

Klean-Strip Acetone

Printed: 04/15/2015

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Supersedes Revision: 03/26/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Klean-Strip Acetone	
Company Name:	W. M. Barr 2105 Channel Avenue Memphis, TN 38113	Phone Number: (901)775-0100
Web site address:	www.wmbarr.com	
Emergency Contact:	3E 24 Hour Emergency Contact	(800)451-8346
Information:	W.M. Barr Customer Service	(800)398-3892
Intended Use:	Paint, stain, and varnish thinning.	
Synonyms:	CAC18, DAC18, GAC18, GAC182, QAC18, QAC18KM, QAC184, PA12270	
Additional Information	This product is regulated by the United States Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS). The product label also includes other important information, including directions for use, and should always be read in its entirety prior to using the product.	

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 2

Serious Eye Damage/Eye Irritation, Category 2

Specific Target Organ Toxicity (single exposure), Category 3

**GHS Signal Word:** Danger

GHS Hazard Phrases:

H225: Highly flammable liquid and vapor.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.

GHS Precaution Phrases:

P233: Keep container tightly closed.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P243: Take precautionary measures against static discharge.
P242: Use only non-sparking tools.
P264: Wash hands thoroughly after handling.
P261: Avoid breathing gas/mist/vapours/spray.
P271: Use only outdoors or in a well-ventilated area.

GHS Response Phrases:

P370+378: In case of fire, use dry chemical to extinguish.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313: If eye irritation persists, get medical advice/attention.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER/doctor if you feel unwell.

GHS Storage and Disposal P403+235: Store in cool/well-ventilated place.

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Phrases:

P501: Dispose of contents/container according to local, state and federal regulations.
 P403+233: Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.
 P405: Store locked up.

Hazard Rating System:

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL		0
PPE		X

**NFPA:****HMIS:****OSHA Regulatory Status:**

This material is classified as hazardous under OSHA regulations.

**Potential Health Effects
(Acute and Chronic):****Inhalation Acute Exposure Effects:**

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, drowsiness, nausea, and numbness in fingers, arms and legs. Inhalation of high vapor concentrations can cause central nervous system depression and narcosis. May lead to unconsciousness.

Skin Contact Acute Exposure Effects:

May cause skin irritation. Liquid is absorbed readily and can transport other toxins into the body. Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. Causes itching, burning, redness and tearing. May cause corneal injury.

Ingestion Acute Exposure Effects:

Harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage. May cause irritation of the gastrointestinal tract. May cause systemic poisoning with symptoms paralleling those of inhalation.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. May cause weakness, fatigue, skin irritation, and numbness in hands and feet.

May cause target organ or system damage to the respiratory system, nervous system, kidney, blood system, and liver.

Target Organs:

Eyes, skin, respiratory system, central nervous system, heart

Medical Conditions Generally Aggravated By Exposure: Skin, eye, respiratory and asthma, cardiac irregularities

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
67-64-1	Acetone {2-Propanone}	100.0 %	AL3150000

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Skin:

Immediately begin washing the skin thoroughly with large amounts of water and mild soap, if available, while removing contaminated clothing. Seek medical attention if irritation persists.

Eyes:

Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes, then seek immediate medical attention.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Ingestion:

If swallowed, do NOT induce vomiting. Seek immediate medical attention. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person.

Signs and Symptoms Of Exposure:

Primary Routes of Exposure:

Inhalation, ingestion, and dermal.

Note to Physician:

Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

Flash Pt:

Class IB

0.00 F Method Used: TAG Closed Cup

Explosive Limits:

LEL: 2.5 % at 77.0 F UEL: 13.0 % at 77.0 F

Autoignition Pt:

869.00 F

Suitable Extinguishing Media: Use carbon dioxide, dry powder, or alcohol-resistant foam.

Fire Fighting Instructions:

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards:

Extremely Flammable! Vapors are heavier than air and may spread along floors. Forms or accumulates static electricity, may cause fire or explosion.

Acetone/water solutions that contain more than 2.5% acetone have flash points. When the acetone concentration is greater than 8% by weight in a closed container, it would be within the flammable range and cause fire or explosion if a source of ignition were introduced.

Do not spread this product over a large surface area because the fire and health safety risks will increase dramatically.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:

Vapors may cause flash fire or ignite explosively.

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills: Dike far ahead of spill for later disposal.

Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

Do not use in small enclosed spaces, such as basements and bathrooms. Vapors can accumulate and explode if ignited.

Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.

Precautions To Be Taken in Storing:

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near any source of heat or flame, furnace areas, pilot lights, stoves, etc. Do not reuse this container. Use product within one year of purchasing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
67-64-1	Acetone {2-Propanone}	PEL: 1000 ppm	TLV: 500 ppm STEL: 750 ppm	No data.

Respiratory Equipment (Specify Type):

For use in areas with inadequate ventilation or fresh air, wear a properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors.

For OSHA controlled work places and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding the appropriate TLV.

A dust mask does not provide protection against vapors.

Eye Protection:

Splash goggles.

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Protective Gloves:	Wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as nitrile rubber, natural rubber, and neoprene may provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.
Other Protective Clothing:	Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.
Engineering Controls (Ventilation etc.):	<p>Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.</p> <p>Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas. Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.</p>
Work/Hygienic/Maintenance Practices:	<p>Wash hands thoroughly after use and before eating, drinking, smoking, or using the restroom.</p> <p>Do not eat, drink, or smoke in the work area.</p> <p>Discard any clothing or other protective equipment that cannot be decontaminated.</p> <p>Facilities storing or handling this material should be equipped with an emergency eyewash and safety shower.</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[] Gas [X] Liquid [] Solid
Appearance and Odor:	Clear colorless liquid with a characteristic ketone odor. Odor may be described as a sweet pungent odor.
Melting Point:	No data.
Boiling Point:	> 133.00 F
Autoignition Pt:	869.00 F
Flash Pt:	0.00 F Method Used: TAG Closed Cup
Explosive Limits:	LEL: 2.5 % at 77.0 F UEL: 13.0 % at 77.0 F
Specific Gravity (Water = 1):	0.789
Density:	6.572 LB/GA at 77.0 F
Vapor Pressure (vs. Air or mm Hg):	213 MM HG at 77.0 F
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate:	No data.
Solubility in Water:	Complete

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Percent Volatile: 100.0 % by weight.**10. STABILITY AND REACTIVITY****Stability:** Unstable [] Stable [X]**Conditions To Avoid -** No data available.**Instability:****Incompatibility - Materials To Avoid:** Avoid contact with acids, aldehydes, alkalies, amines, ammonia, oxidizing agents, reducing agents, chlorine compounds.

May form explosive mixtures with chromic anhydride, chromyl alcohol, hexachloromelamine, hydrogen peroxide, permonosulfuric acid, potassium tertbutoxide, and thioglycol. Strong oxidizers.

Hazardous Decomposition Or Byproducts: Decomposition may produce carbon monoxide, carbon dioxide, and other asphyxiants.**Possibility of Hazardous Reactions:** Will occur [] Will not occur [X]**Conditions To Avoid -** No data available.**Hazardous Reactions:****11. TOXICOLOGICAL INFORMATION****Toxicological Information:** NEUROTOXICITY: Clinical studies and case reports suggest slight neurological effects, mostly of the subjective type, in individuals exposed to varying concentrations of acetone. In most studies the subjects report discomfort, irritation of the eyes and respiratory passages, mood swings, and nausea following exposure to acetone vapor at concentrations of 500 ppm or higher. The fact that the effects subside following termination of exposure indicates that acetone may be the active compound, rather than a metabolite. Case reports of accidental poisoning also indicate that the effects (e.g., lethargy and drowsiness) are short-lived.**Carcinogenicity/Other Information:**
CAS# 67-64-1:
Standard Draize Test, Eyes, Species: Rabbit, 20.00 MG, Severe.
Result:
Behavioral: Change in motor activity (specific assay).
Behavioral: Alteration of classical conditioning.
- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946
ACGIH A4 - Not Classifiable as a Human Carcinogen.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
67-64-1	Acetone {2-Propanone}	n.a.	n.a.	A4	n.a.

12. ECOLOGICAL INFORMATION

No data available.

SAFETY DATA SHEET

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13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with all applicable local, state, and federal regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Acetone

DOT Hazard Class: 3 FLAMMABLE LIQUID

UN/NA Number: UN1090

Packing Group: II



Additional Transport Information:

The shipper/supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
67-64-1	Acetone {2-Propanone}	No	Yes 5000 LB	No

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Acute (immediate) Health Hazard
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Chronic (delayed) Health Hazard
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Fire Hazard
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Sudden Release of Pressure Hazard
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
67-64-1	Acetone {2-Propanone}	CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 4 Test; CA PROP.65: No

16. OTHER INFORMATION

Revision Date: 04/15/2015

Preparer Name: W.M. Barr EHS Department (901)775-0100

Additional Information About This Product: No data available.

Company Policy or Disclaimer:

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

SAFETY DATA SHEET

1. Identification

Product identifier Clear Cut Edge Sealant
Other means of identification W56TPOC001
Recommended use Roofing and Architectural Sealant
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Firestone Building Product, LLC
 200 4th Avenue South
 Nashville, TN 37201 USA

Email firestonemsds@bfdp.com
Telephone Number 1-800-428-4442
Contact Person SDS request
Emergency Telephone Number CHEMTREC 1-800-424-9300

2. Hazard(s) identification

Physical hazards Flammable liquids Category 3
Health hazards Skin corrosion/irritation Category 2
 Serious eye damage/eye irritation Category 2B
 Specific target organ toxicity, single exposure Category 3 narcotic effects
Environmental hazards Hazardous to the aquatic environment, acute hazard Category 3
 Hazardous to the aquatic environment, long-term hazard Category 3
OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Flammable liquid and vapor. Causes skin irritation. Causes eye irritation. May cause drowsiness or dizziness. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist/vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

Response If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
Supplemental information

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Distillates, petroleum, hydrotreated light	64742-47-8	0 - 70
Stoddard solvent	8052-41-3	0 - 70
Other components below reportable levels		≤ 30

Constituents

Chemical name	CAS number	%
n-Nonane	111-84-2	< 5
Trimethylbenzene	25551-13-7	< 3

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Diarrhea. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information

Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Alcohol resistant foam. Dry chemicals. Carbon dioxide (CO₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed such as: Carbon oxides (CO_x).

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat and sources of ignition. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Stoddard solvent (CAS 8052-41-3)	PEL	2900 mg/m3
		500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Stoddard solvent (CAS 8052-41-3)	TWA	100 ppm
Constituents	Type	Value
Trimethylbenzene (CAS 25551-13-7)	TWA	25 ppm
n-Nonane (CAS 111-84-2)	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Distillates, petroleum, hydrotreated light (CAS 64742-47-8)	TWA	100 mg/m3
Stoddard solvent (CAS 8052-41-3)	Ceiling	1800 mg/m3
	TWA	350 mg/m3
Constituents	Type	Value
Trimethylbenzene (CAS 25551-13-7)	TWA	125 mg/m3
		25 ppm
n-Nonane (CAS 111-84-2)	TWA	1050 mg/m3
		200 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Nitrile gloves are recommended.

Skin protection

Other Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state Liquid.

Form Liquid.

Color Clear. Colorless.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 316.4 - 381.2 °F (158 - 194 °C)

Flash point	107.6 °F (42.0 °C) Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	4000 - 6000 cP (75.2 °F (24 °C))
Other information	% Solids: 28 - 32
Density	0.82 g/ml 6.88 lb/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC	580 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Diarrhea. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Stoddard solvent (CAS 8052-41-3)

3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available for this product.

Partition coefficient n-octanol / water (log Kow)

Stoddard solvent (CAS 8052-41-3)

3.16 - 7.15

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste U List: Reference

Benzene (CAS 71-43-2)

U019

Cumene (CAS 98-82-8)

U055

Toluene (CAS 108-88-3)

U220

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1133

UN proper shipping name Adhesives

Transport hazard class(es)

Class 3

Subsidiary risk -

Label(s) 3

Packing group III

Environmental hazards**Marine pollutant** No.**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Special provisions** B1, B52, IB3, T2, TP1**Packaging exceptions** 150**Packaging non bulk** 173**Packaging bulk** 242**IATA****UN number** UN1133**UN proper shipping name** Adhesives**Transport hazard class(es)****Class** 3**Subsidiary risk** -**Packing group** III**Environmental hazards** No.**ERG Code** 3L**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**IMDG****UN number** UN1133**UN proper shipping name** ADHESIVES**Transport hazard class(es)****Class** 3**Subsidiary risk** -**Packing group** III**Environmental hazards****Marine pollutant** No.**EmS** F-E, S-D**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Transport in bulk according to** Not established.**Annex II of MARPOL 73/78 and
the IBC Code****15. Regulatory information****US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

n-Nonane (CAS 111-84-2) 1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

n-Nonane (CAS 111-84-2) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous
chemical** Yes**Classified hazard
categories** Flammable (gases, aerosols, liquids, or solids)
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)
Hazard not otherwise classified (HNOC)**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Trimethylbenzene	25551-13-7	< 3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

.....**Safe Drinking Water Act** Not regulated.
(SDWA)

US state regulations

US. Massachusetts RTK - Substance List

Distillates, petroleum, hydrotreated light (CAS 64742-47-8)
n-Nonane (CAS 111-84-2)
Stoddard solvent (CAS 8052-41-3)
Trimethylbenzene (CAS 25551-13-7)

US. New Jersey Worker and Community Right-to-Know Act

Distillates, petroleum, hydrotreated light (CAS 64742-47-8)
n-Nonane (CAS 111-84-2)
Stoddard solvent (CAS 8052-41-3)
Trimethylbenzene (CAS 25551-13-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Distillates, petroleum, hydrotreated light (CAS 64742-47-8)
n-Nonane (CAS 111-84-2)
Stoddard solvent (CAS 8052-41-3)
Trimethylbenzene (CAS 25551-13-7)

US. Rhode Island RTK

Distillates, petroleum, hydrotreated light (CAS 64742-47-8)
n-Nonane (CAS 111-84-2)
Stoddard solvent (CAS 8052-41-3)
Trimethylbenzene (CAS 25551-13-7)

California Proposition 65



WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Cumene (CAS 98-82-8)	Listed: April 6, 2010
Ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004

California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Toluene (CAS 108-88-3)	Listed: January 1, 1991

California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
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US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Distillates, petroleum, hydrotreated light (CAS 64742-47-8)
Ethylbenzene (CAS 100-41-4)
Stoddard solvent (CAS 8052-41-3)
Toluene (CAS 108-88-3)
Trimethylbenzene (CAS 25551-13-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 31-October-2018

Revision date -

Version # 01

HMIS® ratings
Health: 2
Flammability: 2
Physical hazard: 0


Disclaimer Firestone Building Products, LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

SAFETY DATA SHEET

1. Identification

Product identifier	W56RACIASA, W56RACSADC - Firestone Jet Bond Spray Adhesive
Other means of identification	W56RACIASA, W56RACSADC
Recommended use	Construction. Adhesive.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company name	Firestone Building Products Company, LLC 200 4th Avenue South Nashville, TN 37201 USA
Email	firestonemsds@bfdp.com
Telephone Number	1-800-428-4442
Contact Person	SDS request
Emergency Telephone Number	CHEMTREC: 1-800-424-9300

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Compressed gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		

Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye/face protection.

Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Methyl acetate	79-20-9	10 - 25
Acetone	67-64-1	5 - 20
Cyclohexane	110-82-7	5 - 20
Carbon dioxide	124-38-9	2.5 - 10
Pentane (mixed isomers)	109-66-0	2.5 - 10
Petroleum Gases, Liquefied	68476-85-7	2.5 - 10
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane	25068-38-6	< 0.5
Other components below reportable levels		< 20

Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
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4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2). Dry sand. Larger fires: Water spray.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. Small fires: Do not use water.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions

In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.

General fire hazards

Extremely flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors/spray. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material. Clean surface thoroughly to remove residual contamination.

For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Pressurized container: Do not pierce or burn, even after use. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Protect containers from physical damage; do not drag, roll, slide, or drop. Do not re-use empty containers. Avoid breathing mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm
Carbon dioxide (CAS 124-38-9)	PEL	5000 ppm
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3 300 ppm
Methyl acetate (CAS 79-20-9)	PEL	610 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
		200 ppm
Pentane (mixed isomers) (CAS 109-66-0)	PEL	2950 mg/m3
		1000 ppm
Petroleum Gases, Liquefied (CAS 68476-85-7)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Methyl acetate (CAS 79-20-9)	STEL	250 ppm
	TWA	200 ppm
Pentane (mixed isomers) (CAS 109-66-0)	TWA	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm
Cyclohexane (CAS 110-82-7)	TWA	1050 mg/m3
		300 ppm
Methyl acetate (CAS 79-20-9)	STEL	760 mg/m3
		250 ppm
	TWA	610 mg/m3
		200 ppm
Pentane (mixed isomers) (CAS 109-66-0)	Ceiling	1800 mg/m3
		610 ppm
	TWA	350 mg/m3
		120 ppm
Petroleum Gases, Liquefied (CAS 68476-85-7)	TWA	1800 mg/m3
		1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Tightly fitting safety goggles. Face shield is recommended.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Examples of preferred glove barrier materials include: Butyl rubber. Suitable gloves can be recommended by the glove supplier.

Skin protection

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Aerosol. Compressed gas.

Color

Yellowish.

Odor

Characteristic.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

96.8 °F (36 °C)

Flash point

-31.0 °F (-35.0 °C)

Evaporation rate

Not available.

Flammability (solid, gas)

Flammable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

1.2 % v/v

Flammability limit - upper (%)

16 % v/v

Vapor pressure

174.8 mm Hg (68 °F (20 °C))
233 hPa (68 °F (20 °C))

Vapor density

Not available.

Relative density

Not available.

Solubility(ies)

Solubility (water)

Insoluble.

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature	500 °F (260 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.86 g/cm ³ (68 °F (20 °C)) 7.14 lb/gal (68 °F (20 °C))
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC	< 250 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Bases. Strong oxidizing agents. Reactive metals. Aluminum. Chlorine. Fluorine. Nitrates.
Hazardous decomposition products	Carbon oxides. Nitrogen oxides. Hydrogen Chloride (HCl). Aldehydes. Acids. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
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Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
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Components	Species	Test Results
Acetone (CAS 67-64-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 15700 mg/kg, 24 Hours
Inhalation		
<i>Vapor</i>		
LC50	Rat	76 mg/l, 4 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexane (CAS 110-82-7)		
<u>Acute</u>		
Oral		
LD50	Rat	12705 mg/kg
Pentane (mixed isomers) (CAS 109-66-0)		
Other		
NOAEL	Rat	> 1000 mg/kg/day
<u>Acute</u>		
Dermal		
LD50	Rabbit	3000 mg/kg/day

Components	Species	Test Results
Inhalation		
LC50	Rat	18 mg/l, 4 Hours
Oral		
LD50	Rat	> 2000 mg/kg/day
Chronic		
Other		
NOAEL	Rat	20 mg/l
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane (CAS 25068-38-6)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	15000 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity	Not listed.	
NTP Report on Carcinogens	Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	May be fatal if swallowed and enters airways.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity		Toxic to aquatic life with long lasting effects.	
Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Acute			
Crustacea	LC50	Daphnia pulex	8800 mg/l, 48 Hours
Fish	LC50	Pimephales promelas	7163 mg/l, 96 Hours
Chronic			
Crustacea	NOEC	Daphnia magna	> 79 mg/l, 21 days
Pentane (mixed isomers) (CAS 109-66-0)			
Acute			
	EC50	Selenastrum capricornutum (new Pseudokirchneriella subcapita	7.51 mg/l, 72 Hours

Components	Species		Test Results
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	2.7 mg/l, 48 Hours
Fish	LC50	Oncorhynchus mykiss	4.26 mg/l, 96 Hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available for this product.		
Partition coefficient n-octanol / water (log Kow)			
Acetone (CAS 67-64-1)			-0.24
Cyclohexane (CAS 110-82-7)			3.44
Methyl acetate (CAS 79-20-9)			0.18
Pentane (mixed isomers) (CAS 109-66-0)			3.39
Mobility in soil	The product is immiscible in water.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		
13. Disposal considerations			
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.		
Local disposal regulations	Dispose in accordance with all applicable regulations.		
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.		
14. Transport information			
DOT			
UN number	UN3501		
UN proper shipping name	Chemical under pressure, flammable, n.o.s. (Methyl acetate RQ = 400 LBS, Pentanes RQ = 1000 LBS)		
Transport hazard class(es)			
Class	2.1		
Subsidiary risk	-		
Label(s)	2.1		
Packing group	Not available.		
Environmental hazards			
Marine pollutant	Yes.		
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.		
Special provisions	362, T50, TP40		
IATA			
UN number	UN3501		
UN proper shipping name	Chemical under pressure, flammable, n.o.s. (Methyl acetate, Pentanes)		
Transport hazard class(es)			
Class	2.1		
Subsidiary risk	-		
Packing group	Not available.		
Environmental hazards	Yes.		
ERG Code	10L		
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.		
IMDG			
UN number	UN3501		
UN proper shipping name	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (Methyl acetate, Pentanes)		

Transport hazard class(es)**Class** 2.1**Subsidiary risk** -**Packing group** Not available.**Environmental hazards****Marine pollutant** Yes.**EmS** E-D, S-U**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Transport in bulk according to** Not established.**Annex II of MARPOL 73/78 and the IBC Code****15. Regulatory information****US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1) Listed.

Cyclohexane (CAS 110-82-7) Listed.

Methyl acetate (CAS 79-20-9) Listed.

Pentane (mixed isomers) (CAS 109-66-0) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA)

All components of the mixture on the TSCA 8(b) inventory are designated "active".

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)
 Gas under pressure
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Respiratory or skin sensitization
 Specific target organ toxicity (single or repeated exposure)
 Aspiration hazard

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Cyclohexane	110-82-7	5 - 20

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Pentane (mixed isomers) (CAS 109-66-0)

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Acetone (CAS 67-64-1)

Low priority

Methyl acetate (CAS 79-20-9)

Low priority

US state regulations

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Cyclohexane (CAS 110-82-7)

Methyl acetate (CAS 79-20-9)

Pentane (mixed isomers) (CAS 109-66-0)

Petroleum Gases, Liquefied (CAS 68476-85-7)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Cyclohexane (CAS 110-82-7)

Methyl acetate (CAS 79-20-9)

Pentane (mixed isomers) (CAS 109-66-0)

Petroleum Gases, Liquefied (CAS 68476-85-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Cyclohexane (CAS 110-82-7)

Methyl acetate (CAS 79-20-9)

Pentane (mixed isomers) (CAS 109-66-0)

Petroleum Gases, Liquefied (CAS 68476-85-7)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Cyclohexane (CAS 110-82-7)

Methyl acetate (CAS 79-20-9)

Pentane (mixed isomers) (CAS 109-66-0)

Petroleum Gases, Liquefied (CAS 68476-85-7)

California Proposition 65



WARNING: This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Ethylbenzene (CAS 100-41-4)

Listed: June 11, 2004

Formaldehyde (CAS 50-00-0)

Listed: January 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetone (CAS 67-64-1)

Cyclohexane (CAS 110-82-7)

Pentane (mixed isomers) (CAS 109-66-0)

Petroleum Gases, Liquefied (CAS 68476-85-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	20-September-2019
Revision date	-
Version #	01
HMIS® ratings	Health: 3 Flammability: 4 Physical hazard: 3
Disclaimer	Firestone Building Products cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use The information in the sheet was written based on the best knowledge and experience currently available.

SAFETY DATA SHEET

1. Identification

Product identifier	W56RAC1696, W56RAC16DC - Firestone LVOC Canister Flush Solution
Other means of identification	W56RAC1696, W56RAC16DC
Recommended use	Construction. Adhesive.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company name	Firestone Building Products Company, LLC 200 4th Avenue South Nashville, TN 37201 USA
Email	firestonemsds@bfdp.com
Telephone Number	1-800-428-4442
Contact Person	SDS request
Emergency Telephone Number	CHEMTREC: 1-800-424-9300

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Compressed gas
Health hazards	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye/face protection.
Response	If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

Repeated exposure may cause skin dryness or cracking.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Acetone	67-64-1	50 - 70
4-Chlorobenzotrifluoride	98-56-6	25 - 50
Carbon dioxide	124-38-9	2.5 - 10
d-Limonene	5989-27-5	< 2

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO₂). Dry sand.

Unsuitable extinguishing media

Water. Do not use water as an extinguisher.

Specific hazards arising from the chemical

Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions

In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.

General fire hazards

Extremely flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors/spray. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Pressurized container: Do not pierce or burn, even after use. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Protect containers from physical damage; do not drag, roll, slide, or drop. Do not re-use empty containers. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm
Carbon dioxide (CAS 124-38-9)	PEL	5000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3 250 ppm
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3 30000 ppm
	TWA	9000 mg/m3 5000 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
d-Limonene (CAS 5989-27-5)	TWA	165.5 mg/m3 30 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Tightly fitting safety goggles. Face shield is recommended.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Examples of preferred glove barrier materials include: Butyl rubber. Suitable gloves can be recommended by the glove supplier.

Skin protection

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.
Form Aerosol. Compressed gas.
Color Colorless.

Odor Solvent-like.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 132.4 - 133.9 °F (55.8 - 56.6 °C)

Flash point < -0.4 °F (< -18.0 °C)

Evaporation rate Not available.

Flammability (solid, gas) Flammable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.6 % v/v

Flammability limit - upper (%) 13 % v/v

Vapor pressure 174.8 mm Hg (68 °F (20 °C))
233 hPa (68 °F (20 °C))

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Insoluble.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 869 °F (465 °C)

Decomposition temperature	Not available.
Viscosity	Not available.
Other information	% Organic solvents: 58.6 % Solids: 0
Density	0.95 g/cm ³ (68 °F (20 °C)) 7.89 lb/gal (68 °F (20 °C))
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC	< 25 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Aluminum.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
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Components	Species	Test Results
4-Chlorobenzotrifluoride (CAS 98-56-6)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 3300 mg/kg bw/day
Inhalation		
LC50	Rat	> 32.03 mg/l, 4 hours
Oral		
LD50	Rat	5546 mg/kg bw/day (Male)
Acetone (CAS 67-64-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 15700 mg/kg, 24 Hours
Inhalation		
<i>Vapor</i>		
LC50	Rat	76 mg/l, 4 Hours
Oral		
LD50	Rat	5800 mg/kg

Components	Species	Test Results
d-Limonene (CAS 5989-27-5)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	4400 mg/kg/day
Other		
NOAEL	Rat	300 mg/kg/day
Skin corrosion/irritation	Repeated exposure may cause skin dryness or cracking.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
d-Limonene (CAS 5989-27-5)	3 Not classifiable as to carcinogenicity to humans.	
NTP Report on Carcinogens		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Based on available data, the classification criteria are not met.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
4-Chlorobenzotrifluoride (CAS 98-56-6)		
Aquatic		
<i>Acute</i>		
Fish	LC50	3 mg/l, 96 hours
Acetone (CAS 67-64-1)		
Aquatic		
<i>Acute</i>		
Crustacea	LC50	Daphnia pulex 8800 mg/l, 48 Hours
Fish	LC50	Pimephales promelas 7163 mg/l, 96 Hours
<i>Chronic</i>		
Crustacea	NOEC	Daphnia magna > 79 mg/l, 21 days
d-Limonene (CAS 5989-27-5)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Daphnia magna 0.421 mg/l, 48 Hours
Fish	LC50	Fathead minnow (Pimephales promelas) 0.702 mg/l, 96 Hours

Components	Species		Test Results
Chronic			
Algae	NOEC	Green algae (Chlamydomonas variabilis)	4.08 mg/l, 96 Hours
Crustacea	NOEC	Daphnia magna	0.15 mg/l, 21 days
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available for this product.		
Partition coefficient n-octanol / water (log Kow)			
Acetone (CAS 67-64-1)			-0.24
d-Limonene (CAS 5989-27-5)			4.232
Bioconcentration factor (BCF)			
4-Chlorobenzotrifluoride (CAS 98-56-6)			121 - 202
Mobility in soil	No data available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		
13. Disposal considerations			
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.		
Local disposal regulations	Dispose in accordance with all applicable regulations.		
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.		
14. Transport information			
DOT			
UN number	UN3501		
UN proper shipping name	Chemical under pressure, flammable, n.o.s. (Acetone RQ = 9009 LBS, 4-Chlorobenzotrifluoride)		
Transport hazard class(es)			
Class	2.1		
Subsidiary risk	-		
Label(s)	2.1		
Packing group	Not available.		
Environmental hazards			
Marine pollutant	Yes.		
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.		
Special provisions	362, T50, TP40		
IATA			
UN number	UN3501		
UN proper shipping name	Chemical under pressure, flammable, n.o.s. (Acetone, 4-Chlorobenzotrifluoride)		
Transport hazard class(es)			
Class	2.1		
Subsidiary risk	-		
Packing group	Not available.		
Environmental hazards	Yes.		
ERG Code	10L		
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.		
IMDG			
UN number	UN3501		
UN proper shipping name	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (Acetone, 4-Chlorobenzotrifluoride)		
Transport hazard class(es)			
Class	2.1		

Subsidiary risk	-
Packing group	Not available.
Environmental hazards	
Marine pollutant	Yes.
EmS	E-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)		
4-Chlorobenzotrifluoride (CAS 98-56-6)	1.0 % One-Time Export Notification only.	
CERCLA Hazardous Substance List (40 CFR 302.4)		
Acetone (CAS 67-64-1)	Listed.	
SARA 304 Emergency release notification		
Not regulated.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
Toxic Substances Control Act (TSCA)	All components of the mixture on the TSCA 8(b) inventory are designated "active".	
Superfund Amendments and Reauthorization Act of 1986 (SARA)		
SARA 302 Extremely hazardous substance		
Not listed.		
SARA 311/312 Hazardous chemical	Yes	
Classified hazard categories	Flammable (gases, aerosols, liquids, or solids) Gas under pressure Serious eye damage or eye irritation Respiratory or skin sensitization Specific target organ toxicity (single or repeated exposure)	
SARA 313 (TRI reporting)		
Not regulated.		
Other federal regulations		
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List		
Not regulated.		
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)		
Not regulated.		
Safe Drinking Water Act (SDWA)	Not regulated.	
Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number		
Acetone (CAS 67-64-1)	6532	
Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))		
Acetone (CAS 67-64-1)	35 %WV	
DEA Exempt Chemical Mixtures Code Number		
Acetone (CAS 67-64-1)	6532	
FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace		
Acetone (CAS 67-64-1)	Low priority	
US state regulations		
US. Massachusetts RTK - Substance List		
Acetone (CAS 67-64-1)		
Carbon dioxide (CAS 124-38-9)		

US. New Jersey Worker and Community Right-to-Know Act

4-Chlorobenzotrifluoride (CAS 98-56-6)

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

d-Limonene (CAS 5989-27-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetone (CAS 67-64-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-September-2019

Revision date 05-September-2019

Version # 02

HMIS® ratings Health: 2
Flammability: 4
Physical hazard: 3

Disclaimer Firestone Building Products cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product identifier**

Product Name • I.S.O. Twin Pack™ Insulation Adhesive Part A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company

200 4th Avenue S
Nashville, TN 37201-2208
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification**EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

- | | |
|----------------|---|
| CLP | <ul style="list-style-type: none">• Skin Irritation 2 - H315• Skin Sensitization 1 - H317• Eye Irritation 2 - H319• Acute Toxicity Inhalation 3 - H331• Respiratory Sensitization 1 - H334• Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335• Carcinogenicity 2 - H351• Specific Target Organ Toxicity Repeated Exposure 2 - H373 |
| DSD/DPD | <ul style="list-style-type: none">• Harmful (Xn)• Irritant (Xi)• Carcinogenic Substances - Category 3R20, R36/37/38, R40, R42/43, R48/20 |

2.2 Label Elements

CLP

DANGER

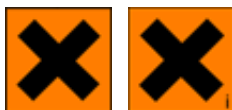


- Hazard statements •**
- H315 - Causes skin irritation
 - H317 - May cause an allergic skin reaction
 - H319 - Causes serious eye irritation
 - H331 - Toxic if inhaled
 - H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 - H335 - May cause respiratory irritation
 - H351 - Suspected of causing cancer.
 - H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention •**
- P201 - Obtain special instructions before use.
 - P202 - Do not handle until all safety precautions have been read and understood.
 - P260 - Do not breathe mist/vapours/spray.
 - P264 - Wash thoroughly after handling.
 - P271 - Use only outdoors or in a well-ventilated area.
 - P272 - Contaminated work clothing should not be allowed out of the workplace.
 - P280 - Wear protective gloves and eye/face protection , .
 - P281 - Use personal protective equipment as required.
 - P285 - In case of inadequate ventilation wear respiratory protection.
- Response •**
- P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 - P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 - P321 - Specific treatment, see supplemental first aid information.
 - P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 - P362 - Take off contaminated clothing and wash before reuse.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P308+P313 - IF exposed or concerned: Get medical advice/attention.
 - P314 - Get medical advice/attention if you feel unwell.
- Storage/Disposal •**
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 - P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases •**
- R20 - Harmful by inhalation.
 - R36/37/38 - Irritating to eyes, respiratory system and skin.
 - R40 - Limited evidence of a carcinogenic effect.
 - R42/43 - May cause sensitisation by inhalation and skin contact.
 - R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- Safety phrases •**
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - S36 - Wear suitable protective clothing.
 - S37 - Wear suitable gloves.
 - S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 - S53 - Avoid exposure - obtain special instructions before use.

2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD**
- According to European Directive 1999/45/EC this preparation is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Skin Irritation 2
- Skin Sensitization 1A
- Eye Irritation 2
- Acute Toxicity Inhalation 2
- Respiratory Sensitization 1A
- Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
- Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Causes skin irritation
 - May cause an allergic skin reaction
 - Causes serious eye irritation
 - Fatal if inhaled
 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 - May cause respiratory irritation
 - Causes damage to organs - Lungs through prolonged or repeated exposure via Inhalation

Precautionary statements

- Prevention**
- Do not breathe mist/vapours/spray.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - Use only outdoors or in a well-ventilated area.
 - Contaminated work clothing should not be allowed out of the workplace.
 - Wear protective gloves/protective clothing/eye protection/face protection.
 - In case of inadequate ventilation wear respiratory protection.
- Response**
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 - If on skin: Wash with plenty of water .
 - If skin irritation or rash occurs: Get medical advice/attention.
 - Take off contaminated clothing and wash before reuse.
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - If eye irritation persists: Get medical advice/attention.
 - Specific treatment is urgent, see supplemental first aid information.
 - Get medical advice/attention if you feel unwell.
- Storage/Disposal**
- Store in a well-ventilated place. Keep container tightly closed.
 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

- Supplemental information**
- 75 percent of this product consists of an ingredient of unknown toxicity.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Very Toxic - D1A
Other Toxic Effects - D2A
Other Toxic Effects - D2B

2.2 Label elements

WHMIS



WHMIS

- Very Toxic - D1A
Other Toxic Effects - D2A
Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Polymethylene polyphenyl isocyanate	CAS: 9016-87-9	25% TO 50%	Ingestion/Oral-Rat LD50 • 49 g/kg Inhalation-Rat LC50 • 490 mg/m³ 4 Hour(s) Skin-Rabbit LD50 • >9400 mg/kg	EU DSD/DPD: Self Classified: Xn, R20-48/20; Xn, R42/43, Xi, R36/37/38; Carc. 3, R40 EU CLP: Self Classified: Acute Tox. 2 (mist), H330; STOT RE 2, H373; Eye Irrit. 2, H319; STOT SE 3: Resp. Irrit., H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317; Carc. 2, H351 OSHA HCS 2012: Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1A; STOT SE 3: Resp. Irrit.; Resp. Sens. 1A; STOT RE 1(Lung); Acute Tox. 2 (inhl, mist)	NDA
Isocyanic acid, methylenedi-p-phenylene ester	CAS: 101-68-8 EC Number: 202-966-0 EU Index: 615-005-00-9	25% TO 50%	Ingestion/Oral-Rat LD50 • 9200 mg/kg Inhalation-Rat LC50 • 178 mg/m³	EU DSD/DPD: Annex VI, Table 3.2: Carc. Cat. 3; R40; Xn; R20-48/20; Xi; R36/37/38, R42/43 EU CLP: Annex VI, Table 3.1: Carc. 2, H351; Acute Tox. 4, H332; STOT RE 2 *, H373; Eye Irrit. 2, H319; STOT SE 3: Resp. Irrit., H335; Skin Irrit. 2, H319; Resp. Sens. 1, H334; Skin Sens. 1, H317 OSHA HCS 2012: Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Resp. Sens. 1, STOT SE 3: Resp. Irrit.; STOT RE 1(Lungs);	NDA
Diphenylmethane diisocyanate	CAS: 26447-40-5 EC Number: 247-714-0 EU Index: 615-005-00-9	2.5% TO 10%	NDA	EU DSD/DPD: Annex VI, Table 3.2: Carc. Cat. 3; R40; Xn; R20-48/20; Xi; R36/37/38; R42/43 EU CLP: Annex VI, Table 3.1: Carc. 2, H351; Acute Tox. 4, H332; STOT RE 2, H373; Eye Irrit. 2, H319; STOT SE 3: Resp. Irrit., H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317 OSHA HCS 2012: Eye Irrit. 2; STOT SE 3: Resp. Irrit.; Skin Irrit. 2; Resp. Sens. 1A; Skin Sens. 1A; STOT RE 1	NDA

See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- | | |
|-------------------|--|
| Inhalation | • Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Keep patient warm. Get medical attention immediately if symptoms occur. |
| Skin | • Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention. |
| Eye | • In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention. |
| Ingestion | • Rinse mouth. Drink 1 - 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. |

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|---------------------------|--|
| Notes to Physician | • All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. |
|---------------------------|--|

Section 5 - Firefighting Measures

5.1 Extinguishing media

- | | |
|---------------------------------------|---|
| Suitable Extinguishing Media | • CO ₂ , extinguishing powder or water spray. Fight larger fires with water spray. |
| Unsuitable Extinguishing Media | • Do not use a direct stream of water. |

5.2 Special hazards arising from the substance or mixture

- | | |
|---|---|
| Unusual Fire and Explosion Hazards | • Dried solids can burn and release toxic fumes and vapors. |
| Hazardous Combustion Products | • No data available |

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Wear positive pressure self-contained breathing apparatus (SCBA).
Move fire exposed containers if safe to do so. Cool fire exposed containers with water spray. Dike contaminated fire-control water for later disposal.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- | | |
|-----------------------------|---|
| Personal Precautions | • Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. |
| Emergency Procedures | • As an immediate precautionary measure, isolate spill or leak area in all directions for |

at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. Stay upwind. Keep out of low areas. Keep unauthorized personnel away. Ventilate closed spaces before entering.

6.2 Environmental precautions

- Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
LARGE SPILLS: Dike far ahead of spill for later disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only with adequate ventilation. Prevent formation of aerosols. Keep away from water as reaction can be initiated by water exposure. Persons with sensitivity to isocyanate should not handle/use this product. Wear appropriate personal protective equipment, avoid direct contact. Do not breath mist/vapours/spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry, well-ventilated place. Keep container tightly closed. Protect from atmospheric moisture. Keep away from heat, sparks and flame.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick
Isocyanic acid, methylenedi-p-phenylene ester (101-68-8)	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWA; 0.05 mg/m3 TWA	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate); 0.051 mg/m3 TWA (listed under Methylene bisphenyl isocyanate)
	Ceilings	Not established	Not established	0.01 ppm Ceiling (listed under Methylene bisphenyl isocyanate (MDI))	Not established	Not established
Polymethylene polyphenyl isocyanate (9016-87-9)	TWAs	Not established	0.005 ppm TWA; 0.07 mg/m3 TWA	Not established	Not established	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec
Diphenylmethane diisocyanate (26447-40-5)	Ceilings	0.02 ppm Ceiling; 0.2 mg/m ³ Ceiling	Not established	0.02 ppm Ceiling; 0.2 mg/m ³ Ceiling	Not established	Not established
Isocyanic acid, methylenedi-p-phenylene ester (101-68-8)	TWAs	Not established	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Not established	0.005 ppm TWA (designated substances regulation, listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI))); 0.005 ppm TWA (applies to workplaces to which the designated substances regulation does not apply, listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWA _{AEV} ; 0.051 mg/m ³ TWA _{AEV}
	Ceilings	Not established	Not established	Not established	0.02 ppm Ceiling (designated substances regulation, listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI)))	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Canada Saskatchewan	Canada Yukon	Denmark	Germany DFG	Germany TRGS
Isocyanic acid, methylenedi-p-phenylene ester (101-68-8)	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Not established	0.005 ppm TWA; 0.05 mg/m ³ TWA	Not established	0.05 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, ceiling factor 2, exposure factor 1)
	Ceilings	Not established	0.02 ppm Ceiling (Methylene bisphenyl isocyanate (MDI)); 0.2 mg/m ³ Ceiling (Methylene bisphenyl isocyanate (MDI))	Not established	0.05 mg/m ³ Peak (inhalable fraction)	Not established
	MAKs	Not established	Not established	Not established	0.05 mg/m ³ TWA MAK (see also polymeric MDI, inhalable fraction)	Not established
						0.05 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can

Polymethylene polyphenyl isocyanate (9016-87-9)	TWAs	Not established	Not established	Not established	Not established	be excluded when AGW and BGW values are observed, inhalable fraction, as MDI, exposure factor 1)
	Ceilings	Not established	Not established	Not established	0.05 mg/m ³ Peak (inhalable fraction)	Not established
	MAKs	Not established	Not established	Not established	0.05 mg/m ³ TWA MAK (inhalable fraction)	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	NIOSH			OSHA	
Diphenylmethane diisocyanate (26447-40-5)	Ceilings	Not established			0.02 ppm Ceiling; 0.2 mg/m ³ Ceiling	
Isocyanic acid, methylenedi-p-phenylene ester (101-68-8)	Ceilings	0.020 ppm Ceiling (10 min); 0.2 mg/m ³ Ceiling (10 min)			0.02 ppm Ceiling; 0.2 mg/m ³ Ceiling	
	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate); 0.05 mg/m ³ TWA			Not established	

Exposure Control Notations

Germany TRGS

• Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **Carcinogens:** (Category 3 (as inhalable aerosol, alveola fraction)) | **Developmental**

Toxins: (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveoli fraction)) | **Reproductive**

Toxins: (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveola fraction)) | **Germ Cell**

Mutagens: (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveola fraction))

• Polymethylene polyphenyl isocyanate (9016-87-9): **Carcinogens:** (Category 3 (as inhalable aerosol, alveola fraction)) | **Developmental**

Toxins: (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveoli fraction)) | **Reproductive**

Toxins: (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveola fraction)) | **Germ Cell**

Mutagens: (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveola fraction)) | **Skin:** (skin notation (calculated as MDI))

Germany DFG

• Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **Carcinogens:** (Category 4 (no significant contribution to human cancer)) |

Pregnancy: (no risk to embryo/fetus if exposure limits adhered to (inhalable fraction, see also polymeric MDI)) | **Sensitizers:** (respiratory and skin sensitizer (inhalable fraction)) | **Skin:** (skin notation)

• Polymethylene polyphenyl isocyanate (9016-87-9): **Carcinogens:** (Category 4 (no significant contribution to human cancer)) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to (inhalable fraction)) | **Sensitizers:** (respiratory and skin sensitizer (inhalable fraction)) | **Skin:** (skin notation)

Exposure Limits Supplemental

ACGIH

• Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **TLV Basis - Critical Effects:** (respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI)))

8.2 Exposure controls

Engineering Measures/Controls

- This material is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- Wear appropriate gloves. Chloroprene rubber, CR. Nitrile rubber, NBR. Butyl rubber, BR. Wear appropriate chemical resistant clothing.

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

TWA EV = Time-Weighted Average Exposure Value

NIOSH = National Institute of Occupational Safety and Health

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties**9.1 Information on Basic Physical and Chemical Properties**

Material Description			
Physical Form	Liquid	Appearance/Description	Off white to light amber liquid with faint aromatic odor.
Color	Off White - Light Amber.	Odor	Faint Aromatic.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Not relevant
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	= 1.12 @ 20 °C(68 °F) Water=1	Water Solubility	Insoluble
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	0 mmHg (torr)	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	176 °C(348.8 °F)	UEL	Data lacking
LEL	0.4 %	Autoignition	> 482 °F(> 250 °C)
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity**10.1 Reactivity**

- There is a potential for violent reaction if contaminated with water.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Danger of polymerization. Reacts violently with water.

10.4 Conditions to avoid

- Contact with moisture, other materials that react with isocyanates, or temperatures

above 350°F (177°C), may cause polymerization.

10.5 Incompatible materials

- Reacts with amines, caustic alkali solutions, alcohols, ammonia, oxidizers, acids, polyols. Reacts with water forming carbon dioxide-may rupture sealed containers if contaminated with water. May produce violent reactions with bases and numerous organic substances including alcohols and amines.

10.6 Hazardous decomposition products

- Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Isocyanic acid, methylenedi-p-phenylene ester (25% TO 50%)	101-68-8	Acute Toxicity: Ingestion/Oral-Rat LD50 • 9200 mg/kg; Behavioral:Somnolence (general depressed activity); Behavioral:Ataxia; Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Body temperature decrease; Inhalation-Rat LC50 • 178 mg/m³; Irritation: Eye-Rabbit • 100 mg • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s); Mutagen: DNA adduct • Inhalation-Rat • 2 mg/m³ 52 Week(s)-Intermittent; Micronucleus test • Inhalation-Rat • 7.1 mg/m³ 3 Hour(s); DNA adduct • Inhalation-Rat • 0.002 mg/L 17 Hour(s) 1 Year(s); Reproductive: Inhalation-Rat TCLO • 9 mg/m³ 6 Hour(s)(6-15D preg); Reproductive Effects:Maternal Effects:Other effects; Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system
Polymethylene polyphenyl isocyanate (25% TO 50%)	9016-87-9	Acute Toxicity: Ingestion/Oral-Rat LD50 • 49 g/kg; Behavioral:Somnolence (general depressed activity); Gastrointestinal:Hypermotility, diarrhea; Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Body temperature decrease; Inhalation-Rat LC50 • 490 mg/m³ 4 Hour(s); Sense Organs and Special Senses:Eye:Other; Lungs, Thorax, or Respiration:Respiratory depression; Blood:Hemorrhage; Skin -Rabbit LD50 • >9400 mg/kg; Irritation: Eye-Rabbit • 100 mg • Mild irritation; Reproductive: Inhalation-Rat TCLO • 12 mg/m³ 6 Hour(s)(6-15D preg); Reproductive Effects:Maternal Effects:Other effects; Reproductive Effects:Effects on Embryo or Fetus:Extra embryonic structures; Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system

GHS Properties	Classification
Acute toxicity	EU/CLP • Acute Toxicity - Inhalation 3 - ATEmix(inhl)=0.748 mg/L OSHA HCS 2012 • Acute Toxicity - Inhalation 2 - ATEmix(inhl)=0.49 mg/L
Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2
Skin sensitization	EU/CLP • Skin Sensitizer 1 OSHA HCS 2012 • Skin Sensitizer 1A
Respiratory sensitization	EU/CLP • Respiratory Sensitizer 1 OSHA HCS 2012 • Respiratory Sensitizer 1A
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Carcinogenicity 2 OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
STOT-RE	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1

Potential Health Effects

Inhalation

- Acute (Immediate)** • Toxic if inhaled. May cause respiratory irritation.
- Chronic (Delayed)** • May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin

- Acute (Immediate)** • Causes skin irritation. May cause skin sensitization. Symptoms include redness and skin rash.
- Chronic (Delayed)** • No data available.

Eye

- Acute (Immediate)** • Causes serious eye irritation.
- Chronic (Delayed)** • No data available.

Ingestion

- Acute (Immediate)** • Although swallowing this product is an unlikely means of exposure, irritation of the mouth, pharynx, esophagus and stomach can develop following ingestion.
- Chronic (Delayed)** • No data available

Other

- Chronic (Delayed)** • Causes damage to the lungs through prolonged or repeated exposure via Inhalation. Long-term effect of Isocyanic acid, methylenedi-p-phenylene ester on the respiratory system of 318 workers suggests that such workers may develop fibrosis. Long-term exposure tends to restrict pulmonary function and cause decrease in CO single breath transfer factor.

Carcinogenic Effects

- May cause cancer.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user

- None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications

- Acute, Chronic

State Right To Know				
Component	CAS	MA	NJ	PA
Diphenylmethane diisocyanate	26447-40-5	Yes	Yes	No
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	No	No	Yes
Polymethylene polyphenyl isocyanate	9016-87-9	No	Yes	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Diphenylmethane diisocyanate	26447-40-5	Yes	No	Yes	No	Yes
Isocyanic acid,						

methylenedi-p-phenylene ester	101-68-8	Yes	No	Yes	No	Yes
Polymethylene polyphenyl isocyanate	9016-87-9	Yes	No	No	No	Yes

Belgium

Labor

Belgium - Substances and Preparations - Carcinogens and Mutagens

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	D1A, D2A, D2B
• Polymethylene polyphenyl isocyanate	9016-87-9	D1A, D2A, D2B

Canada - WHMIS - Ingredient Disclosure List

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	0.1 %
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Environment

Canada - CEPA - Priority Substances List

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

• Diphenylmethane diisocyanate	26447-40-5	Binders (listed under Certain isocyanates); Curing agents (listed under Certain isocyanates); Glues (listed under Certain isocyanates); Paints (listed under Certain isocyanates); Coatings (listed under Certain isocyanates); Molding compounds (listed under Certain isocyanates)
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Binders; Curing agents; Glues; Paints; Coatings; Molding compounds
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Diphenylmethane diisocyanate	26447-40-5	Xn; R20-48/20 Xi; R36/37/38 Carc.Cat.3; R40 R42/43
--------------------------------	------------	---

• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Xn; R20-48/20 Xi; R36/37/38 Carc.Cat.3; R40 R42/43
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits		
• Diphenylmethane diisocyanate	26447-40-5	5%≤C: Xi; R:36/37/38 0.1% ≤C: R:42
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	5%≤C: Xi; R:36/37/38 0.1% ≤C: R:42
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
• Diphenylmethane diisocyanate	26447-40-5	Xn R:20-36/37/38-40-42/43- 48/20 S:(1/2)-23-36/37-45
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Xn R:20-36/37/38-40-42/43- 48/20 S:(1/2)-23-36/37-45
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations		
• Diphenylmethane diisocyanate	26447-40-5	C, 2
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	C, 2
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
• Diphenylmethane diisocyanate	26447-40-5	S:(1/2)-23-36/37-45
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	S:(1/2)-23-36/37-45
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany

Labor

Germany - Immission Control - Qualifying Quantities for Major Accident Prevention

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - Immission Control - Qualifying Quantities for Safety Reporting

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - TRGS 505 - Specific Lead Regulations

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - TRGS 511 - Specific Ammonium Nitrate Regulations

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Environment

Germany - TA Luft - Types and Classes

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	organic Substance: 5.2.5, Class I
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - TA Luft - Emission Limits for Carcinogenic Substances

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - TA Luft - Emission Limits for Fibers

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - TA Luft - Emission Limits for Inorganic Dusts

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - TA Luft - Emission Limits for Inorganic Gases

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - TA Luft - Emission Limits for Organic Substances

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	0.10 kg/h Mass flow (Class I); 20 mg/m3 Mass concentration (Class I)
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	ID Number 635, hazard class 1 - low hazard to waters
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Germany - Water Classification (VwVwS) - Annex 3

• Diphenylmethane diisocyanate	26447-40-5	ID Number 8322, hazard class 1 - low hazard to waters
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	(listed under Methylene diphenyl diisocyanate)
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	5000 lb final RQ; 2270 kg final RQ
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	1.0 % de minimis concentration (listed under Chemical Category N120, Diisocyanates)
• Polymethylene polyphenyl isocyanate	9016-87-9	1.0 % de minimis concentration (listed under Chemical Category N120, Diisocyanates)

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed

• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Diphenylmethane diisocyanate	26447-40-5	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Polymethylene polyphenyl isocyanate	9016-87-9	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H330 - Fatal if inhaled
- H332 - Harmful if inhaled

Revision Date

- 19/January/2018

Preparation Date

- 18/October/2011

Other Information

- Update due to incorrectly identifying product as Part 1 in product name. Updated to Part A Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any

third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • I.S.O. Twin Pack™ Insulation Adhesive Part B

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company

200 4th Avenue S
Nashville, TN 37201-2208
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Skin Irritation 2 - H315
Skin Sensitization 1 - H317
Eye Irritation 2 - H319

DSD/DPD • Irritant (Xi)
R36/38, R43

2.2 Label Elements

CLP

WARNING



Hazard statements • H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary statements

Prevention • P261 - Avoid breathing mists, vapours, and/or spray.
P264 - Wash thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P280 - Wear protective gloves and eye/face protection , .

- Response •** P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P321 - Specific treatment, see supplemental first aid information.

- Storage/Disposal •** P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases •** R36/38 - Irritating to eyes and skin.
R43 - May cause sensitisation by skin contact.

- Safety phrases •** S24 - Avoid contact with skin.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 - Wear suitable gloves.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other Hazards

- CLP •** According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

- DSD/DPD •** This product is considered dangerous according to the European Directive 67/548/EEC.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012 •** Skin Irritation 2
Skin Sensitization 1
Eye Irritation 2A

2.2 Label elements

OSHA HCS 2012

WARNING



- Hazard statements •** Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation

Precautionary statements

- Prevention •** Avoid breathing mists, vapours, and/or spray.
Wash thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves and eye/face protection , .

- Response •** If on skin: Wash with plenty of water .
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 Specific treatment, see supplemental first aid information.

- Storage/Disposal** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Other Toxic Effects - D2B

2.2 Label elements

WHMIS



- Other Toxic Effects - D2B

WHMIS

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Siloxanes and Silicones, di-Me, reaction products with silica	CAS:67762-90-7	<= 2.5%	NDA	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA
Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	CAS:1760-24-3 EINECS:217-164-6	<= 2.5%	Ingestion/Oral-Rat LD50 • 2413 mg/kg	EU DSD/DPD: Self Classified: Xi; R36 EU CLP: Self Classified: Eye Irrit. 2, H319 OSHA HCS 2012: Eye Irrit. 2	NDA
Propanol, oxybis-	CAS:25265-71-8 EINECS:246-770-3	<= 2.5%	Ingestion/Oral-Rat LD50 • 14850 mg/kg Skin-Rabbit LD50 • >20 mL/kg	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA

Section 4 - First Aid Measures

4.1 Description of first aid measures

- | | |
|-------------------|---|
| Inhalation | <ul style="list-style-type: none">• Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention. |
| Skin | <ul style="list-style-type: none">• Wash skin with soap and water. If irritation develops and persists, get medical attention. |
| Eye | <ul style="list-style-type: none">• In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention. |
| Ingestion | <ul style="list-style-type: none">• Rinse mouth. Drink 1 - 2 glasses of water. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person. Get medical attention immediately. |

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|---------------------------|--|
| Notes to Physician | <ul style="list-style-type: none">• All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. |
|---------------------------|--|

Section 5 - Firefighting Measures

5.1 Extinguishing media

- | | |
|---------------------------------------|---|
| Suitable Extinguishing Media | <ul style="list-style-type: none">• Use fire extinguishing media as appropriate for surrounding conditions. |
| Unsuitable Extinguishing Media | <ul style="list-style-type: none">• No data available |

5.2 Special hazards arising from the substance or mixture

- | | |
|---|---|
| Unusual Fire and Explosion Hazards | <ul style="list-style-type: none">• Dried solids can burn and release toxic fumes and vapors. |
| Hazardous Combustion Products | <ul style="list-style-type: none">• No data available |

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA).
SMALL FIRES: Move containers from fire area if you can do it without risk.
LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- | | |
|-----------------------------|---|
| Personal Precautions | <ul style="list-style-type: none">• Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. |
| Emergency Procedures | <ul style="list-style-type: none">• As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Keep out of low areas. Stay upwind. |

6.2 Environmental precautions

- Prevent entry into waterways and sewers.

6.3 Methods and material for containment and cleaning up

- | | |
|--------------------------------------|--|
| Containment/Clean-up Measures | <ul style="list-style-type: none">• Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. |
|--------------------------------------|--|

Dike to collect large liquid spills.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use only in well ventilated areas. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapours, spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool, dry, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines			
	Result	Germany DFG	Germany TRGS
Propanol, oxybis- (25265-71-8)	TWAs	Not established	100 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, inhalable fraction, exposure factor 2)
	Ceilings	200 mg/m3 Peak (inhalable fraction)	Not established
	MAKs	100 mg/m3 TWA MAK (inhalable fraction)	Not established

Exposure Control Notations

Germany TRGS

•Propanol, oxybis- (25265-71-8): **Skin:** (skin notation)

Germany DFG

•Propanol, oxybis- (25265-71-8): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation (inhalable fraction))

8.2 Exposure controls

Engineering Measures/Controls

- This material is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- Wear appropriate chemical resistant clothing and chemical resistant gloves.

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Colorless liquid with polyether odor.
Color	Colorless	Odor	Polyether
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	9 to 10
Specific Gravity/Relative Density	= 0.98 @ 20 °C(68 °F) Water=1	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Product does not present an explosion hazard.
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	> 350 °C(> 662 °F)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not determined.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- High temperatures.

10.5 Incompatible materials

- Oxidizing agents.

10.6 Hazardous decomposition products

- Carbon monoxide, carbon dioxide, tin oxide.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Siloxanes and Silicones, di-Me, reaction products with silica (<= 2.5%)	67762-90-7	Multi-dose Toxicity: Inhalation-Rat TCLo • 30 mg/kg 6 Hour(s) 4 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Other changes</i> ; <i>Blood:Hemorrhage</i> ; <i>Related to Chronic Data:Death in the Other Multiple Dose data type field</i>
Ethylenediamine, N-(3-(trimethoxysilyl)propyl)- (<= 2.5%)	1760-24-3	Acute Toxicity: Ingestion/Oral-Rat LD50 • 2413 mg/kg; <i>Behavioral:Tremor</i> ; <i>Gastrointestinal:Hypermotility, diarrhea</i> ; <i>Gastrointestinal:Other changes</i> ; Skin-Rat LD50 • >2009 mg/kg; Irritation: Eye-Rabbit • 15 mg • Severe irritation; Skin-Rabbit • 500 mg-Open • Mild irritation
Propanol, oxybis- (<= 2.5%)	25265-71-8	Acute Toxicity: Ingestion/Oral-Rat LD50 • 14850 mg/kg; Skin-Rabbit LD50 • >20 mL/kg

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2A
Skin sensitization	EU/CLP • Skin Sensitizer 1 OSHA HCS 2012 • Skin Sensitizer 1
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

Potential Health Effects

Inhalation

- Acute (Immediate)** • May cause irritation.
- Chronic (Delayed)** • No data available

Skin

- Acute (Immediate)** • Causes skin irritation. May cause skin sensitization. Symptoms include redness, and skin rash.
- Chronic (Delayed)** • No data available

Eye

- Acute (Immediate)** • Causes serious eye irritation.
- Chronic (Delayed)** • No data available

Ingestion

- Acute (Immediate)** • Although swallowing this product is an unlikely means of exposure, irritation of the mouth, pharynx, esophagus and stomach can develop following ingestion.
- Chronic (Delayed)** • No data available

Key to abbreviations

LD = Lethal Dose

TC = Toxic Concentration

Section 12 - Ecological Information**12.1 Toxicity**

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations**13.1 Waste treatment methods**

- Product waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
ADN	NDA	Not Regulated	NDA	NDA	NDA
ADR/RID	NDA	Not Regulated	NDA	NDA	NDA

IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA
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14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code • Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute

State Right To Know				
Component	CAS	MA	NJ	PA
Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	No	No	No
Propanol, oxybis-	25265-71-8	No	No	Yes
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Yes	No	Yes	Yes	No
Propanol, oxybis-	25265-71-8	Yes	No	Yes	Yes	No
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Yes	No	Yes	No	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Yes	Yes	Yes
Propanol, oxybis-	25265-71-8	Yes	Yes	Yes
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Yes	Yes	Yes

Australia

Labor

Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Australia - High Volume Industrial Chemicals List

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Australia - List of Designated Hazardous Substances - Classification

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Environment**Australia - National Pollutant Inventory (NPI) Substance List**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Australia - Ozone Protection Act - Scheduled Substances

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Australia - Priority Existing Chemical Program

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Belgium**Labor****Belgium - Substances and Preparations - Carcinogens and Mutagens**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Bulgaria**Environment****Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 30 Minute

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - Annual

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Canada**Labor****Canada - WHMIS - Classifications of Substances**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed

• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
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Canada - WHMIS - Ingredient Disclosure List

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Environment**Canada - CEPA - Priority Substances List**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

China**Other****China - Annex I & II - Controlled Chemicals Lists**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Denmark**Environment****Denmark - List of Undesirable Substances - Product Groups/Function**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Europe**Other****EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany

Labor

Germany - Immission Control - Qualifying Quantities for Major Accident Prevention

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - Immission Control - Qualifying Quantities for Safety Reporting

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - TRGS 505 - Specific Lead Regulations

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - TRGS 511 - Specific Ammonium Nitrate Regulations

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Environment

Germany - TA Luft - Types and Classes

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - TA Luft - Emission Limits for Carcinogenic Substances

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - TA Luft - Emission Limits for Fibers

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - TA Luft - Emission Limits for Inorganic Dusts

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - TA Luft - Emission Limits for Inorganic Gases

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - TA Luft - Emission Limits for Organic Substances

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
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• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	ID Number 849, not considered hazardous to water

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Germany - Water Classification (VwVwS) - Annex 3

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	ID Number 7703, hazard class 1 - low hazard to waters
• Propanol, oxybis-	25265-71-8	ID Number 3419, hazard class 1 - low hazard to waters
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Mexico**Other****Mexico - Hazard Classifications**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Mexico - Regulated Substances

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed

• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

United States - Pennsylvania

Labor**U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-	1760-24-3	Not Listed
• Propanol, oxybis-	25265-71-8	Not Listed
• Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Revision Date**

- 19/January/2018

Preparation Date

- 13/April/2009

Other Information

- Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No data available

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product identifier**

Product Name • ISO 95+™ GL (Flat and Tapered), ISO 95+™ CAN

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company

200 4th Avenue S
Nashville, TN 37201-2208
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification**EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP • Not classified

DSD/DPD • Not classified

2.2 Label Elements

CLP

Hazard statements • No label element(s) required

DSD/DPD

Risk phrases • No label element(s) required

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

DSD/DPD • According to European Directive 1999/45/EC this preparation is not considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Not classified

2.2 Label elements

OSHA HCS 2012
Hazard statements • No label elements(s) required

2.3 Other hazards

OSHA HCS 2012 • This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS • Not classified

2.2 Label elements

WHMIS • No label element(s) required

2.3 Other hazards

WHMIS • In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Glass, oxide, chemicals	CAS:65997-17-3 EC Number:266-046-0	< 11%	NDA	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA
2-Methylbutane	CAS:78-78-4 EC Number:201-142-8	4.5% TO 9.9%	Inhalation-Rat LC50 • 280000 mg/m ³ 4 Hour (s)	EU DSD/DPD: EU CLP: Annex VI: Flam. Liq. 1, H224; Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic Chronic 2, H411; EUH066 OSHA HCS 2012: Flam Liq 1; Eye Irrit. 2A; Skin Irrit. 2; STOT SE 3: Resp. Irrit. & Narc., Asp. Tox. 1	NDA
Pentane	CAS:109-66-0 EC Number:203-692-4	0.05% TO 5.5%	Inhalation-Rat LC50 • 364 g/m ³ 4 Hour(s) Ingestion/Oral-Rat LD50 • >2000 mg/kg	EU DSD/DPD: EU CLP, Annex VI, Table 3.2: F+, R12; Xn, R65; R66; R67; N, R51, R53 EU CLP: Annex VI: Flam. Liq. 2, H225; Asp. Tox. 1, H304; STOT SE 3: Narc., H336; Aquatic Chronic 2, H411; EUH066 OSHA HCS 2012: Flam. Liq. 1; Asp. Tox. 1.	NDA

				Eye Irrit. 2, Skin Irrit. 2, STOT SE 3: Narc.	
2-Propanol, 1-chloro -, 2,2',2"-phosphate	CAS:13674-84-5 EC Number:237-158-7	< 5%	Ingestion/Oral-Rat LD50 • 1500 mg/kg	EU DSD/DPD: Self Classified: Xn, R22 EU CLP: Self Classified: Acute Tox. 4, H302 OSHA HCS 2012: Acute Tox. 4 (Oral)	NDA

See Section 11 for Toxicological Information. See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation**
- Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
- Ingestion**
- Rinse mouth. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- No specific actions or treatments recommended related to exposure to this material.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- LARGE FIRE: Water spray, fog or regular foam.
 - SMALL FIRES: Dry chemical, CO2, water spray or regular foam.
- Unsuitable Extinguishing Media**
- No data available.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Burning of this product will produce thick black smoke. Toxic fumes and vapors may be produced. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Isopentane and n-pentane, highly flammable materials, may be present within this product.
- Hazardous Combustion Products**
- Carbon dioxide and carbon monoxide, phosphorus oxides, and phosphoric acid.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • Not applicable.

Emergency Procedures • Not applicable.

6.2 Environmental precautions

- No special precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures • Avoid generating dust.
Pick up large pieces. Sweep and scoop up material and put into a suitable container for disposal as a non-hazardous waste.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling • Use only in well ventilated areas. Wear appropriate personal protective equipment. Protect against dust that may be generated by reprocessing, altering or applying this product. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage • Keep away from heat, sparks and flame. Store in a cool, dry place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Alberta	Canada British Columbia	Canada New Brunswick	Canada Ontario
Pentane (109-66-0)	TWAs	600 ppm TWA (listed under Pentane, all isomers)	600 ppm TWA; 1770 mg/m ³ TWA	600 ppm TWA (listed under Pentane, all isomers)	600 ppm TWA; 1770 mg/m ³ TWA	600 ppm TWA
	STELs	Not established	Not established	Not established	750 ppm STEL; 2210 mg/m ³ STEL	Not established
2-Methylbutane (78-78-4)	TWAs	600 ppm TWA (listed under Pentane, all isomers)	600 ppm TWA; 1770 mg/m ³ TWA	600 ppm TWA (listed under Pentane, all isomers)	Not established	600 ppm TWA (listed under Pentane, all isomers)
Glass, oxide, chemicals	TWAs	1 fiber/cm ³ TWA (respirable fibers: length >5 µm, aspect ratio ≥3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination, listed	1 fibre/cm ³ TWA <i>as Glass wool fiber</i>	1 fibre/cm ³ TWA (fibres >5 µm, with an aspect ratio of ≥3:1, as determined by the membrane filter method at 400-450 times magnification (4 mm objective), using phase-contrast illumination, listed	1 fibre/cm ³ TWA (fibres >5 µm with a diameter <3 µm, aspect ratio >5:1) <i>as Glass wool fiber</i>	1 fibre/cm ³ TWA (fibres >5 µm in length and an aspect ratio ≥3:1 as determined by the membrane filter method at 400-450 times magnification (4 -mm objective), using phase-contrast illumination, respirable, listed

		under Synthetic vitreous fibers) <i>as Glass wool fiber</i>		under Synthetic vitreous fibres) <i>as Glass wool fiber</i>		under Synthetic Vitreous Fibres (Man Made Mineral Fibres)) <i>as Glass wool fiber</i>
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Quebec	Canada Yukon	Europe	NIOSH	OSHA
Pentane (109-66-0)	TWAs	120 ppm TWAEV; 350 mg/m3 TWAEV	600 ppm TWA; 1800 mg/m3 TWA	1000 ppm TWA; 3000 mg/m3 TWA	120 ppm TWA; 350 mg/m3 TWA	1000 ppm TWA; 2950 mg/m3 TWA
	STELs	Not established	750 ppm STEL; 2250 mg/m3 STEL	Not established	Not established	Not established
	Ceilings	Not established	Not established	Not established	610 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)	Not established
2-Methylbutane (78-78-4)	TWAs	Not established	Not established	1000 ppm TWA; 3000 mg/m3 TWA	Not established	Not established
Glass, oxide, chemicals	TWAs	2 fibre/cm3 TWAEV (respirable, listed under Fibres - Artificial Vitreous Mineral Fibres) <i>as Glass wool fiber</i>	30 mppcf TWA; 10 mg/m3 TWA (respirable mass) <i>as Glass wool fiber</i>	Not established	3 fiber/cm3 TWA (fibers <= 3.5 µm in diameter and >= 10 µm in length); 5 mg/m3 TWA (total) <i>as Glass wool fiber</i>	Not established

8.2 Exposure controls

Engineering Measures/Controls

- No special controls are expected to be needed.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety goggles.

Hands

- Wear appropriate gloves.

Skin/Body

- Wear long sleeves and/or protective coveralls if determined to be needed by the end-user.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	White rigid cellular sheets with no odor.
Color	White	Odor	Odorless
Odor Threshold	Data lacking		

General Properties

Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Insoluble
Viscosity	Data lacking	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizer.		

Volatility

Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		

Flammability

Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not flammable.		

Environmental

Octanol/Water Partition coefficient	Data lacking		
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9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity**10.1 Reactivity**

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization not indicated.

10.4 Conditions to avoid

- No data available.

10.5 Incompatible materials

- No data available.

10.6 Hazardous decomposition products

- No data available.

Section 11 - Toxicological Information**11.1 Information on toxicological effects**

Components		
Pentane (0.05% TO 5.5%)	109-66-0	Acute Toxicity: Ingestion/Oral-Rat LD50 • >2000 mg/kg; Inhalation-Rat LC50 • 364 g/m³ 4 Hour(s)
2-Methylbutane (4.5% TO 9.9%)	78-78-4	Acute Toxicity: Inhalation-Rat LC50 • 280000 mg/m³ 4 Hour(s)
2-Propanol, 1-chloro-, 2,2',2"-phosphate (< 5%)	13674-84-5	Acute Toxicity: Ingestion/Oral-Rat LD50 • 1500 mg/kg; Behavioral:Tremor; Behavioral:Convulsions or effect on seizure threshold

GHS Properties	Classification
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Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Route(s) of entry/exposure

- Inhalation, Skin, Eye, Ingestion

Medical Conditions

- Disorders of the lungs.

Aggravated by Exposure**Potential Health Effects****Inhalation****Acute (Immediate)**

- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)

- No data available

Skin**Acute (Immediate)**

- Exposure to dust may cause mechanical irritation.

Chronic (Delayed)

- No data available.

Eye**Acute (Immediate)**

- Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed)

- No data available.

Ingestion**Acute (Immediate)**

- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed)

- No data available.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not regulated	NDA	NDA	NDA
TDG	NDA	Not regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not regulated	NDA	NDA	NDA
ADN	NDA	Not regulated	NDA	NDA	NDA
ADR/RID	NDA	Not regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not regulated	NDA	NDA	NDA

14.6 Special precautions for user

- None known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • None

State Right To Know				
Component	CAS	MA	NJ	PA
2-Methylbutane	78-78-4	Yes	Yes	Yes
2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	No	No	No
Glass, oxide, chemicals	65997-17-3	Yes	No	Yes
Pentane	109-66-0	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
2-Methylbutane	78-78-4	Yes	No	Yes	No	Yes
2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Yes	No	Yes	No	Yes
Glass, oxide, chemicals	65997-17-3	Yes	No	Yes	No	Yes
Pentane	109-66-0	Yes	No	Yes	No	Yes

Canada**Labor****Canada - WHMIS - Classifications of Substances**

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	B2
• 2-Methylbutane	78-78-4	B2
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Uncontrolled product according to WHMIS classification criteria (listed under Glass wool); D2A (listed under Mineral wool fiber)

Canada - WHMIS - Ingredient Disclosure List

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	1 %
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

Environment**Canada - CEPA - Priority Substances List**

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

Other**Canada - Accelerated Reduction/Elimination of Toxics (ARET)**

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed

• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

Canada New Brunswick

Environment

Canada - New Brunswick - Ozone Depleting Substances - Schedule A

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

Canada - New Brunswick - Ozone Depleting Substances - Schedule B

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	F+; R12 N; R51-53 Xn; R65 R66 R67
• 2-Methylbutane	78-78-4	F+; R12 N; R51-53 Xn; R65 R66 R67
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	F+ Xn N R:12-51/53-65-66-67 S:(2)-9-16-29-33-61-62
• 2-Methylbutane	78-78-4	F+ Xn N R:12-51/53-65-66-67 S:(2)-9-16-29-33-61-62
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• 2-Propanol, 1-chloro-, 2,2',2"-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	C
• 2-Methylbutane	78-78-4	C
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	S:(2)-9-16-29-33-61-62
• 2-Methylbutane	78-78-4	S:(2)-9-16-29-33-61-62
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		(including mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers [or other mineral derived fibers] of average diameter 1 µm or less)

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed

• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		carcinogen, initial date 7/1/90 (inhalable and biopersistent)

U.S. - California - Proposition 65 - Developmental Toxicity

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• 2-Propanol, 1-chloro-, 2,2',2''-phosphate	13674-84-5	Not Listed
• Pentane	109-66-0	Not Listed
• 2-Methylbutane	78-78-4	Not Listed
• Glass, oxide, chemicals	65997-17-3	Not Listed
• Glass, oxide, chemicals as Glass wool fiber		Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H224 - Extremely flammable liquid and vapour
- H225 - Highly flammable liquid and vapour
- H302 - Harmful if swallowed
- H304 - May be fatal if swallowed and enters airways
- H336 - May cause drowsiness or dizziness
- H411 - Toxic to aquatic life with long lasting effects
- EUH066 - Repeated exposure may cause skin dryness or cracking.
- R12 - Extremely flammable.
- R22 - Harmful if swallowed.
- R51 - Toxic to aquatic organisms.
- R53 - May cause long-term adverse effects in the aquatic environment.
- R65 - Harmful: may cause lung damage if swallowed.
- R66 - Repeated exposure may cause skin dryness or cracking.
- R67 - Vapours may cause drowsiness and dizziness.

Revision Date

- 18/January/2018

Preparation Date

- 19/April/2011

Other Information

- Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No data available

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • **SA-Solvent Based (SB) Primer, Enverge™ Solvent Based Primer, SBPro™ SB Primer, V-Force™ SB Primer**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Primer used to enhance adhesion of self-adhesive membranes on porous surfaces

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company

200 4th Avenue S
Nashville, TN 37201-2208
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

CLP

- Flammable Liquids 2 - H225
- Aspiration 1 - H304
- Skin Irritation 2 - H315
- Eye Irritation 2 - H319
- Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
- Germ Cell Mutagenicity 1B - H340
- Carcinogenicity 1B - H350
- Reproductive Toxicity 2 - H361f
- Specific Target Organ Toxicity Repeated Exposure 2 - H373
- Hazardous to the aquatic environment Acute 1 - H400
- Hazardous to the aquatic environment Chronic 1 - H410

2.2 Label Elements

CLP

DANGER



Hazard statements • H225 - Highly flammable liquid and vapour

H304 - May be fatal if swallowed and enters airways
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H336 - May cause drowsiness or dizziness
 H340 - May cause genetic defects.
 H350 - May cause cancer.
 H361f - Suspected of damaging fertility.
 H373 - May cause damage to organs through prolonged or repeated exposure.
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

- Prevention •** P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 - Keep container tightly closed.
 P240 - Ground and/or bond container and receiving equipment.
 P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P264 - Wash thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response •** P370+P378 - In case of fire: Use appropriate media for extinction.
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 - Call a POISON CENTER/doctor if you feel unwell.
 P302+P352 - IF ON SKIN: Wash with plenty of water.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P321 - Specific treatment, see supplemental first aid information.
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P331 - Do NOT induce vomiting.
 P308+P313 - IF exposed or concerned: Get medical advice/attention.
 P314 - Get medical advice/attention if you feel unwell.
 P391 - Collect spillage.
- Storage/Disposal •** P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 P235 - Keep cool.
 P405 - Store locked up.
 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Flammable Liquids 2
 - Aspiration 1
 - Eye Irritation 2
 - Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
 - Reproductive Toxicity 2
 - Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements •** Highly flammable liquid and vapour
May be fatal if swallowed and enters airways
Causes serious eye irritation
May cause drowsiness or dizziness
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention •** Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
Keep container tightly closed.
Ground and/or bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe mist, vapours and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
- Response •** In case of fire: Use appropriate media for extinction.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Take off immediately all contaminated clothing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
Do NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
- Storage/Disposal •** Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS 2015

2.1 Classification of the substance or mixture

WHMIS 2015

- Flammable Liquids 2
Aspiration 1
Eye Irritation 2
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Reproductive Toxicity 2

Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements**WHMIS 2015****DANGER**

- Hazard statements •** Highly flammable liquid and vapour
 May be fatal if swallowed and enters airways
 Causes serious eye irritation
 May cause drowsiness or dizziness
 Suspected of damaging fertility or the unborn child.
 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention •** Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 No smoking.
 Keep container tightly closed.
 Use non-sparking tools.
 Take action to prevent static discharges.
 Ground and bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/ equipment.
 Do not breathe mist, vapours and/or spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.
- Response •** In case of fire: Use appropriate media for extinction.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Call a POISON CENTER/doctor if you feel unwell.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 Do NOT induce vomiting.
 IF exposed or concerned: Get medical advice/attention.
 Get medical advice/attention if you feel unwell.
- Storage/Disposal •** Store in a well-ventilated place. Keep container tightly closed.
 Keep cool.
 Store locked up.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards**WHMIS 2015**

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients**3.1 Substances**

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Naphtha (petroleum), hydrotreated light	CAS: 64742-49-0 EC Number: 265-151-9 EU Index: 649-328-00-1	30% TO 60%	NDA	EU CLP: Annex VI, Table 3.1: Carc. 1B, H350; Muta. 1B, H340; Asp. Tox. 1, H304 OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Hexane [0% TO 60%]	CAS: 110-54-3 EC Number: 203-777-6 EU Index: 601-037-00-0	0% TO 60%	Ingestion/Oral-Rat LD50 • 15840 mg/kg Inhalation-Rat LC50 • 48000 ppm 4 Hour(s)	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; Repr. 2, H361f; STOT SE 3: Narc., H336; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc.; STOT RE 1 (CNS/Inhl, PNS/Inhl); Asp. Tox. 1 WHMIS 2015: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc.; STOT RE 1 (CNS/Inhl, PNS/Inhl); Asp. Tox. 1	NDA
Heptane [0% TO 60%]	CAS: 142-82-5 EC Number: 205-563-8 EU Index: 601-008-00-2	0% TO 60%	Inhalation-Rat LC50 • 48000 ppm 4 Hour(s)	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; STOT SE 3: Narc., H336 (Inhalation); Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Flam. Liq. 2; STOT SE 3: Narc. (Inhl); Asp. Tox. 1 WHMIS 2015: Flam. Liq. 2; STOT SE 3: Narc. (Inhl); Asp. Tox. 1	NDA
Acetone	CAS: 67-64-1 EC Number: 200-662-2 EU Index: 606-001-00-8	15% TO 40%	Ingestion/Oral-Rat LD50 • 5800 mg/kg Inhalation-Rat LC50 • 50100 mg/m³ 8 Hour (s)	EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3: Narc., H336; EUH066; OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc. WHMIS 2015: Flam. Liq. 2; Eye Irrit. 2; Repr. 2 (Inhl); STOT SE 3: Narc.	NDA

See Section 16 for full text of H-statements.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention.

Skin

- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin. Remove and isolate contaminated clothing. Wash skin with soap and water. If irritation develops and persists, get medical attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- Do NOT induce vomiting. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- LARGE FIRES: Water spray, fog or alcohol-resistant foam.
 - SMALL FIRES: Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media

- Do not use a direct stream of water.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Containers may explode when heated. Vapor explosion hazard indoors, outdoors or in sewers. Many liquids are lighter than water. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Runoff to sewer may create fire or explosion hazard. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

- Irritating and/or toxic gases or fumes may be generated by thermaldecomposition or combustion. Toxic and/or irritating gases or fumes can emanate from empty containers when submitted to high temperatures: CO, CO₂, Aldehydes, ketone, acrolein, halogenated compound.

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk. LARGE FIRES: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out. Stop leak if safe to do so. If leak cannot be stopped, and if there is no risk to the surrounding area, let the fire burn itself out.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist/vapours/spray. Avoid contact with skin, eyes, and clothing.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Use clean non-sparking tools to collect absorbed material.
A vapor suppressing foam may be used to reduce vapors.
All equipment used when handling the product must be grounded.
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
LARGE SPILLS: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Keep away from heat, sparks and open flame. Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe mist/vapours/spray. Avoid contact with skin, eyes, and clothing. Do not ingest. Take precautionary measures against static charges. Bond and ground all transfer containers and equipment. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near container. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Protect from sunlight.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Australia	Belgium	Canada Alberta	Canada British Columbia
Heptane (142-82-5)	STELs	500 ppm STEL (listed under Heptane, all isomers)	500 ppm STEL; 2050 mg/m ³ STEL	500 ppm STEL; 2085 mg/m ³ STEL	500 ppm STEL; 2050 mg/m ³ STEL	500 ppm STEL
	TWAs	400 ppm TWA (listed under Heptane, all isomers)	400 ppm TWA; 1640 mg/m ³ TWA	400 ppm TWA; 1664 mg/m ³ TWA	400 ppm TWA; 1640 mg/m ³ TWA	400 ppm TWA
Hexane (110-54-3)	TWAs	50 ppm TWA	20 ppm TWA; 72 mg/m ³ TWA	20 ppm TWA; 72 mg/m ³ TWA	50 ppm TWA; 176 mg/m ³ TWA	20 ppm TWA
Acetone (67-64-1)	STELs	500 ppm STEL	1000 ppm STEL; 2375 mg/m ³ STEL	1000 ppm STEL; 2420 mg/m ³ STEL	750 ppm STEL; 1800 mg/m ³ STEL	500 ppm STEL
	TWAs	250 ppm TWA	500 ppm TWA; 1185 mg/m ³ TWA	500 ppm TWA; 1210 mg/m ³ TWA	500 ppm TWA; 1200 mg/m ³ TWA	250 ppm TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut

Heptane (142-82-5)	STELs	500 ppm STEL (listed under Heptane, all isomers)	500 ppm STEL; 2050 mg/m3 STEL	500 ppm STEL	500 ppm STEL (listed under Heptane, all isomers)	500 ppm STEL
	TWAs	400 ppm TWA (listed under Heptane, all isomers)	400 ppm TWA; 1640 mg/m3 TWA	400 ppm TWA	400 ppm TWA (listed under Heptane, all isomers)	400 ppm TWA
Hexane (110-54-3)	TWAs	50 ppm TWA	50 ppm TWA; 176 mg/m3 TWA	50 ppm TWA	50 ppm TWA	50 ppm TWA
	STELs	Not established	Not established	62.5 ppm STEL	Not established	62.5 ppm STEL
Acetone (67-64-1)	STELs	500 ppm STEL	750 ppm STEL; 1782 mg/m3 STEL	750 ppm STEL	500 ppm STEL	750 ppm STEL
	TWAs	250 ppm TWA	500 ppm TWA; 1188 mg/m3 TWA	500 ppm TWA	250 ppm TWA	500 ppm TWA

Exposure Limits/Guidelines (Con't.)

	Result	Canada Ontario	Canada Quebec	Canada Saskatchewan	Canada Yukon	Denmark
Heptane (142-82-5)	TWAs	400 ppm TWA	400 ppm TWA EV; 1640 mg/m3 TWA EV	400 ppm TWA	400 ppm TWA; 1600 mg/m3 TWA	200 ppm TWA; 820 mg/m3 TWA
	STELs	500 ppm STEL (listed under Heptane, all isomers)	500 ppm STEV; 2050 mg/m3 STEV	Not established	500 ppm STEL; 2000 mg/m3 STEL	Not established
Hexane (110-54-3)	TWAs	50 ppm TWA	50 ppm TWA EV; 176 mg/m3 TWA EV	50 ppm TWA	100 ppm TWA; 360 mg/m3 TWA	20 ppm TWA; 72 mg/m3 TWA
	STELs	Not established	Not established	Not established	125 ppm STEL; 450 mg/m3 STEL	Not established
Acetone (67-64-1)	TWAs	500 ppm TWA	500 ppm TWA EV; 1190 mg/m3 TWA EV	500 ppm TWA	1000 ppm TWA; 2400 mg/m3 TWA	250 ppm TWA; 600 mg/m3 TWA
	STELs	750 ppm STEL	1000 ppm STEV; 2380 mg/m3 STEV	Not established	1250 ppm STEL; 3000 mg/m3 STEL	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Europe	Germany DFG	Germany TRGS	NIOSH	OSHA
Heptane (142-82-5)	TWAs	Not established	Not established	500 ppm TWA AGW (all isomers, exposure factor 1); 2100 mg/m3 TWA AGW (all isomers, exposure factor 1)	85 ppm TWA; 350 mg/m3 TWA	500 ppm TWA; 2000 mg/m3 TWA
	Ceilings	Not established	500 ppm Peak; 2100 mg/m3 Peak	Not established	440 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)	Not established
	MAKs	Not established	500 ppm TWA MAK; 2100 mg/m3 TWA MAK	Not established	Not established	Not established
Hexane (110-54-3)	TWAs	20 ppm TWA; 72 mg/m3 TWA	Not established	50 ppm TWA AGW (exposure factor 8); 180 mg/m3 TWA AGW (exposure factor 8)	50 ppm TWA; 180 mg/m3 TWA	500 ppm TWA; 1800 mg/m3 TWA
	Ceilings	Not established	400 ppm Peak; 1440 mg/m3 Peak	Not established	Not established	Not established
	MAKs	Not established	50 ppm TWA MAK; 180 mg/m3 TWA MAK	Not established	Not established	Not established

Acetone (67-64-1)	TWAs	Not established	Not established	500 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 1200 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)	250 ppm TWA; 590 mg/m3 TWA	1000 ppm TWA; 2400 mg/m3 TWA
	Ceilings	Not established	1000 ppm Peak; 2400 mg/m3 Peak	Not established	Not established	Not established
	MAKs	Not established	500 ppm TWA MAK; 1200 mg/m3 TWA MAK	Not established	Not established	Not established

Exposure Control Notations

Germany DFG

- Heptane (142-82-5): **Pregnancy:** (classification not yet possible)
- Hexane (110-54-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)
- Acetone (67-64-1): **Pregnancy:** (risk to embryo/fetus probable)

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced. Minimize breathing mist/vapor/spray.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear appropriate gloves.

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

TWAEV = Time-Weighted Average Exposure Value

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Red liquid with a strong solvent odor.
Color	Red	Odor	Solvent
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	= 0.77 Water=1	Water Solubility	Insoluble
Viscosity	250 Centipoise (cPs, cP) or mPas	Explosive Properties	Not explosive.
Oxidizing Properties:	Not an oxidizer.		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	> 1 Air=1
Evaporation Rate	Data lacking	VOC (Wt.)	Data lacking
Flammability			
Flash Point	-23 °C(-9.4 °F)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Flammable Liquid.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Open flames, sparks, electrostatic discharge, heat and other ignition sources; prolonged exposure to direct sunlight.

10.5 Incompatible materials

- Strong acids, strong oxidizing and reducing agents, basis, halogenated compounds.

10.6 Hazardous decomposition products

- During a fire, irritating/toxic gases, such as carbon monoxide, carbon dioxide and other toxic and irritating compounds, such as formaldehyde, methanol, acetic acid, hydrogen peroxide, methane and ethylene oxide may be formed, depending on fire conditions.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Heptane (0% TO 60%)	142 -82- 5	<p>Acute Toxicity: Inhalation-Rat LC50 • 48000 ppm 4 Hour(s); Inhalation-Human TClO • 1000 ppm 6 Minute(s); Behavioral: Hallucinations, distorted perceptions;</p> <p>Multi-dose Toxicity: Inhalation-Rat TClO • 420 mg/m³ 12 Hour(s) 2 Week(s)-Intermittent; Brain and Coverings: Other degenerative changes; Liver: Other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: Cytochrome oxidases (including oxidative phosphorylation); Inhalation-Rat TClO • 2970 ppm 26 Week(s)-Intermittent; Behavioral: Somnolence (general depressed activity); Lungs, Thorax, or Respiration: Dyspnea; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: Phosphatases</p>
Hexane (0% TO 60%)	110 -54- 3	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 15840 mg/kg; Ingestion/Oral-Rat LD50 • 29700 mg/kg; Behavioral: Somnolence (general depressed activity); Gastrointestinal: Changes in structure or function of salivary glands; Gastrointestinal: Hypermotility, diarrhea; Ingestion/Oral-Rat TDLo • 20000 mg/kg; Reproductive Effects: Paternal Effects: Spermatogenesis; Reproductive Effects: Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands; Inhalation-Rat LC50 • 48000 ppm 4 Hour(s); Irritation: Eye-Rabbit • 10 mg • Mild irritation;</p> <p>Multi-dose Toxicity: Inhalation-Human TClO • 190 mg/m³ 6 Year(s)-Intermittent; Peripheral Nerve and Sensation: Paresthesis;</p> <p>Reproductive: Ingestion/Oral-Mouse TDLo • 238 g/kg (6-15D preg); Reproductive Effects: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus); Inhalation-Rat TClO • 5000 ppm (6-19D preg); Reproductive Effects: Maternal Effects: Other effects; Reproductive Effects: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects: Specific Developmental Abnormalities: Musculoskeletal system; Tumorigen / Carcinogen: Inhalation-Mouse TClO • 9018 ppm 6 Hour(s) 2 Year(s)-Intermittent; Tumorigenic: Neoplastic by RTECS criteria; Liver: Tumors; Inhalation-Rat TClO • 1000 ppm 4 Hour(s) 59 Week(s)-Intermittent; Tumorigenic: Carcinogenic by RTECS criteria; Reproductive Effects: Tumorigenic Effects: Testicular tumors</p>
Acetone (15% TO 40%)	67- 64- 1	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 5800 mg/kg; Ingestion/Oral-Rat LD50 • 5800 mg/kg; Behavioral: Altered sleep time (including change in righting reflex); Behavioral: Tremor; Inhalation-Rat LC50 • 50100 mg/m³; Skin-Guinea Pig LD50 • >9400 µL/kg;</p> <p>Irritation: Eye-Rabbit • 20 mg • Severe irritation; Skin-Rabbit • 395 mg-Open • Mild irritation;</p> <p>Mutagen: Sex chromosome loss & nondisjunction • Inhalation-Mouse • 12 g/L; Cytogenetic analysis • Unreported Route-Hamster • Fibroblast (Somatic cell) • 40 g/L;</p> <p>Reproductive: Ingestion/Oral-Rat TDLo • 273 g/kg (13W male); Reproductive Effects: Paternal Effects: Spermatogenesis; Inhalation-Mouse TClO • 6600 ppm (6-17D preg); Reproductive Effects: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects: Effects on Fertility: Post-implantation mortality; Inhalation-Rat TClO • 30 mg/m³ (1-13D preg); Reproductive Effects: Effects on Fertility: Pre-implantation mortality; Reproductive Effects: Effects on Fertility: Post-implantation mortality; Reproductive Effects: Effects on Embryo or Fetus: Fetal death; Inhalation-Rat TClO • 11000 ppm (6-19D preg); Reproductive Effects: Specific Developmental Abnormalities: Other developmental abnormalities</p>

GHS Properties	Classification
Acute toxicity	<p>EU/CLP • Classification criteria not met</p> <p>OSHA HCS 2012 • Classification criteria not met</p> <p>WHMIS 2015 • Classification criteria not met</p>
Skin corrosion/Irritation	<p>EU/CLP • Skin Irritation 2</p> <p>OSHA HCS 2012 • Classification criteria not met</p> <p>WHMIS 2015 • Classification criteria not met</p>
Serious eye damage/Irritation	<p>EU/CLP • Eye Irritation 2</p> <p>OSHA HCS 2012 • Eye Irritation 2</p> <p>WHMIS 2015 • Eye Irritation 2</p>
Skin sensitization	<p>EU/CLP • Classification criteria not met</p> <p>OSHA HCS 2012 • Classification criteria not met</p> <p>WHMIS 2015 • Classification criteria not met</p>
Respiratory sensitization	<p>EU/CLP • Classification criteria not met</p> <p>OSHA HCS 2012 • Classification criteria not met</p> <p>WHMIS 2015 • Classification criteria not met</p>

Aspiration Hazard	EU/CLP • Aspiration 1 OSHA HCS 2012 • Aspiration 1 WHMIS 2015 • Aspiration 1
Carcinogenicity	EU/CLP • Carcinogenicity 1B; May cause cancer OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Germ Cell Mutagenicity 1B OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Toxicity for Reproduction	EU/CLP • Toxic to Reproduction 2 OSHA HCS 2012 • Toxic to Reproduction 2 WHMIS 2015 • Toxic to Reproduction 2
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects WHMIS 2015 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
STOT-RE	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1 WHMIS 2015 • Specific Target Organ Toxicity Repeated Exposure 1

Potential Health Effects

Inhalation

Acute (Immediate)

- May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)

- No data available.

Skin

Acute (Immediate)

- Causes skin irritation.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Causes serious eye irritation.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- Material may be aspirated into the lungs during ingestion and/or subsequent vomiting. Aspiration of this material will cause severe lung injury, chemical pneumonitis, pulmonary edema or death.

Chronic (Delayed)

- No data available.

Other

Chronic (Delayed)

- Chronic exposure to hexane may produce peripheral neuropathy (motor sensory) and CNS abnormalities.

Mutagenic Effects

- Animal tests for components show repeated and prolonged exposure may cause mutagenic effects.

Carcinogenic Effects

- Repeated and prolonged exposure may cause cancer.

Reproductive Effects

- May cause adverse reproductive effects - such as birth defects, miscarriages or infertility based on animal data.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

Components		
Heptane (0% TO 60%)	142-82-5	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Oreochromis mossambicus (Mozambique Tilapia)</i> 375 mg/L Comments: Acute Toxicity of n-Heptane and n-Hexane on Worm and Fish
Hexane (0% TO 60%)	110-54-3	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Fathead minnow</i> 2.1 mg/L Aquatic Toxicity-Crustacea: 48 Hour(s) EC50 <i>Water Flea (Daphnia magna)</i> 3.878 mg/L

- This material may be toxic to aquatic organisms and cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1133	Adhesives	3	II	NDA
TDG	UN1133	ADHESIVES	3	II	NDA
IMO/IMDG	UN1133	ADHESIVES	3	II	NDA
ADN	UN1133	ADHESIVES	3	II	NDA
ADR/RID	UN1133	ADHESIVES	3	II	NDA
IATA/ICAO	UN1133	Adhesives	3	II	NDA

14.6 Special precautions for user

- None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute, Chronic, Fire

State Right To Know				
Component	CAS	MA	NJ	PA
Acetone	67-64-1	Yes	Yes	Yes
Heptane	142-82-5	Yes	Yes	Yes
Hexane	110-54-3	Yes	Yes	Yes
Naphtha (petroleum), hydrotreated light	64742-49-0	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	Japan ENCS
Acetone	67-64-1	Yes	No	Yes	No	Yes
Heptane	142-82-5	Yes	No	Yes	No	Yes
Hexane	110-54-3	Yes	No	Yes	No	Yes
Naphtha (petroleum), hydrotreated light	64742-49-0	Yes	No	Yes	No	No

Inventory (Con't.)			
Component	CAS	Korea KECL	TSCA
Acetone	67-64-1	Yes	Yes
Heptane	142-82-5	Yes	Yes
Hexane	110-54-3	Yes	Yes
Naphtha (petroleum), hydrotreated light	64742-49-0	Yes	Yes

Australia

Labor

Australia - Work Health and Safety Regulations - Hazardous Chemicals Requiring Health Monitoring

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Australia - High Volume Industrial Chemicals List

• Naphtha (petroleum), hydrotreated light	64742-49-0	
• Acetone	67-64-1	
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	

Australia - List of Designated Hazardous Substances - Classification

• Naphtha (petroleum), hydrotreated light	64742-49-0	Xn Carc.Cat.2, Muta.Cat.2 R45, R46, R65
• Acetone	67-64-1	F, Xi R11, R36, R66, R67

• Heptane	142-82-5	F, Xn, Xi, N R11, R65, R38, R67, R50, R53
• Hexane	110-54-3	F, Xn, Xi, N Repr.Cat.3 R11, R62, R48/20, R65, R38, R67, R51, R53

Environment

Australia - National Pollutant Inventory (NPI) Substance List

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	10 tonne/yr Threshold category 1
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	10 tonne/yr Threshold category 1

Australia - Ozone Protection Act - Scheduled Substances

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Australia - Priority Existing Chemical Program

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Belgium

Labor

Belgium - Substances and Preparations - Carcinogens and Mutagens

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Bulgaria

Environment

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	0.35 mg/m3 MAHCL
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 30 Minute

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	0.35 mg/m3 MAHCL
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	60.0 mg/m3 MAHCL

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - Annual

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Canada

Labor

Canada - WHMIS 1988 - Classifications of Substances

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	B2, D2B
• Heptane	142-82-5	B2, D2B
• Hexane	110-54-3	B2, D2A, D2B

Canada - WHMIS 1988 - Ingredient Disclosure List

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	1 %
• Heptane	142-82-5	1 %
• Hexane	110-54-3	1 %

Environment

Canada - CEPA - Priority Substances List

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Solvents

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Naphtha (petroleum), hydrotreated light	64742-49-0	Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65
• Acetone	67-64-1	F; R11 Xi; R36 R66 R67
• Heptane	142-82-5	F; R11 Xi; R38 N; R50-53 Xn; R65 R67
• Hexane	110-54-3	F; R11 Xi; R38 N; R51-53 Repr.Cat.3; R62 Xn; R65-48/20 R67

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	5%≤C: Xn; R:48/20

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Naphtha (petroleum), hydrotreated light	64742-49-0	T R:45-46-65 S:53-45
• Acetone	67-64-1	F Xi R:11-36-66-67 S:(2)-9-16-26
• Heptane	142-82-5	F Xn N R:11-38-65-67-50/53 S:(2)-9-16-29-33-60-61-62

• Hexane	110-54-3	F Xn N R:11-38-48/20-62-65-67-51/53 S:(2)-9-16-29-33-36/37-61-62
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Naphtha (petroleum), hydrotreated light	64742-49-0	P
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	C
• Hexane	110-54-3	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Naphtha (petroleum), hydrotreated light	64742-49-0	S:53-45
• Acetone	67-64-1	S:(2)-9-16-26
• Heptane	142-82-5	S:(2)-9-16-29-33-60-61-62
• Hexane	110-54-3	S:(2)-9-16-29-33-36/37-61-62

Germany**Labor****Germany - Immission Control - Qualifying Quantities for Major Accident Prevention**

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - Immission Control - Qualifying Quantities for Safety Reporting

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - TRGS 505 - Specific Lead Regulations

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Environment**Germany - TA Luft - Types and Classes**

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - TA Luft - Emission Limits for Carcinogenic Substances

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - TA Luft - Emission Limits for Fibers

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - TA Luft - Emission Limits for Inorganic Dusts

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - TA Luft - Emission Limits for Inorganic Gases

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - TA Luft - Emission Limits for Organic Substances

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	ID Number 6, hazard class 1 - low hazard to waters
• Heptane	142-82-5	ID Number 120, hazard class 2 - hazard to waters
• Hexane	110-54-3	ID Number 124, hazard class 2 - hazard to waters

Germany - Water Classification (VwVwS) - Annex 3

• Naphtha (petroleum), hydrotreated light	64742-49-0	ID Number 2502, hazard class 3 - severe hazard to waters
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	ID Number 120, hazard class 2 - hazard to waters
• Hexane	110-54-3	Not Listed

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	5000 lb final RQ; 2270 kg final RQ
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	5000 lb final RQ; 2270 kg final RQ

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	1.0 % de minimis concentration

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Included in waste stream: F039
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	

• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	0.28 mg/L (wastewater); 160 mg/kg (nonwastewater)
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	waste number U002 (ignitable waste)
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Naphtha (petroleum), hydrotreated light	64742-49-0	Not Listed
• Acetone	67-64-1	Not Listed
• Heptane	142-82-5	Not Listed
• Hexane	110-54-3	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H411 - Toxic to aquatic life with long lasting effects
EUH066 - Repeated exposure may cause skin dryness or cracking.

Revision Date

- 29/January/2018

Preparation Date

- 20/May/2013

Other Information

- Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company, LLC assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available

**1. Identification**

Product name : Sikaflex®-1A

Supplier : Sika Corporation

Address : 201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com

Telephone : (201) 933-8800

Telefax : (201) 804-1076

Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887
ehs@sika-corp.com

Recommended use of the chemical and restrictions on use : For further information, refer to the product technical data sheet.

2. Hazards identification**GHS Classification**

Respiratory sensitization, Category 1 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitization, Category 1 H317: May cause an allergic skin reaction.

Carcinogenicity, Category 1A H350: May cause cancer.

GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350 May cause cancer.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.



P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Warning : Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

See Section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
titanium dioxide	13463-67-7	>= 2 - < 5 %
xylene	1330-20-7	>= 2 - < 5 %
ethylbenzene	100-41-4	>= 0 - < 1 %
Quartz (SiO ₂)	14808-60-7	>= 0 - < 1 %
aromatic polyisocyanate	53317-61-6	>= 0 - < 1 %
Carbon black	1333-86-4	>= 0 - < 1 %
4,4'-methylenediphenyl diisocyanate	101-68-8	>= 0 - < 1 %

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.



In case of eye contact	: Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Induce vomiting immediately and call a physician. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	: Asthmatic appearance Allergic reactions See Section 11 for more detailed information on health effects and symptoms. sensitizing effects carcinogenic effects
Protection of first-aiders	: Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.
Notes to physician	: Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific extinguishing methods	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	: In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Deny access to unprotected persons.
Environmental precautions	: Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.



7. Handling and storage

- Advice on safe handling : Do not breathe vapors or spray mist.
 Avoid exceeding the given occupational exposure limits (see section 8).
 Do not get in eyes, on skin, or on clothing.
 For personal protection see section 8.
 Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
 Smoking, eating and drinking should be prohibited in the application area.
 Follow standard hygiene measures when handling chemical products.
- Conditions for safe storage : Prevent unauthorized access.
 Store in original container.
 Keep container tightly closed in a dry and well-ventilated place.
 Observe label precautions.
 Store in accordance with local regulations.
- Materials to avoid : no data available

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
xylene	1330-20-7	OSHA Z-1	TWA	100 ppm 435 mg/m3
		ACGIH	TWA	100 ppm
		ACGIH	STEL	150 ppm
		OSHA P0	STEL	150 ppm 655 mg/m3
ethylbenzene	100-41-4	OSHA P0	TWA	100 ppm 435 mg/m3
		ACGIH	TWA	100 ppm
		ACGIH	STEL	125 ppm
		OSHA Z-1	TWA	100 ppm 435 mg/m3
		OSHA P0	TWA	100 ppm 435 mg/m3



		OSHA P0	STEL	125 ppm 545 mg/m3
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*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

****Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminant (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

**9. Physical and chemical properties**

Appearance	: paste
Color	: various
Odor	: aromatic
Odor Threshold	: no data available
Flash point	: Note: not applicable
Ignition temperature	: not applicable
Decomposition temperature	: no data available
Lower explosion limit (Vol%)	: no data available
Upper explosion limit (Vol%)	: no data available
Flammability (solid, gas)	: no data available
Oxidizing properties	: no data available
Autoignition temperature	: no data available
pH	: no data available
Melting point/range / Freezing point	: no data available
Boiling point/boiling range	: no data available
Vapor pressure	: no data available
Density	: ca.1.4 g/cm ³ at 68 °F (20 °C)
Water solubility	: no data available
Partition coefficient: n- octanol/water	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: ca.> 20.5 mm ² /s at 104 °F (40 °C)
Relative vapor density	: no data available
Evaporation rate	: no data available
Burning rate	: no data available
Volatile organic compounds (VOC) content	: 40 g/l



10. Stability and reactivity

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: The product is chemically stable.
Possibility of hazardous reactions	: Stable under recommended storage conditions.
Conditions to avoid	: no data available
Incompatible materials	: no data available

11. Toxicological information**Acute toxicity****Product**

Acute oral toxicity	: no data available
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: no data available

Ingredients:**aromatic polyisocyanate :**

Acute oral toxicity	: LD50 Oral rat: > 5,000 mg/kg
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Carbon black :

Acute oral toxicity	: LD50 Oral rat: > 8,000 mg/kg
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4,4'-methylenediphenyl diisocyanate :

Acute inhalation toxicity	: Acute toxicity estimate : 1.5 mg/l Test atmosphere: dust/mist Method: Expert judgment
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Skin corrosion/irritation**Product**

no data available

Serious eye damage/eye irritation**Product**

no data available

Respiratory or skin sensitization**Product**

May cause an allergic skin reaction.



May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity**Product**

Mutagenicity : no data available

Carcinogenicity**Product**

Carcinogenicity : May cause cancer.

IARC

Group 2B: Possibly carcinogenic to humans

titanium dioxide 13463-67-7

ethylbenzene 100-41-4

Carbon black 1333-86-4

Group 1: Carcinogenic to humans

NTP

Quartz (SiO₂) 14808-60-7

Known to be human carcinogen

Quartz (SiO₂) 14808-60-7

Reproductive Toxicity/Fertility**Product**

Reproductive toxicity : no data available

Reproductive Toxicity/Development/Teratogenicity**Product**

Teratogenicity : no data available

STOT-single exposure**Product**

Assessment: no data available

STOT-repeated exposure

Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Product

Assessment: no data available

Aspiration toxicity**Product**

no data available



12. Ecological information

Other information

Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Component:

Carbon black

1333-86-4

Toxicity to fish:

LC50

Species: Brachydanio rerio (zebrafish)

Dose: > 1,000 mg/l

Exposure time: 96 h

13. Disposal considerations

Disposal methods

Waste from residues

: Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging

: Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods

Special precautions for user

no data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

15. Regulatory information

TSCA list

: All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

**EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard
Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
xylene 1330-20-7 2.60 %

Clean Air Act**Ozone-Depletion Potential**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

xylene 1330-20-7 2.60 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65

WARNING! This product contains a chemical known in the State of California to cause cancer.
WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

16. Other information**HMIS Classification**

Health	*	3
Flammability		0
Physical Hazard		0
Personal Protection		x

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the



National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 07/29/2014

Material number: 476501

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product identifier**

Product Name	• Splice Wash SW-100 Cleaner
Synonyms	• Light Aliphatic; Solvent Naptha (Petroleum)
CAS Number	• 64742-89-8
EC Number	• 265-192-2
REACH Pre-Registration Number	• 05-2115991350-46-0000
Product Description	• Thin, light colored liquid, hydrocarbon odor.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)	• Splice Wash SW-100 is designed to clean and prepare Firestone single ply membranes to receive adhesives as specified by Firestone Specifications and Details.
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1.3 Details of the supplier of the safety data sheet

Manufacturer	• Firestone Building Products Company 200 4th Avenue S Nashville, TN 37201-2208 United States firestonemsds@bfdp.com
Telephone (General)	• 800-428-4442

1.4 Emergency telephone number

Manufacturer	• (800) 424-9300 - CHEMTREC
Manufacturer	• (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification**EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP	• Flammable Liquids 2 - H225 Aspiration 1 - H304 Skin Irritation 2 - H315 Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335 Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336 Hazardous to the aquatic environment Chronic 2 - H411
DSD/DPD	• Flammable Irritant (Xi) Harmful (Xn) Dangerous to the Environment (N) R38, R65, R67, R11, R51/53

2.2 Label Elements

CLP**DANGER**

- Hazard statements •**
- H225 - Highly flammable liquid and vapour
 - H304 - May be fatal if swallowed and enters airways
 - H315 - Causes skin irritation
 - H335 - May cause respiratory irritation
 - H336 - May cause drowsiness or dizziness
 - H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

- Prevention •**
- P261 - Avoid breathing dust, fume, gas, mist, vapours and/or spray.
 - P264 - Wash thoroughly after handling.
 - P273 - Avoid release to the environment.
 - P240 - Ground and/or bond container and receiving equipment.
 - P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.

- Response •**
- P321 - Specific treatment, see supplemental first aid information.
 - P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P362 - Take off contaminated clothing and wash before reuse.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- Storage/Disposal •**
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 - P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

- Risk phrases •**
- R38 - Irritating to skin.
 - R65 - Harmful: may cause lung damage if swallowed.
 - R67 - Vapours may cause drowsiness and dizziness.
 - R11 - Highly flammable.
 - R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD**
- This product is considered dangerous according to the European Directive 67/548/EEC.

UN GHS Revision 3

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Third Revised Edition

2.1 Classification of the substance or mixture**UN GHS**

- Flammable Liquids 2
- Skin Irritation 2
- Eye Irritation 2A
- Aspiration 1
- Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects

Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Hazardous to the aquatic environment Chronic 2

2.2 Label elements

UN GHS

DANGER



- Hazard statements** • Highly flammable liquid and vapour
Causes skin irritation
Causes serious eye irritation
May be fatal if swallowed and enters airways
May cause respiratory irritation and drowsiness or dizziness
Toxic to aquatic life with long lasting effects

Precautionary statements

- Prevention** • Avoid breathing dust, fume, gas, mist, vapours and/or spray.
Keep container tightly closed.
Use only outdoors or in a well-ventilated area.
Wash : thoroughly after handling.
Wear protective gloves and eye/face protection , .
- Response** • Specific treatment, see supplemental first aid information.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
If skin irritation occurs: Get medical advice/attention.
Wash with plenty of soap and water.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
- Storage/Disposal** • Store in a well-ventilated place. Keep container tightly closed.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

UN GHS

- According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 1994

- Flammable Liquid
Flammable/Combustible Class IB
Irritant

2.2 Label elements

OSHA HCS 1994

- Not required

2.3 Other hazards

OSHA HCS 1994

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Flammable Liquids - B2
- Other Toxic Effects - D2B

2.2 Label elements

WHMIS



WHMIS

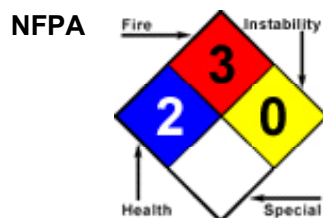
- Flammable Liquids - B2
- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information



See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Light aliphatic solvent naphtha	CAS:64742-89-8 EC Number:265-192-2 EINECS:265-192-2	100%	NDA	EU DSD/DPD: Self Classified Xi R38, Xn R67, R65, N; R51/53, F R11 EU CLP: Self Classified Skin Irrit 2, Asp Tox. 1, STOT SE 3: Narc, Aquatic Chronic 2, Flam Liq. 3 UN GHS Revision 3: Eye Irrit 2A, Skin Irrit 2, Asp Tox. 1, STOT SE 3: Narc, STOT SE 3: Resp. Irrit, Flam Liq. 3	NDA

3.2 Mixtures

- Material does not meet the criteria of a mixture according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other

proper respiratory medical device. Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention if artificial oxygen is administered.

- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. For minor skin contact, avoid spreading material on unaffected skin. Remove and isolate contaminated clothing and shoes. Call 911 or emergency medical service.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
- Ingestion**
- Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- If material is ingested and aspirated into the lungs it may cause chemical pneumonitis. Treat appropriately.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

- Unsuitable Extinguishing Media**
- No data available.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Heat builds up pressure in closed containers. Cool with water stream. Toxic fumes and vapors may be produced.
- Hazardous Combustion Products**
- Carbon dioxide, carbon monoxide, acrid smoke, irritating fumes.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear positive pressure self-contained breathing apparatus (SCBA).
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Runoff from fire control may cause pollution.
LARGE FIRES: Dike fire-control water for later disposal.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate enclosed areas.
- Emergency Procedures**
- As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stay upwind. Keep out of low areas. Keep unauthorized personnel away. Ventilate closed spaces before entering.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- **SMALL SPILLS:** Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Use clean non-sparking tools to collect absorbed material. All equipment used when handling the product must be grounded.
- **LARGE SPILLS:** Dike far ahead of spill for later disposal. A vapor suppressing foam may be used to reduce vapors.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Keep away from heat, sparks, and flame – No Smoking. Keep containers closed. Vapors of this material are heavier than air and will collect in low or confined areas. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near container. Static electricity may accumulate and create a fire hazard. Take precautionary measures against static charges. Bond and ground all transfer containers and equipment. Use only with adequate ventilation. Do not breathe (dust, vapor or spray mist) Ground fixed equipment.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Store locked up. Keep container closed when not in use. Keep away from incompatible materials.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines

- No exposure limits/guidelines available for the material or the components.

8.2 Exposure controls

Engineering Measures/Controls

- This adhesive is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety glasses.

Skin/Body

- Use protective gloves, Nitrile BT>360m. The actual work situation is not known. Glove recommendation based upon normal product use and incidental contact only. Contact glove supplier for help with glove selection.

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Thin, light colored liquid, hydrocarbon odor.
Color	Light color.	Odor	Hydrocarbon
Taste	No data available	Particulate Type	No data available
Particulate Size	No data available	Aerosol Type	No data available
Odor Threshold	No data available	Physical and Chemical Properties	No data available
General Properties			
Boiling Point	247 to 282 °F(119.4444 to 138.8889 °C)	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	Heat of Decomposition	No data available
pH	No data available	Specific Gravity/Relative Density	0.715 to 0.791 Water=1
Density	No data available	Bulk Density	No data available
Water Solubility	No data available	Solvent Solubility	Negligible
Viscosity	No data available	Explosive Properties	No data available
Oxidizing Properties:	No data available		
Volatility			
Vapor Pressure	26 mmHg (torr) @ 100 °F(37.7778 °C)	Vapor Density	3.8 Air=1
Evaporation Rate	1.2 n-Butyl Acetate = 1	VOC (Wt.)	No data available
VOC (Vol.)	No data available	Volatiles (Wt.)	100 %
Volatiles (Vol.)	No data available		
Flammability			
Flash Point	12 °C(53.6 °F) TCC (Tagliabue Closed Cup)	UEL	7 %
LEL	1 %	Autoignition	No data available
Self-Accelerating Decomposition Temperature (SADT)	No data available	Heat of Combustion (ΔHc)	No data available
Burning Time	No data available	Flame Height	No data available
Flame Extension	No data available	Ignition Distance	No data available
Flame Duration	No data available	Flammability (solid, gas)	No data available
Environmental			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Coefficient of water/oil distribution	No data available	Bioaccumulation Factor	No data available
Bioconcentration Factor	No data available	Biochemical Oxygen Demand BOD/BOD5	No data available
Chemical Oxygen Demand	No data available	Persistence	No data available
Degradation	No data available		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid flames, sparks, or other sources of ignition. Excess heat. Incompatible materials.

10.5 Incompatible materials

- Acids, alkalies, strong oxidizers.

10.6 Hazardous decomposition products

- Hazardous decomposition will not occur.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

	CAS	
Splice Wash SW-100 Cleaner	64742-89-8	Acute Toxicity: Ingestion/Oral-Rat LD50 • >8 g/kg; Inhalation-Rat LC50 • 3400 ppm 4 Hour(s)

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking UN GHS 3 • Data lacking
Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 UN GHS 3 • Skin Irritation 2
Serious eye damage/Irritation	EU/CLP • Classification criteria not met UN GHS 3 • Eye Irritation 2A
Skin sensitization	EU/CLP • Data lacking UN GHS 3 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking UN GHS 3 • Data lacking
Aspiration Hazard	EU/CLP • Aspiration 1 UN GHS 3 • Aspiration 1
Carcinogenicity	EU/CLP • Classification criteria not met UN GHS 3 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Data lacking UN GHS 3 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking UN GHS 3 • Data lacking
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects UN GHS 3 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
STOT-RE	EU/CLP • Data lacking UN GHS 3 • Data lacking

Potential Health Effects

Inhalation

Acute (Immediate)

- May cause respiratory irritation. May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

- Chronic (Delayed)**
- No data available.
- Skin**
- Acute (Immediate)**
- Causes skin irritation.
- Chronic (Delayed)**
- No data available.
- Eye**
- Acute (Immediate)**
- Causes serious eye irritation.
- Chronic (Delayed)**
- No data available.
- Ingestion**
- Acute (Immediate)**
- Material may be aspirated into the lungs during ingestion and/or subsequent vomiting. Aspiration of this material will cause severe lung injury, chemical pneumonitis, pulmonary edema or death.
- Chronic (Delayed)**
- No data available.

Section 12 - Ecological Information

12.1 Toxicity

	CAS	
Splice Wash SW-100 Cleaner	64742-89-8	Aquatic Toxicity-Crustacea: 21 Day(s) NOEC <i>Daphnia magna</i> 3.8 mg/L

12.2 Persistence and degradability

- No data available

12.3 Bioaccumulative potential

- No data available.

12.4 Mobility in Soil

- No data available.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted by the manufacturer.

12.6 Other adverse effects

- Potential Environmental Effects**
- May cause long lasting harmful effects to aquatic life.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

- Product waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste**
- Containers, even those that have been emptied, can contain explosive vapors. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1268	Petroleum distillates, n.o.s. or Petroleum products, n.o.s.	3	II	NDA

TDG	UN1268	PETROLEUM DISTILLATES, N.O.S.; or PETROLEUM PRODUCTS, N.O.S.	3	II	Potential Marine Pollutant
IMO/IMDG	UN1268	Petroleum Distillates, N.O.S	3	II	NDA
ADN	UN1268	PETROLEUM DISTILLATES, N.O.S.	3	II	NDA
ADR/RID	UN1268	PETROLEUM DISTILLATES, N.O.S.	3	II	NDA
IATA/ICAO	UN1268	Petroleum Distillates, N.O.S	3	II	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code • This product is provided only in non-bulk containers.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

State Right To Know				
Component	CAS	MA	NJ	PA
Light aliphatic solvent naphtha	64742-89-8	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Light aliphatic solvent naphtha	64742-89-8	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Light aliphatic solvent naphtha	64742-89-8	No	Yes	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Light aliphatic solvent naphtha 64742-89-8 B2

Canada - WHMIS - Ingredient Disclosure List

• Light aliphatic solvent naphtha 64742-89-8 Not Listed

Environment

Canada - CEPA - Priority Substances List

• Light aliphatic solvent naphtha 64742-89-8 Not Listed

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

• Light aliphatic solvent naphtha 64742-89-8 Not Listed

Europe

Other**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification**

• Light aliphatic solvent naphtha	64742-89-8	Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Light aliphatic solvent naphtha	64742-89-8	T R:45-46-65 S:53-45
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Light aliphatic solvent naphtha	64742-89-8	H, P
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Light aliphatic solvent naphtha	64742-89-8	S:53-45
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Mexico**Other****Mexico - Hazard Classifications**

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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Mexico - Regulated Substances

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - OSHA - Specifically Regulated Chemicals

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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United States - California

Environment**U.S. - California - Proposition 65 - Carcinogens List**

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - California - Proposition 65 - Developmental Toxicity

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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United States - Rhode Island**Labor****U.S. - Rhode Island - Hazardous Substance List**

• Light aliphatic solvent naphtha	64742-89-8	Not Listed
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15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Section 16 - Other Information**Revision Date**

- 29/January/2018

Preparation Date

- 17/July/2008

Other Information

- Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products, a subsidiary of Firestone Diversified Products, LLC, assumes no responsibility for injury to the buyer, the buyer employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of the material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name	• UltraPly Bonding Adhesive
Synonyms	• TPO Bonding Adhesive 5G; UltraPly TPO Bonding Adhesive
SDS Number/Grade	• FS-025

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)	• Adhesive
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1.3 Details of the supplier of the safety data sheet

Manufacturer	• Firestone Building Products Company 200 4th Avenue S Nashville, TN 37201-2208 United States firestonemsds@bfdp.com
Telephone (General)	• 800-428-4442

1.4 Emergency telephone number

Manufacturer	• (800) 424-9300 - CHEMTREC
Manufacturer	• (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP	• Flammable Liquids 2 - H225 Skin Irritation 2 - H315 Eye Irritation 2 - H319 Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336 Reproductive Toxicity 2 - H361d Specific Target Organ Toxicity Repeated Exposure 2 - H373 Hazardous to the aquatic environment Chronic 3 - H412
DSD/DPD	• Highly Flammable (F) Irritant (Xi) Harmful (Xn) Substances Toxic To Reproduction - Category 3 R11, R38, R48/20, R63, R65, R67, R52, R53

2.2 Label Elements

CLP

DANGER



- Hazard statements •**
- H225 - Highly flammable liquid and vapour
 - H315 - Causes skin irritation
 - H319 - Causes serious eye irritation
 - H336 - May cause drowsiness or dizziness
 - H361d - Suspected of damaging the unborn child.
 - H373 - May cause damage to organs - Central Nervous System (CNS) through prolonged or repeated exposure via Inhalation
 - H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

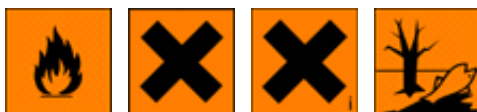
- Prevention •**
- P201 - Obtain special instructions before use.
 - P202 - Do not handle until all safety precautions have been read and understood.
 - P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 - P233 - Keep container tightly closed.
 - P240 - Ground and/or bond container and receiving equipment.
 - P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
 - P242 - Use only non-sparking tools.
 - P243 - Take precautionary measures against static discharge.
 - P260 - Do not breathe mist, vapours, spray.
 - P264 - Wash thoroughly after handling.
 - P271 - Use only outdoors or in a well-ventilated area.
 - P273 - Avoid release to the environment.
 - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 - P281 - Use personal protective equipment as required.

- Response •**
- P370+P378 - In case of fire: Use appropriate media for extinction.
 - P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
 - P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P321 - Specific treatment, see supplemental first aid information.
 - P332+P313 - If skin irritation occurs: Get medical advice/attention.
 - P362 - Take off contaminated clothing and wash before reuse.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P314 - Get medical advice/attention if you feel unwell.
 - P308+P313 - IF exposed or concerned: Get medical advice/attention.

- Storage/Disposal •**
- P235 - Keep cool.
 - P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 - P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

- Supplemental information •** 25-35 percent of this product consists of an ingredient of unknown toxicity.

DSD/DPD



- Risk phrases •**
- R11 - Highly flammable.
 - R38 - Irritating to skin.
 - R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
 - R50 - Very toxic to aquatic organisms.
 - R51 - Toxic to aquatic organisms.
 - R52 - Harmful to aquatic organisms.
 - R53 - May cause long-term adverse effects in the aquatic environment.
 - R62 - Possible risk of impaired fertility.
 - R63 - Possible risk of harm to the unborn child.

- Safety phrases •**
- R65 - Harmful: may cause lung damage if swallowed.
 - R67 - Vapours may cause drowsiness and dizziness.
 - S9 - Keep container in a well ventilated place
 - S16 - Keep away from sources of ignition - No Smoking.
 - S37 - Wear suitable gloves.
 - S57 - Use appropriate containment to avoid environmental contamination.

2.3 Other Hazards

CLP

- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD

- According to European Directive 1999/45/EC this preparation is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Flammable Liquids 2
- Acute Toxicity Oral 4
- Skin Irritation 2
- Eye Irritation 2A
- Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
- Carcinogenicity 2
- Reproductive Toxicity 2
- Specific Target Organ Toxicity Repeated Exposure 2

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements •**
- Highly flammable liquid and vapour
 - Harmful if swallowed
 - Causes skin irritation
 - Causes serious eye irritation
 - May cause drowsiness or dizziness
 - Suspected of causing cancer.
 - Suspected of damaging fertility or the unborn child.
 - May cause damage to organs (Central Nervous System/CNS) through prolonged or repeated exposure

Precautionary statements

- Prevention •**
- Obtain special instructions before use.
 - Do not handle until all safety precautions have been read and understood.
 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 - Keep container tightly closed.
 - Ground and/or bond container and receiving equipment.
 - Use explosion-proof electrical/ventilating/lighting/equipment.
 - Use only non-sparking tools.
 - Take precautionary measures against static discharge.
 - Do not breathe mist, vapours, spray.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - Use only outdoors or in a well-ventilated area.
 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response •**
- In case of fire: Use appropriate media for extinction.
 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 Specific treatment, see supplemental first aid information.
 Take off contaminated clothing and wash before reuse.
 If skin irritation occurs: Get medical advice/attention.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 Rinse mouth.
 Get medical advice/attention if you feel unwell.
 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

- Storage/Disposal**
- Keep cool.
 Store in a well-ventilated place. Keep container tightly closed.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Supplemental information • 25-35 percent of this product consists of an ingredient of unknown toxicity.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Flammable Liquids - B2
 Other Toxic Effects - D2A
 Other Toxic Effects - D2B

2.2 Label elements

WHMIS



WHMIS

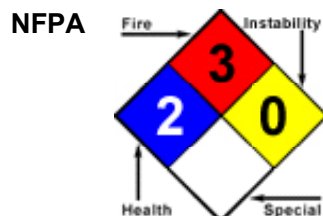
- Flammable Liquids - B2
 Other Toxic Effects - D2A
 Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information



See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Toluene	CAS: 108-88-3 EC Number: 203-625-9	34% TO 44%	Ingestion/Oral-Rat LD50 • 636 mg/kg Inhalation-Rat LC50 • 49 g/m ³ 4 Hour(s) Skin-Rabbit LD50 • 14100 µL/kg	EU DSD/DPD: Annex I: F, R11; Repr. Cat. 3, R63; Xn, R48/20-65; Xi, R38, R67 EU CLP: Annex VI: Flam. Liq. 2, H226; Repr. 2, H361d; Asp. Tox. 1, H304; STOT RE 2 *, H373; Skin Irrit. 2, H315; STOT SE 3, H336 OSHA HCS 2012: Flam. Liq. 2; Repr. 2; Acute Tox. 4 (Oral); STOT SE 3: Narc.; Asp. Tox. 1; STOT RE 2 (CNS)	NDA
Solvent-refined light petroleum naphtha	CAS: 64741-84-0 EC Number: 265-086-6	25% TO 35%	NDA	EU DSD/DPD: Annex I: Carc. Cat. 2; R45; Muta. Cat. 2; R46; Xn; R65 EU CLP: Annex VI: Carc. 1B, H350; Muta. 1B, H340; Asp. Tox. 1, H304 OSHA HCS 2012: Data lacking	NDA
Polymers	NDA	5% TO 15%	NDA	EU DSD/DPD: Not Classified - Classification criteria not met EU CLP: Not Classified - Classification criteria not met OSHA HCS 2012: Not Classified - Classification criteria not met	NDA
1,3-Butadiene, 2-chloro-, polymers	CAS: 9010-98-4	< 12%	Ingestion/Oral-Rat LD50 • >40 g/kg	EU DSD/DPD: Not Classified - Classification criteria not met EU CLP: Not Classified - Classification criteria not met OSHA HCS 2012: Not Classified - Classification criteria not met	NDA
Acetone	CAS: 67-64-1 EC Number: 200-662-2	5% TO 10%	Ingestion/Oral-Rat LD50 • 5800 mg/kg Inhalation-Rat LC50 • 50100 mg/m ³	EU DSD/DPD: Annex I: F, R11, Xi; R36; R66; R67 EU CLP: Annex VI: Flam. Liq. 2, H226; Eye Irrit. 2, H319; STOT SE 3, H336 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2A, STOT SE 3: Resp. Irrit. & Narc.; Repr. 2	NDA
Xylene	CAS: 1330-20-7 EC Number: 215-535-7	< 1%	Ingestion/Oral-Rat LD50 • 4300 mg/kg Inhalation-Rat LC50 • 5000 ppm 4 Hour(s) Skin-Rabbit LD50 • >1700 mg/kg	EU DSD/DPD: Annex I: R10, Xn; R20/21, Xi; R38 EU CLP: Annex VI: Flam. Liq. 3, H226; Acute Tox. 4*, H312; Acute Tox. 4*, H332; Skin Irrit. 2, H315 OSHA HCS 2012: Acute Tox 4 (Skin); Eye Irrit. 2A; Skin Irrit. 2; Repr. 2	NDA
Styrene	CAS: 100-42-5 EC Number: 202-851-5	< 1%	Ingestion/Oral-Rat LD50 • 2650 mg/kg Inhalation-Rat LC50 • 2770 ppm 4 Hour(s)	EU DSD/DPD: Annex I: R10 Xn; R20 Xi; R36/38 EU CLP: Annex VI: Flam. Liq. 3, H226; Acute Tox. 4 *, H332; Eye Irrit. 2, H319; Skin Irrit. 2, H315 OSHA HCS 2012: Eye Irrit. 2; Acute Tox. 4; Carc. 2	NDA
Magnesium oxide	CAS: 1309-48-4 EC Number: 215-171-9	< 1%	NDA	EU DSD/DPD: Self Classified: Xi, R36/37 EU CLP: Self Classified: Eye Irrit. 2, H319; STOT SE 3, H335 OSHA HCS 2012: Eye Irrit. 2; STOT SE 3: Resp. Irrit.	NDA
Zinc oxide	CAS: 1314-13-2 EC Number: 215-222-5	< 0.3%	NDA	EU DSD/DPD: Annex I: N; R50-53 EU CLP: Annex VI: Aquatic Acute 1, H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Not Classified	NDA

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- | | |
|-------------------|--|
| Inhalation | <ul style="list-style-type: none">• IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately if symptoms occur. |
| Skin | <ul style="list-style-type: none">• In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing and shoes. If skin irritation occurs: Get medical advice/attention. |
| Eye | <ul style="list-style-type: none">• In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention. |
| Ingestion | <ul style="list-style-type: none">• If swallowed, rinse mouth with water (only if the person is conscious) Do NOT induce vomiting. Do not give anything by mouth to an unconscious person. Get medical attention immediately if symptoms occur. |

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|---------------------------|--|
| Notes to Physician | <ul style="list-style-type: none">• All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. |
|---------------------------|--|

Section 5 - Firefighting Measures

5.1 Extinguishing media

- | | |
|---------------------------------------|---|
| Suitable Extinguishing Media | <ul style="list-style-type: none">• CAUTION: For mixtures containing a high percentage of an alcohol or polar solvent, alcohol-resistant foam may be more effective.
LARGE FIRES: Water spray, fog or alcohol-resistant foam.
SMALL FIRES: Dry chemical, CO₂, water spray or alcohol-resistant foam. |
| Unsuitable Extinguishing Media | <ul style="list-style-type: none">• Do not use a direct stream of water. |

5.2 Special hazards arising from the substance or mixture

- | | |
|---|---|
| Unusual Fire and Explosion Hazards | <ul style="list-style-type: none">• Containers may explode when heated.
Vapor explosion hazard indoors, outdoors or in sewers.
HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
Many liquids are lighter than water.
Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
Runoff to sewer may create fire or explosion hazard.
Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
Vapors may form explosive mixtures with air.
Vapors may travel to source of ignition and flash back. |
| Hazardous Combustion Products | <ul style="list-style-type: none">• Oxides of carbon, oxides of nitrogen, hydrochloric acid. |

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk.
LARGE FIRES: Cool containers with flooding quantities of water until well after fire is

out.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- CAUTION: Victim may be a source of contamination. Do not touch or walk through spilled material.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Use clean non-sparking tools to collect absorbed material.
A vapor suppressing foam may be used to reduce vapors.
All equipment used when handling the product must be grounded.
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
LARGE SPILLS: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Do not use in areas without adequate ventilation. Handle and open container with care. Use good safety and industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep away from fire. Store in a well-ventilated place. Keep container tightly closed.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Canada Ontario	Canada Quebec	China	Europe
Toluene (108-88-3)	STELs	Not established	Not established	Not established	100 mg/m3 STEL	100 ppm STEL; 384 mg/m3 STEL
	TWAs	20 ppm TWA	20 ppm TWA	50 ppm TWAEV; 188 mg/m3 TWAEV	50 mg/m3 TWA	50 ppm TWA; 192 mg/m3 TWA

Exposure Limits/Guidelines (Con't.)					
	Result	Germany DFG	Germany TRGS	NIOSH	OSHA
Toluene (108-88-3)	Ceilings	200 ppm Peak; 760 mg/m ³ Peak	Not established	Not established	300 ppm Ceiling
	TWAs	Not established	50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4); 190 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4)	100 ppm TWA; 375 mg/m ³ TWA	200 ppm TWA
	STELs	Not established	Not established	150 ppm STEL; 560 mg/m ³ STEL	Not established
	MAKs	50 ppm TWA MAK; 190 mg/m ³ TWA MAK	Not established	Not established	Not established

Exposure Control Notations

China

- Toluene (108-88-3): **Skin:** (Skin notation)

Canada Quebec

- Toluene (108-88-3): **Skin:** (Skin designation)

ACGIH

- Toluene (108-88-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Germany TRGS

- Toluene (108-88-3): **Skin:** (skin notation)

Germany DFG

- Toluene (108-88-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)

Exposure Limits Supplemental

ACGIH

- Toluene (108-88-3): **BEIs:** (0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene; 0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene; 0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)) | **TLV Basis - Critical Effects:** (female reproductive; pregnancy loss; visual impairment)

8.2 Exposure controls

Engineering Measures/Controls

- This adhesive is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles.

Skin/Body

- Wear appropriate chemical resistant gloves.

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Yellow amber liquid with strong aromatic odor.
Color	Yellow amber.	Odor	Aromatic
Odor Threshold	Data lacking		
General Properties			
Boiling Point	55 to 142 °F(12.7778 to 61.1111 °C)	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	= 0.844 Water=1	Water Solubility	Insoluble
Viscosity	Not relevant	Explosive Properties	Explosion hazard.
Oxidizing Properties:	Static hazard.		
Volatility			
Vapor Pressure	9.5 to 185 mmHg (torr) @ 68 °F(20 °C)	Vapor Density	> 3 Air=1
Evaporation Rate	1.9 to 9.5 n-Butyl Acetate = 1	VOC (Vol.)	633 g/L
Volatiles (Vol.)	76.4 %		
Flammability			
Flash Point	-18 °C(-0.4 °F)	UEL	7.5 %
LEL	1.1 %	Autoignition	Data lacking
Flammability (solid, gas)	Not relevant.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid flames, sparks, and other sources of ignition. Avoid contact with combustible materials. Avoid contact with incompatible materials.

10.5 Incompatible materials

- Acids, bases, combustible materials, oxidizing materials.

10.6 Hazardous decomposition products

- Thermal decomposition could produce CO, CO₂, and Oxides of Nitrogen.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Toluene (34% TO 44%)	108- 88-3	Acute Toxicity: Ingestion/Oral-Rat LD50 • 636 mg/kg; Inhalation-Rat LC50 • 49 g/m ³ 4 Hour(s); Skin-Rabbit LD50 • 14100 µL/kg; Irritation: Eye-Rabbit • 100 mg 30 Second(s)-Rinse • Mild irritation; Skin-Rabbit • 435 mg • Mild irritation; Reproductive: Inhalation-Rat TClO • 1500 ppm (7-20D preg); <i>Reproductive Effects: Specific Developmental Abnormalities: Central nervous system</i> ; <i>Reproductive Effects: Effects on Newborn: Growth statistics (e.g., reduced weight gain)</i> ; <i>Reproductive Effects: Effects on Newborn: Biochemical and metabolic</i>

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Acute Toxicity - Oral 4
Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2A
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Carcinogenicity 2
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	EU/CLP • Toxic to Reproduction 2 OSHA HCS 2012 • Toxic to Reproduction 2
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
STOT-RE	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 2

Route(s) of entry/exposure • Inhalation, Skin, Eye, Ingestion/Oral

Potential Health Effects

Inhalation

Acute (Immediate)

- May be harmful. May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)

- Repeated and prolonged exposure may cause Central Nervous System (CNS) effects.

Skin

Acute (Immediate)

- Causes skin irritation.

Chronic (Delayed)

- No data available.

Eye

Acute (Immediate)

- Causes serious eye irritation.

Chronic (Delayed)

- No data available.

Ingestion

- Acute (Immediate)** • May be harmful.
- Chronic (Delayed)** • No data available.

Carcinogenic Effects			
	CAS	IARC	NTP
Toluene	108-88-3	Group 3-Not Classifiable	Evidence of Carcinogenicity

- Reproductive Effects** • Repeated and prolonged exposure may cause reproductive effects.

Section 12 - Ecological Information**12.1 Toxicity**

	CAS	
UltraPly Bonding Adhesive	NDA	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Fathead Minnow</i> 0.00025 mg/L Comments: Hexane Aquatic Toxicity-Crustacea: 48 Hour(s) EC50 Water Flea <i>Daphnia magna</i> 6.8 mg/L Comments: Toluene 48 Hour(s) NOEC Water Flea <i>Daphnia magna</i> 28 mg/L Comments: Toluene

- This material may be toxic to aquatic organisms and cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

- No information available for the product.

12.3 Bioaccumulative potential

- No information available for the product.

12.4 Mobility in Soil

- No information available for the product.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations**13.1 Waste treatment methods**

- Product waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1133	Adhesives	3	II	NDA
TDG	UN1133	ADHESIVES	3	II	NDA
IMO/IMDG	UN1133	ADHESIVES	3	II	NDA

ADN	UN1133	ADHESIVES	3	II	NDA
ADR/RID	UN1133	ADHESIVES	3	II	NDA
IATA/ICAO	UN1133	Adhesives	3	II	NDA

14.6 Special precautions for user • None known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code • Not relevant.

14.8 Other information

DOT • Toluene has a reportable quantity of 1000 lbs (454 kg) as listed in Appendix A to 49 CFR 172.101. Hexane has a reportable quantity of 5000 lbs (2270 kg) as listed in Appendix A to 49 CFR 172.101. Cyclohexane has a reportable quantity of 1000lbs (454kg) as listed in Appendix A to 49 CFR 172.101.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute, Chronic, Fire

State Right To Know				
Component	CAS	MA	NJ	PA
Toluene	108-88-3	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Toluene	108-88-3	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Toluene	108-88-3	Yes	Yes	Yes

Australia

Labor

Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring

• Toluene 108-88-3 Not Listed

Australia - High Volume Industrial Chemicals List

• Toluene 108-88-3

Australia - List of Designated Hazardous Substances - Classification

• Toluene 108-88-3 F, Xn, Xi Repr.Cat.3 R11, R63, R48/20, R65, R38, R67

Environment

Australia - National Pollutant Inventory (NPI) Substance List

• Toluene 108-88-3 10 tonne/yr Threshold category 1

Australia - Ozone Protection Act - Scheduled Substances

• Toluene 108-88-3 Not Listed

Australia - Priority Existing Chemical Program

• Toluene	108-88-3	Candidate chemical
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Bulgaria

Environment

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour

• Toluene	108-88-3	0.25 mg/m3 MAHCL
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Canada

Labor

Canada - WHMIS - Classifications of Substances

• Toluene	108-88-3	B2, D2A, D2B
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Canada - WHMIS - Ingredient Disclosure List

• Toluene	108-88-3	1 %
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Environment

Canada - CEPA - Priority Substances List

• Toluene	108-88-3	Priority Substance List 1 (substance not considered toxic)
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Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Toluene	108-88-3	F; R11 Xi; R38 Xn; R48/20-65 Repr.Cat.3; R63 R67
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Toluene	108-88-3	Not Listed
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Toluene	108-88-3	F Xn R:11-38-48/20-63-65-67 S:(2)-36/37-46-62
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Toluene	108-88-3	Not Listed
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EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Toluene	108-88-3	S:(2)-36/37-46-62
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Mexico

Other

Mexico - Hazard Classifications

• Toluene	108-88-3	Hazard Class = 3 PG = II UN1294
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Mexico - Regulated Substances

• Toluene	108-88-3	UN1294
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United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Toluene	108-88-3	Not Listed
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U.S. - OSHA - Specifically Regulated Chemicals

• Toluene	108-88-3	Not Listed
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Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Toluene	108-88-3	
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U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Toluene	108-88-3	Not Listed
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Toluene	108-88-3	Not Listed
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U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Toluene	108-88-3	1.0 % de minimis concentration
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U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Toluene	108-88-3	Not Listed
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U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261

• Toluene	108-88-3	waste number U220
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U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents

• Toluene	108-88-3	
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United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Toluene	108-88-3	Not Listed
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U.S. - California - Proposition 65 - Developmental Toxicity

• Toluene	108-88-3	developmental toxicity, initial date 1/1/91
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U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Toluene	108-88-3	female reproductive toxicity, initial date 8/7/09
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U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Toluene	108-88-3	Not Listed
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United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Toluene	108-88-3	
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U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Toluene	108-88-3	Not Listed
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United States - Rhode Island

Labor**U.S. - Rhode Island - Hazardous Substance List**

- Toluene

108-88-3

Toxic (skin); Flammable (skin)

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H226 - Flammable liquid and vapour
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H335 - May cause respiratory irritation
- H340 - May cause genetic defects.
- H350 - May cause cancer.
- H400 - Very toxic to aquatic life
- R10 - Flammable.
- R20 - Harmful by inhalation.
- R36 - Irritating to eyes.
- R36/37 - Irritating to eyes and respiratory system.
- R36/38 - Irritating to eyes and skin.
- R45 - May cause cancer.
- R46 - May cause heritable genetic damage.
- R50 - Very toxic to aquatic organisms.
- R66 - Repeated exposure may cause skin dryness or cracking.

Revision Date

- 29/January/2018

Preparation Date

- 07/February/2013

Other Information

- Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No data available

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product identifier****Product Name**

- **UltraPly™ TPO Membrane & Flashing Series**

Synonyms

- UltraPly™ TPO 18" Curb Flashing, UltraPly™ TPO Custom Accessories, UltraPly™ TPO Reinforced Split Pipe Boot, UltraPly™ TPO Walkway Pad, UltraPly™ TPO T-Joint Cover, UltraPly™ TPO Inside/Outside Molded Corner, UltraPly™ TPO Universal Pipe Flashing, UltraPly™ TPO Large Pipe Flashing, UltraPly™ TPO Unsupported Flashing, UltraPly™ TPO Coated Metal, UltraPly™ TPO Membrane, UltraPly™ TPO XR T Membrane, UltraPly™ TPO Platinum™ Membrane, UltraPly™ TPO Reinforced Cover Strip, UltraPly™ TPO Reinforced Curb Corner, X-Tred™ Walkway Pad, UltraPly™ TPO XR CP 54

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Relevant identified use(s)** • Construction:Roofing Material

1.3 Details of the supplier of the safety data sheet**Manufacturer**

- Firestone Building Products Company
200 4th Avenue S
Nashville, TN 37201-2208
United States

firestonemsds@bfpdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number**Manufacturer**

- (800) 424-9300 - CHEMTREC

Manufacturer

- (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification**EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture**CLP**

- Not classified

DSD/DPD

- Not classified

2.2 Label Elements**CLP**

Hazard statements • No label element(s) required

DSD/DPD

Risk phrases • No label element(s) required

2.3 Other Hazards**CLP**

- This material is exempt from CLP/REACH obligations as an article as specified in

DSD/DPD

REACH (1907/2006) and related ECHA guidance.

- Under European Directive 1999/45/EC these product(s) are exempt and considered manufactured article(s) under stated normal conditions of use.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Not classified

2.2 Label elements

OSHA HCS 2012

Hazard statements • No label elements(s) required**2.3 Other hazards**

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard) this product is exempt as an article under stated normal conditions of use.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Not classified

2.2 Label elements

WHMIS

- No label element(s) required

2.3 Other hazards

WHMIS

- Under Canadian regulations (Workplace Hazardous Materials Information System (WHMIS) - Hazardous Products Act (HPA), Section 11(1)), these product(s) are exempt and considered manufactured article(s) under stated normal conditions of use.

2.4 Other information

- This material, as an article, does not legally require an SDS.

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients**3.1 Substances**

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Nonhazardous Components	NDA	100%	NDA	EU DSD/DPD: None EU CLP: None OSHA HCS 2012: None	NDA

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- | | |
|-------------------|--|
| Inhalation | <ul style="list-style-type: none">First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, move person to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention. |
| Skin | <ul style="list-style-type: none">First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Wash skin with soap and water. If signs/symptoms develop, get medical attention. |
| Eye | <ul style="list-style-type: none">First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If contact with material occurs flush eyes with water. If signs/symptoms develop, get medical attention. |
| Ingestion | <ul style="list-style-type: none">First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, get medical attention. |

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|---------------------------|--|
| Notes to Physician | <ul style="list-style-type: none">All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. |
|---------------------------|--|

Section 5 - Firefighting Measures

5.1 Extinguishing media

- | | |
|-------------------------------------|---|
| Suitable Extinguishing Media | <ul style="list-style-type: none">Water, foam, dry chemical, carbon dioxide (CO₂). |
|-------------------------------------|---|

- | | |
|---------------------------------------|---|
| Unsuitable Extinguishing Media | <ul style="list-style-type: none">None known. |
|---------------------------------------|---|

5.2 Special hazards arising from the substance or mixture

- | | |
|---|--|
| Unusual Fire and Explosion Hazards | <ul style="list-style-type: none">Does not present any special fire or explosive hazards. |
| Hazardous Combustion Products | <ul style="list-style-type: none">Upon reaching temperatures of combustion, produces corrosive and/or toxic fumes. |

5.3 Advice for firefighters

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- | | |
|-----------------------------|--|
| Personal Precautions | <ul style="list-style-type: none">No special precautions expected to be necessary if material is used under ordinary conditions and as recommended. |
| Emergency Procedures | <ul style="list-style-type: none">No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures. |

6.2 Environmental precautions

- No special precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Pick up pieces and place in container or bag for disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines

- No exposure limits/guidelines available for the material or the components.

8.2 Exposure controls

Engineering Measures/Controls

- Under normal conditions of use, special ventilation is not required.

Personal Protective Equipment

Respiratory

- No respiratory protection is required under normal conditions of use.

Eye/Face

- Under normal conditions of use, eye protection is not required.

Skin/Body

- No skin protection is ordinarily required under normal conditions of use.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description

Physical Form	Solid	Appearance/Description	Black and white sheet, white and gray sheet, tan and gray sheet, gray and gray sheet, white sheet with fleece back membrane, white sheet, grey sheet, or tan sheet. Essentially no odor.
---------------	-------	------------------------	--

Color	Black, white, gray, and tan.	Odor	None
Odor Threshold	None		
General Properties			
Boiling Point	Not relevant	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Not relevant
Specific Gravity/Relative Density	= 0.94 Water=1	Water Solubility	Insoluble
Viscosity	Not relevant	Explosive Properties	Not relevant.
Oxidizing Properties:	Not relevant.		
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- No data available

10.5 Incompatible materials

- No data available.

10.6 Hazardous decomposition products

- Thermal decomposition could produce CO, CO₂, and Oxides of Nitrogen.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Other Material Information

- This material is an article that does not release or otherwise result in exposure to a hazardous chemical under normal use. The information provided below is for components only and is not expected to be applicable to the material as a whole.

GHS Properties	Classification
Acute toxicity	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant

Skin corrosion/Irritation	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
Serious eye damage/Irritation	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
Skin sensitization	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
Respiratory sensitization	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
Aspiration Hazard	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
Carcinogenicity	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
Germ Cell Mutagenicity	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
Toxicity for Reproduction	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
STOT-SE	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant
STOT-RE	EU/CLP • Not relevant OSHA HCS 2012 • Not relevant

Potential Health Effects

Inhalation

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Skin

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Eye

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Ingestion

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

- Material data lacking.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
ADN	NDA	Not Regulated	NDA	NDA	NDA
ADR/RID	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user

- None known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications

- None

Canada

Labor

Canada - WHMIS - Classifications of Substances

Not Listed

Canada - WHMIS - Ingredient Disclosure List

Not Listed

Environment

Canada - CEPA - Priority Substances List

Not Listed

China

Other**China - Annex I & II - Controlled Chemicals Lists**

Not Listed

Europe**Other****EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification**

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

Not Listed

EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2002/95/EC) (RoHS)

Not Listed

EU - Inventory of Cosmetic Ingredients Directive (INCI) (76/768/EEC) - Other Ingredients

Not Listed

EU - Inventory of Cosmetic Ingredients Directive (INCI) (76/768/EEC) - Perfume and Aromatic Materials

Not Listed

Germany**Labor****Germany - Immission Control - Qualifying Quantities for Major Accident Prevention**

Not Listed

Germany - Immission Control - Qualifying Quantities for Safety Reporting

Not Listed

Germany - TRGS 505 - Specific Lead Regulations

Not Listed

Germany - TRGS 511 - Specific Ammonium Nitrate Regulations

Not Listed

Environment**Germany - TA Luft - Types and Classes**

Not Listed

Germany - TA Luft - Emission Limits for Carcinogenic Substances

Not Listed

Germany - TA Luft - Emission Limits for Fibers

Not Listed

Germany - TA Luft - Emission Limits for Inorganic Dusts

Not Listed

Germany - TA Luft - Emission Limits for Inorganic Gases

Not Listed

Germany - TA Luft - Emission Limits for Organic Substances

Not Listed

Germany - Water Classification (VwVwS) - Annex 1

Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

Not Listed

Germany - Water Classification (VwVwS) - Annex 3

Not Listed

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

Not Listed

United States - California**Environment**

U.S. - California - Proposition 65 - Carcinogens List

Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

Not Listed

United States - Pennsylvania**Labor**

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

Not Listed

15.2 Chemical Safety Assessment

- Chemical Safety Assessment is not required.

Section 16 - Other Information**Revision Date**

- 19/January/2018

Preparation Date

- 16/August/2012

Other Information

- Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product identifier**

Product Name • V-Force™ Vapor Barrier Membrane

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer • Firestone Building Products Company

200 4th Avenue S
Nashville, TN 37201-2208
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification**EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

CLP • Not classified

2.2 Label Elements

CLP

Hazard statements • No label element(s) required

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Not classified

2.2 Label elements

OSHA HCS 2012

Hazard statements • No label elements(s) required

2.3 Other hazards

OSHA HCS 2012

- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Canada

According to: WHMIS 2015

2.1 Classification of the substance or mixture

WHMIS 2015

- Not classified

2.2 Label elements

WHMIS 2015

Hazard statements • No label element(s) required

Precautionary statements

2.3 Other hazards

WHMIS 2015

- In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Nonhazardous Components	NDA	100%	NDA	EU CLP: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, move person to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Wash skin with soap and water. If signs/symptoms develop, get medical attention.

Eye

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If contact with material occurs flush eyes with water. If signs/symptoms develop, get medical attention.

Ingestion

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • Water, foam, dry chemical, carbon dioxide (CO₂).

Unsuitable Extinguishing Media • None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • Combustion of this product causes dense black smoke. Water may cause frothing.

Hazardous Combustion Products • Carbon dioxide, carbon monoxide and partially burned carbon.

5.3 Advice for firefighters

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • No special precautions expected to be necessary if material is used under ordinary conditions and as recommended.

Emergency Procedures • No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

6.2 Environmental precautions

- No special precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures • Pick up pieces and place in container or bag for disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling • Use good safety and industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Storage • Keep away from heat, sparks and flame. Store in a clean, dry area in its original unopened packaging at temperatures of 50° F (10° C) – 140° F (60° C), so that it will be 50° F (10° C) or above at the time of application. Store in a well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines • No exposure limits/guidelines available for the material or the components.

8.2 Exposure controls

Engineering Measures/Controls • Under normal conditions of use, special ventilation is not required.

Personal Protective Equipment

Respiratory • No respiratory protection is required under normal conditions of use.

Eye/Face • Under normal conditions of use, eye protection is not required.

Skin/Body • No skin protection is ordinarily required under normal conditions of use.

Environmental Exposure Controls • Follow best practice for site management and disposal of waste.

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Black solid membrane with asphalt odor.
Color	Black	Odor	Asphalt odor.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Not relevant	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Not relevant
Specific Gravity/Relative Density	Varies	Water Solubility	Insoluble
Viscosity	Not relevant	Explosive Properties	Not relevant.
Oxidizing Properties:	Not relevant.		
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Keep away from heat, sparks, and flame.

10.5 Incompatible materials

- No data available.

10.6 Hazardous decomposition products

- No data available

Section 11 - Toxicological Information

11.1 Information on toxicological effects

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
	EU/CLP • Classification criteria not met

STOT-SE	OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met WHMIS 2015 • Classification criteria not met

Potential Health Effects

Inhalation

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Skin

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Eye

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Ingestion

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

- Product waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
TDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IMO/IMDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
ADN	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
ADR/RID	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IATA/ICAO	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code • Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • None

Canada

Labor

Canada - WHMIS - Classifications of Substances

Not Listed

Canada - WHMIS - Ingredient Disclosure List

Not Listed

Environment

Canada - CEPA - Priority Substances List

Not Listed

China

Other

China - Annex I & II - Controlled Chemicals Lists

Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

Not Listed

EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2011/65/EU) (RoHS)

Not Listed

EU - Inventory of Cosmetic Ingredients Directive (INCI) (76/768/EEC) - Other Ingredients

Not Listed

EU - Inventory of Cosmetic Ingredients Directive (INCI) (76/768/EEC) - Perfume and Aromatic Materials

Not Listed

Germany

Labor

Germany - Immission Control - Qualifying Quantities for Major Accident Prevention

Not Listed

Germany - Immission Control - Qualifying Quantities for Safety Reporting

Not Listed

Germany - TRGS 505 - Specific Lead Regulations

Not Listed

Germany - TRGS 511 - Specific Ammonium Nitrate Regulations

Not Listed

Environment

Germany - TA Luft - Types and Classes

Not Listed

Germany - TA Luft - Emission Limits for Carcinogenic Substances

Not Listed

Germany - TA Luft - Emission Limits for Fibers

Not Listed

Germany - TA Luft - Emission Limits for Inorganic Dusts

Not Listed

Germany - TA Luft - Emission Limits for Inorganic Gases

Not Listed

Germany - TA Luft - Emission Limits for Organic Substances

Not Listed

Germany - Water Classification (VwVwS) - Annex 1

Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

Not Listed

Germany - Water Classification (VwVwS) - Annex 3

Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Revision Date

- 19/January/2018

Preparation Date

- 03/February/2014

Other Information

- Changes to this revision: Updated mailing address.

Disclaimer/Statement of Liability

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available

Safety Data Sheet

Firestone Building Products Company

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product identifier****Product Name** • **Water-Block Seal S-20****1.2 Relevant identified uses of the substance or mixture and uses advised against****Relevant identified use(s)** • Water –Block Seal (S-20) is designed to provide a seal when used in compression as required by Firestone Details**1.3 Details of the supplier of the safety data sheet****Manufacturer** • Firestone Building Products Company
200 4th Avenue S
Nashville, TN 37201-2208
United States

firestonemsds@bfdp.com

Telephone (General) • 800-428-4442**1.4 Emergency telephone number****Manufacturer** • (800) 424-9300 - CHEMTREC**Manufacturer** • (703) 527-3887 - CHEMTREC - International**Section 2: Hazards Identification****EU/EEC**

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture**CLP** • Flammable Liquids 2 - H225
Skin Irritation 2 - H315
Hazardous to the aquatic environment Chronic 2 - H411**DSD/DPD** • Flammable
Dangerous to the Environment (N)
R11, R51/53**2.2 Label Elements****CLP****DANGER****Hazard statements** • H225 - Highly flammable liquid and vapour
H411 - Toxic to aquatic life with long lasting effects
H315 - Causes skin irritation**Precautionary statements**

- Prevention** • P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 P233 - Keep container tightly closed.
 P235 - Keep cool.
 P240 - Ground and/or bond container and receiving equipment.
 P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P264 - Wash thoroughly after handling.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.

- Response** • P370+P378 - In case of fire: Use appropriate media for extinction.
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 P362 - Take off contaminated clothing and wash before reuse.
 P321 - Specific treatment, see supplemental first aid information.
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P391 - Collect spillage.

- Storage/Disposal** • P403+P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases** • R11 - Highly flammable.
 R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.3 Other Hazards

- CLP** • According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD** • According to European Directive 1999/45/EC this preparation is considered dangerous.

UN GHS Revision 3

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Third Revised Edition

2.1 Classification of the substance or mixture

- UN GHS** • Flammable Liquids 2
 Skin Irritation 2
 Eye Irritation 2

2.2 Label elements

UN GHS

DANGER



- Hazard statements** • Highly flammable liquid and vapour
 Causes skin irritation
 Causes serious eye irritation

Precautionary statements

- Prevention** • Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 Keep container tightly closed.
 Keep cool.
 Ground and/or bond container and receiving equipment.

Use explosion-proof electrical, ventilating and/or lighting equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Wash thoroughly after handling.
 Wear protective gloves and eye/face protection , .

- Response •** In case of fire: Use appropriate media for extinction.
 IF ON SKIN: Wash with plenty of soap and water.
 Take off contaminated clothing and wash before reuse.
 If skin irritation occurs: Get medical advice/attention.
 Specific treatment (see supplemental first aid instructions on this label).
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.

- Storage/Disposal •** Store in a well-ventilated place. Keep cool.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

UN GHS

- According to the Globally Harmonized System for Classification and Labeling (GHS) this product is considered hazardous

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 1994

- Flammable Liquid
 Flammable/Combustible Class IB
 Irritant
 Target Organ Effects - Central Nervous System (CNS)

2.2 Label elements

OSHA HCS 1994

- Not required

2.3 Other hazards

OSHA HCS 1994

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Flammable Liquids - B2
 Other Toxic Effects - D2A
 Other Toxic Effects - D2B

2.2 Label elements

WHMIS

-  

WHMIS

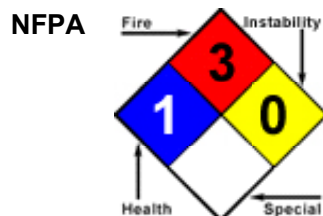
- Flammable Liquids - B2
 Other Toxic Effects - D2A
 Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information



See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Heptane	CAS:142-82-5 EC Number:205-563-8 UN:UN1206	14%	Inhalation-Rat LC50 • 103 g/m ³ 4 Hour(s)	EU DSD/DPD: EU CLP, Annex VI, Table 3.2: F, R11; Xn, R65; Xi, R38; R67; N, R50, R53 EU CLP: Annex VI - Flam. Liq. 2; Asp. Tox 1; Skin Irrit. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; UN GHS Revision 3: Eye Irrit. 2, Skin Irrit. 2, STOT SE 3, Aquatic Acute 3	NDA
Arien	CAS:64742-16-1 EINECS:265-116-8	< 10%	NDA	EU DSD/DPD: Data lacking EU CLP: Data lacking UN GHS Revision 3: Data lacking	NDA
Ethylene	CAS:74-85-1 EC Number:200-815-3 UN:UN1038, UN1962	< 4%	NDA	EU DSD/DPD: EU CLP, Annex VI, Table 3.2: F+, R12; R67 EU CLP: Annex VI Flam. Gas 1, Press Gas, STOT SE 3 UN GHS Revision 3: Eye Irrit. 2	NDA
Kaolin	CAS:1332-58-7	> 3%	NDA	EU DSD/DPD: Self Classified - Xn; R48/20 EU CLP: Self Classified - STOT RE 2 UN GHS Revision 3: STOT RE 2	NDA
Limestone	CAS:1317-65-3 EC Number:215-279-6	> 3%	NDA	EU DSD/DPD: NDA EU CLP: NDA UN GHS Revision 3: NDA	NDA
Propene	CAS:115-07-1 EC Number:204-062-1 UN:UN1077	< 3%	NDA	EU DSD/DPD: Annex I - F+; R12 EU CLP: Annex VI - Flam. Gas 1, Press. Gas UN GHS Revision 3: Flam. Gas 1, Press. Gas	NDA

Methane, 2,2'-bis (6-t-butyl-p-cresyl)-	CAS:119-47-1 EINECS:204-327-1	< 0.1%	Ingestion/Oral-Rat LD50 • 4880 mg/kg	EU DSD/DPD: Self Classified - Xi; R36 EU CLP: Self Classified - Eye Irrit. 2 UN GHS Revision 3: Acute Tox 5 (oral), Eye Irrit, 2	NDA
Carbon Black	CAS:1333-86-4 EC Number:215-609-9	< 0.03%	Ingestion/Oral-Rat LD50 • >15400 mg/kg Skin-Rabbit LD50 • >3 g/kg	EU DSD/DPD: Self Classified - Carc. Cat 3 EU CLP: Self Classified - Carc. 2A UN GHS Revision 3: Carc. 2A	NDA

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.
- Skin**
- In case of skin contact, clean with rubbing alcohol. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes. If skin irritation occurs: Get medical advice/attention.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Do NOT induce vomiting. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- No specific treatment required. Treat victim symptomatically and supportively.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- SMALL FIRES: Dry chemical, CO₂, water spray or alcohol-resistant foam.
LARGE FIRES: Water spray, fog or alcohol-resistant foam.
- Unsuitable Extinguishing Media**
- Water maybe ineffective, but should be used to keep fire exposed containers cool.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapor explosion hazard indoors, outdoors or in sewers. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Hazardous Combustion Products**
- Carbon dioxide, carbon monoxide, aldehydes, acrid smoke and irritating fumes.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear positive pressure self-contained breathing apparatus (SCBA).
Wear chemical protective clothing that is specifically recommended by the

manufacturer. It may provide little or no thermal protection.
Runoff from fire control may cause pollution.
LARGE FIRES: Dike fire-control water for later disposal.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stay upwind. Ventilate enclosed areas.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep out of low areas. Keep unauthorized personnel away. Stay upwind.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
Use clean non-sparking tools to collect absorbed material.
All equipment used when handling the product must be grounded.
A vapor suppressing foam may be used to reduce vapors.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Keep away from heat, sparks, and flame – No Smoking. Keep containers closed. Vapors of this material are heavier than air and will collect in low or confined areas. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near container. Static electricity may accumulate and create a fire hazard. Take precautionary measures against static charges. Bond and ground all transfer containers and equipment. Use only with adequate ventilation. Do not breathe (dust, vapor or spray mist) Ground fixed equipment.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool, dry, well-ventilated place. Keep away from sources of ignition – No Smoking. Keep away from incompatible materials. Keep container closed when not in use.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Australia	Belgium	Canada Alberta	Canada British Columbia
Carbon Black (1333-86-4)	TWAs	3.5 mg/m3 TWA	3 mg/m3 TWA	3.5 mg/m3 TWA	3.5 mg/m3 TWA	Not established

Kaolin (1332-58-7)	TWAs	2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	10 mg/m3 TWA (containing no asbestos and <1% crystalline silica, inspirable dust)	2 mg/m3 TWA (alveolar fraction)	2 mg/m3 TWA (respirable)	Not established
Limestone (1317-65-3)	TWAs	Not established	10 mg/m3 TWA (containing no asbestos and <1% crystalline silica, inspirable dust)	10 mg/m3 TWA	10 mg/m3 TWA	Not established
	STELs	Not established	Not established	Not established	Not established	20 mg/m3 STEL
Propene (115-07-1)	TWAs	500 ppm TWA	Not established	Not established	500 ppm TWA; 860 mg/m3 TWA	Not established
Ethylene (74-85-1)	TWAs	200 ppm TWA	Not established	200 ppm TWA; 233 mg/m3 TWA	200 ppm TWA; 229 mg/m3 TWA	Not established
Heptane (142-82-5)	STELs	500 ppm STEL	500 ppm STEL; 2050 mg/m3 STEL	500 ppm STEL; 2085 mg/m3 STEL	500 ppm STEL; 2050 mg/m3 STEL	500 ppm STEL
	TWAs	400 ppm TWA	400 ppm TWA; 1640 mg/m3 TWA	400 ppm TWA; 1664 mg/m3 TWA	400 ppm TWA; 1640 mg/m3 TWA	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut
Carbon Black (1333-86-4)	TWAs	3.5 mg/m3 TWA	3.5 mg/m3 TWA	3.5 mg/m3 TWA	3.5 mg/m3 TWA	3.5 mg/m3 TWA
	STELs	Not established	Not established	7 mg/m3 STEL	Not established	7 mg/m3 STEL
Kaolin (1332-58-7)	TWAs	2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	2 mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica, respirable fraction)	5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass)	2 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass)
Limestone (1317-65-3)	TWAs	Not established	10 mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica)	5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass)	Not established	5 mg/m3 TWA (respirable mass); 10 mg/m3 TWA (total mass)
Propene (115-07-1)	TWAs	500 ppm TWA	Not established	Not established	500 ppm TWA	Not established
Ethylene (74-85-1)	TWAs	200 ppm TWA	Not established	Not established	200 ppm TWA	Not established
Heptane (142-82-5)	STELs	500 ppm STEL	500 ppm STEL; 2050 mg/m3 STEL	500 ppm STEL; 2049 mg/m3 STEL	500 ppm STEL	500 ppm STEL; 2049 mg/m3 STEL
	TWAs	400 ppm TWA	400 ppm TWA; 1640 mg/m3 TWA	400 ppm TWA; 1640 mg/m3 TWA	400 ppm TWA	400 ppm TWA; 1640 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Ontario	Canada Quebec	Canada Saskatchewan	Canada Yukon	China
Carbon Black (1333-86-4)	STELs	Not established	Not established	Not established	7 mg/m3 STEL	8 mg/m3 STEL (total dust)
	TWAs	3.5 mg/m3 TWAEV	3.5 mg/m3 TWAEV	3.5 mg/m3 TWA	3.5 mg/m3 TWA	4 mg/m3 TWA (total dust)

Kaolin (1332-58-7)	TWAs	2 mg/m3 TWAEV (containing no asbestos and less than 1% crystalline silica, respirable)	5 mg/m3 TWAEV (respirable dust, containing no asbestos and less than 1% crystalline silica)	2 mg/m3 TWA (respirable fraction)	30 mppcf TWA; 10 mg/m3 TWA	Not established
	STELs	Not established	Not established	Not established	20 mg/m3 STEL	Not established
Limestone (1317-65-3)	STELs	Not established	Not established	Not established	20 mg/m3 STEL	16 mg/m3 STEL (total dust); 8 mg/m3 STEL (respirable dust)
	TWAs	Not established	10 mg/m3 TWAEV (total dust, containing no asbestos and less than 1% crystalline silica)	10 mg/m3 TWA	30 mppcf TWA; 10 mg/m3 TWA	8 mg/m3 TWA (total dust); 4 mg/m3 TWA (respirable dust)
Propene (115-07-1)	TWAs	500 ppm TWAEV	Not established	Not established	Not established	Not established
Ethylene (74-85-1)	TWAs	200 ppm TWAEV	Not established	200 ppm TWA	Not established	Not established
Heptane (142-82-5)	STELs	500 ppm STEV; 2045 mg/m3 STEV	500 ppm STEV; 2050 mg/m3 STEV	Not established	500 ppm STEL; 2000 mg/m3 STEL	1000 mg/m3 STEL
	TWAs	400 ppm TWAEV; 1635 mg/m3 TWAEV	400 ppm TWAEV; 1640 mg/m3 TWAEV	400 ppm TWA	400 ppm TWA; 1600 mg/m3 TWA	500 mg/m3 TWA

Exposure Limits/Guidelines (Con't.)

	Result	Cyprus	Denmark	Germany DFG	Germany TRGS	NIOSH
Carbon Black (1333-86-4)	TWAs	Not established	3.5 mg/m3 TWA	Not established	Not established	3.5 mg/m3 TWA; 0.1 mg/m3 TWA (carbon black in presence of polycyclic aromatic hydrocarbons, as PAH)
Kaolin (1332-58-7)	TWAs	Not established	2 mg/m3 TWA (respirable)	Not established	Not established	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
Limestone (1317-65-3)	TWAs	Not established	Not established	Not established	Not established	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
Propene (115-07-1)	TWAs	Not established	100 ppm TWA; 172 mg/m3 TWA	Not established	Not established	Not established
Heptane (142-82-5)	TWAs	500 ppm TWA; 2085 mg/m3 TWA	200 ppm TWA; 820 mg/m3 TWA	Not established	500 ppm TWA (all isomers, exposure factor 1); 2100 mg/m3 TWA (all isomers, exposure factor 1)	85 ppm TWA; 350 mg/m3 TWA
	Ceilings	Not established	Not established	500 ppm Peak; 2100 mg/m3 Peak	Not established	440 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)
	MAKs	Not established	Not established	500 ppm MAK; 2100 mg/m3 MAK	Not established	Not established

Exposure Limits/Guidelines (Con't.)

	Result	OSHA
Carbon Black (1333-86-4)	TWAs	3.5 mg/m3 TWA

Kaolin (1332-58-7)	TWAs	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Limestone (1317-65-3)	TWAs	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Heptane (142-82-5)	TWAs	500 ppm TWA; 2000 mg/m3 TWA

8.2 Exposure controls

Engineering Measures/Controls

- This adhesive is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety glasses.

Skin/Body

- Wear appropriate chemical resistant clothing. Wear appropriate gloves.

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Gray liquid with mild odor.
Color	Gray	Odor	Mild
Taste	No data available	Particulate Type	No data available
Particulate Size	No data available	Aerosol Type	No data available
Odor Threshold	No data available	Physical and Chemical Properties	No data available
General Properties			
Boiling Point	200 °F(93.3333 °C)	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	Heat of Decomposition	No data available
pH	No data available	Specific Gravity/Relative Density	= 1.33 Water=1
Density	No data available	Bulk Density	No data available
Water Solubility	Negligible	Solvent Solubility	No data available
Viscosity	No data available	Explosive Properties	No data available
Oxidizing Properties:	No data available		
Volatility			
Vapor Pressure	45 mmHg (torr)	Vapor Density	3.4 Air=1
Evaporation Rate	4.5 n-Butyl Acetate = 1	VOC (Wt.)	No data available
VOC (Vol.)	No data available	Volatiles (Wt.)	No data available

Volatiles (Vol.)	25.5 %		
Flammability			
Flash Point	14 °F(-10 °C) TCC (Tagliabue Closed Cup)	UEL	7 %
LEL	1 %	Autoignition	No data available
Self-Accelerating Decomposition Temperature (SADT)	No data available	Heat of Combustion (ΔH_c)	No data available
Burning Time	No data available	Flame Height	No data available
Flame Extension	No data available	Ignition Distance	No data available
Flame Duration	No data available	Flammability (solid, gas)	No data available
Environmental			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Coefficient of water/oil distribution	No data available	Bioaccumulation Factor	No data available
Bioconcentration Factor	No data available	Biochemical Oxygen Demand BOD/BOD5	No data available
Chemical Oxygen Demand	No data available	Persistence	No data available
Degradation	No data available		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid flames, sparks, or other sources of ignition. Excess heat. Incompatible materials.

10.5 Incompatible materials

- Acids, alkalies, strong oxidizers.

10.6 Hazardous decomposition products

- Hazardous decomposition will not occur.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Heptane (14%)	142-82-5	Acute Toxicity: Inhalation-Rat LC50 • 103 g/m ³ 4 Hour(s); Multi-dose Toxicity: Inhalation-Rat TCLo • 4000 ppm 6 Hour(s) 28 Day(s)-Intermittent; <i>Brain and Coverings:Recordings from specific areas of CNS; Sense Organs and Special Senses:Ear:Changes in cochlear structure or function; Nutritional and Gross Metabolic:Gross Metabolite Changes:Weight loss or decreased weight gain</i>
Ethylene (< 4%)	74-85-1	Acute Toxicity: Inhalation-Rat TCLo • 1000 ppm 2 Hour(s); <i>Liver:Other changes; Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Other oxidoreductases</i>

Kaolin (> 3%)	1332-58-7	Multi-dose Toxicity: Inhalation-Rat TCLO • 300 mg/m ³ 12 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Other changes;</i> Reproductive: Ingestion/Oral-Rat TDLo • 370 g/kg (37D pre/1-22D preg); <i>Reproductive Effects:Maternal Effects:Other effects; Reproductive Effects:Effects on Newborn:Other neonatal measures or effects.</i>
Limestone (> 3%)	1317-65-3	Multi-dose Toxicity: Inhalation-Rat TCLO • 84 mg/m ³ 4 Hour(s) 40 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis (interstitial); Liver:Other changes; Kidney, Ureter, and Bladder:Other changes</i>
Propene (< 3%)	115-07-1	Multi-dose Toxicity: Inhalation-Rat TCLO • 5000 ppm 6 Hour(s) 2 Year(s)-Intermittent; <i>Sense Organs and Special Senses:Olfaction:Other changes;</i> Mutagen: Inhalation-Rat • 200 ppm 4 Week(s) 6 Hour(s); Tumorigen / Carcinogen: Inhalation-Rat TCLO • 154500 mg/kg 103 Week(s)-Continuous; <i>Tumorigenic:Neoplastic by RTECS criteria; Sense Organs and Special Senses:Olfaction:Tumors</i>
Methane, 2,2'-bis(6-t-butyl-p-cresyl)- (< 0.1%)	119-47-1	Irritation: Eye-Rabbit • 100 mg 24 Hour(s) • Moderate irritation; Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 420 mg/kg 14 Day(s)-Intermittent; <i>Cardiac:Other changes; Biochemical:Metabolism (intermediary):Lipids, including transport;</i> Reproductive: Ingestion/Oral-Rat TDLo • 2946.3 mg/kg (61D male); <i>Reproductive Effects:Paternal Effects:Spermatogenesis; Reproductive Effects:Paternal Effects:Testes, epididymis, sperm duct</i>
Carbon Black (< 0.03%)	1333-86-4	Acute Toxicity: Ingestion/Oral-Rat LD50 • >15400 mg/kg; <i>Behavioral:Somnolence (general depressed activity); Skin-Rabbit LD50 • >3 g/kg;</i> Multi-dose Toxicity: Inhalation-Rat TCLO • 50 mg/m ³ 6 Hour(s) 90 Day(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Other changes;</i> Tumorigen / Carcinogen: Inhalation-Rat TCLO • 11600 µg/m ³ 18 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</i>

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking UN GHS 3 • Data lacking
Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 UN GHS 3 • Skin Irritation 2
Serious eye damage/Irritation	EU/CLP • Classification criteria not met UN GHS 3 • Eye Irritation 2
Skin sensitization	EU/CLP • Data lacking UN GHS 3 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking UN GHS 3 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking UN GHS 3 • Data lacking
Carcinogenicity	EU/CLP • Classification criteria not met UN GHS 3 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Data lacking UN GHS 3 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking UN GHS 3 • Data lacking
STOT-SE	EU/CLP • Classification criteria not met UN GHS 3 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met UN GHS 3 • Classification criteria not met

Target Organs • Central Nervous System (CNS)

Route(s) of entry/exposure • Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

- Acute (Immediate)**
 - May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death. May cause respiratory irritation.
- Chronic (Delayed)**
 - No data available.

Skin

- Acute (Immediate)**
 - Causes skin irritation.
- Chronic (Delayed)**
 - Repeated or prolonged skin contact may cause irritation, dermatitis and drying of the skin.

Eye

- Acute (Immediate)**
 - Causes serious eye irritation.
- Chronic (Delayed)**
 - No data available.

Ingestion

- Acute (Immediate)**
 - Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)**
 - No data available.

Carcinogenic Effects

- This product contains carbon black below percentages that would require a carcinogen classification. Additionally according to IARC "No significant exposure to carbon black is thought to occur during the use of products in which carbon black is bound to other materials, such as rubber, printing ink or paint."

Carcinogenic Effects		
	CAS	IARC
Carbon Black	1333-86-4	Group 2B-Possible Carcinogen

Key to abbreviations

LC = Lethal Concentration
 LD = Lethal Dose
 MOD = Moderate
 TC = Toxic Concentration

Section 12 - Ecological Information

12.1 Toxicity

	CAS	
Water-Block Seal S-20	NDA	Aquatic Toxicity-Crustacea: 48 Hour(s) EC50 Water Flea <i>Daphnia Magna</i> 50 mg/L Comments: Heptane

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted by the manufacturer.

12.6 Other adverse effects

Potential Environmental Effects

- According to Annex VI to Regulation (EC) No 1272/2008 Table 3.1 and Table 3.2 the heptane component of this material may cause adverse effects to the environment.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1133	Adhesives, containing a flammable liquid	3	II	NDA
TDG	UN1133	ADHESIVES containing flammable liquid	3	II	Potential Marine Pollutant
IMO/IMDG	UN1133	ADHESIVES containing flammable liquid	3	II	NDA
IATA/ICAO	UN1133	Adhesives containing flammable liquid	3	II	NDA

14.6 Special precautions for user

- None known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- This product is provided only in non-bulk containers.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

State Right To Know				
Component	CAS	MA	NJ	PA
Arien	64742-16-1	No	No	No
Carbon Black	1333-86-4	Yes	Yes	Yes
Ethylene	74-85-1	Yes	Yes	Yes
Heptane	142-82-5	Yes	Yes	Yes
Kaolin	1332-58-7	Yes	Yes	Yes
Limestone	1317-65-3	Yes	Yes	Yes
Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	No	No	No
Polybutene	9003-29-6	No	No	No
Propene	115-07-1	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Arien	64742-16-1	Yes	No	Yes	Yes	No
Carbon Black	1333-86-4	Yes	No	Yes	Yes	Yes

Ethylene	74-85-1	Yes	No	Yes	Yes	No
Heptane	142-82-5	Yes	No	Yes	Yes	No
Kaolin	1332-58-7	Yes	No	Yes	Yes	No
Limestone	1317-65-3	No	Yes	Yes	Yes	No
Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Yes	No	Yes	Yes	No
Polybutene	9003-29-6	Yes	No	Yes	No	No
Propene	115-07-1	Yes	No	Yes	Yes	No

Inventory (Con't.)

Component	CAS	Japan ENCS	Korea KECL	TSCA
Arien	64742-16-1	Yes	Yes	Yes
Carbon Black	1333-86-4	Yes	Yes	Yes
Ethylene	74-85-1	Yes	Yes	Yes
Heptane	142-82-5	Yes	Yes	Yes
Kaolin	1332-58-7	Yes	Yes	Yes
Limestone	1317-65-3	No	Yes	Yes
Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Yes	Yes	Yes
Polybutene	9003-29-6	Yes	Yes	Yes
Propene	115-07-1	Yes	Yes	Yes

Australia

Labor

Australia - Hazardous Substances - Substances Requiring Health Surveillance

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Australia - High Volume Industrial Chemicals List

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	
• Kaolin	1332-58-7	
• Carbon Black	1333-86-4	
• Heptane	142-82-5	
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	
• Polybutene	9003-29-6	Not Listed

Australia - List of Designated Hazardous Substances - Classification

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	F+ R12, R67

• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Self classification required
• Heptane	142-82-5	F, Xn, Xi, N R11, R65, R38, R67, R50, R53
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	F+ R12
• Polybutene	9003-29-6	Not Listed

Environment

Australia - National Pollutant Inventory (NPI) Substance List

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Australia - Ozone Protection Act - Scheduled Substances

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Australia - Priority Existing Chemical Program

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Belgium

Labor

Belgium - Substances and Preparations - Carcinogens and Mutagens

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Bulgaria

Environment

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	3.0 mg/m3 MAHCL
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	3.0 mg/m3 MAHCL
• Polybutene	9003-29-6	Not Listed

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 30 Minute

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	3.0 mg/m3 MAHCL
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	3.0 mg/m3 MAHCL
• Polybutene	9003-29-6	Not Listed

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	A, B1, D2B
• Kaolin	1332-58-7	D2A
		D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Carbon Black, non-respirable on Health Canada's WHMIS website.)
• Carbon Black	1333-86-4	
• Heptane	142-82-5	B2, D2B
• Limestone	1317-65-3	D2A
• Propene	115-07-1	A, B1, D2B
• Polybutene	9003-29-6	Uncontrolled product according to WHMIS classification criteria

Canada - WHMIS - Ingredient Disclosure List

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	1 %
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	1 %
• Heptane	142-82-5	1 %
• Limestone	1317-65-3	Not Listed

• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Environment

Canada - CEPA - Priority Substances List

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Degreasing agents; Lubricants; Thinners
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Mexico

Other

Mexico - Hazard Classifications

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Class = 2.1 UN1038, UN1962
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Class = 3
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Class = 2.1
• Polybutene	9003-29-6	Not Listed

Mexico - Regulated Substances

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	UN1038 (refrigerated liquid); UN1962 (compressed)
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	UN1206
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	UN1077
• Polybutene	9003-29-6	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed

• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	1.0 % de minimis concentration
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	1.0 % de minimis concentration
• Polybutene	9003-29-6	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	carcinogen, initial date 2/21/03 (airborne, unbound particles of respirable size)
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	
• Polybutene	9003-29-6	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Not Listed
• Kaolin	1332-58-7	Not Listed
• Carbon Black	1333-86-4	Not Listed
• Heptane	142-82-5	Not Listed
• Limestone	1317-65-3	Not Listed
• Propene	115-07-1	Not Listed
• Polybutene	9003-29-6	Not Listed

United States - Rhode Island**Labor****U.S. - Rhode Island - Hazardous Substance List**

• Methane, 2,2'-bis(6-t-butyl-p-cresyl)-	119-47-1	Not Listed
• Arien	64742-16-1	Not Listed
• Ethylene	74-85-1	Toxic; Flammable
• Kaolin	1332-58-7	Toxic
• Carbon Black	1333-86-4	Toxic
• Heptane	142-82-5	Toxic; Flammable
• Limestone	1317-65-3	Toxic
• Propene	115-07-1	Toxic; Flammable
• Polybutene	9003-29-6	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Revision Date	<ul style="list-style-type: none">• 29/January/2018
Preparation Date	<ul style="list-style-type: none">• 16/August/2012
Other Information	<ul style="list-style-type: none">• Changes to this revision: Updated mailing address.
Disclaimer/Statement of Liability	<ul style="list-style-type: none">• The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products, a subsidiary of Firestone Diversified Products, LLC, assumes no responsibility for injury to the buyer, the buyer employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of the material, even if reasonable safety procedures are followed.

Key to abbreviations

NDA = No Data Available