### Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: CS-5500 High Temperature Fuel Tank Sealant-Pre-mixed and Frozen CLB ALL  
- Product Name: High Temperature Fuel Tank Sealant / Premixed and Frozen CLB ALL  
- Product reference: CS-5500-Premixed and Frozen CLB ALL  

1.2. Product Use:  
- High Temperature Fuel Tank Sealant Pre-Mixed and Frozen  

1.3. Manufacturer’s Name:  
CAGE Code: 14439  
Flamemaster Corp.  
Chem Seal Division  
13576 Desmond Street  
Pacoima, CA 91333 – USA  

1.3.1 Suppliers Name ( if not manufacturer )  

1.4. Emergency Telephone:  
Flamemaster Corp.  
Tel: 818-890-1401  
Fax: 818-890-6001  
www.flamemaster.com  

Technical Contact:  
Flamemaster Corp.  
Tel: 818-890-1401  
Fax: 818-890-6001  
www.flamemaster.com  

1.4. Emergency Telephone:  
Chemtrec – Chemtrec International  
Tel: 800-424-9300 (North America)  
Fax: 703-527-3887 (Outside North America)  

**Specification:** MIL-S-83430/AMS3276/FMS1044/FMS3055  
Pre-Mixed and Frozen  
CLASS B  
ALL

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Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus.  
MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY
This SDS is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.
SUPPLEMENTAL LABEL ELEMENTS:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of concentrations above recommended limits causes headaches, drowsiness and nausea and could lead to unconsciousness or possibly death.

1-component mixtures: formaldehyde is released during the curing phase. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause the skin to become sensitized.

Avoid any contact with skin or clothing and wash thoroughly after handling.

Emits toxic fumes when heated.

HAZARDS NOT OTHERWISE CLASSIFIED:

Prolonged or repeated exposure may dry skin and / or cause skin irritation.

Sanding and grinding dust may be harmful if inhaled. Sanding and grinding dust may form combustible concentrations in air.

In the event of sanding, grinding, or abrading:

H372 Causes damage to organs through prolonged or repeated exposure.

Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus.

MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical family</th>
<th>Mixture of organic compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the hazards of the composition, (SDS see Section 2).</td>
<td></td>
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</tbody>
</table>

GHS CLASSIFICATION:LIQUID POLYSULFIDE POLYMER // OSHA HAZARDS: TARGET ORGAN EFFECT,IRRITANT

<table>
<thead>
<tr>
<th></th>
<th>Cas#</th>
<th>EC#</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>EYE IRRITATION</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;=71%</td>
</tr>
<tr>
<td>SKIN IRRITATION</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;=71%</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE-(CATEGORY 3)</td>
<td></td>
<td></td>
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<tr>
<td>AQUATIC, CHRONIC (CATEGORY 3)</td>
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GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS): TOLUENE

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<td>FLAMMABLE LIQUIDS (CATEGORY 2),H225</td>
<td>108-88-3</td>
<td>203-625-9</td>
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<tr>
<td>SKIN IRRITATION</td>
<td>H315</td>
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<tr>
<td>REPRODUCTIVE TOXICITY (CATEGORY 2),H361</td>
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<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE-(CATEGORY 3),CENTRAL NERVOUS SYSTEM,H336</td>
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<td>SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSURE (CATEGORY 2),H373</td>
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<td>ASPIRATION HAZARD (CATEGORY 1),H304</td>
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<tr>
<td>ACUTE AQUATIC TOXICITY (CATEGORY 2),H401</td>
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</table>

GHS CLASSIFICATION:LIQUID POLYSULFIDE POLYMER // OSHA HAZARDS: TARGET ORGAN EFFECT,IRRITANT

<table>
<thead>
<tr>
<th></th>
<th>Cas#</th>
<th>EC#</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>EYE IRRITATION</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;=71%</td>
</tr>
<tr>
<td>SKIN IRRITATION</td>
<td>N/A</td>
<td>N/A</td>
<td>&lt;=71%</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE-(CATEGORY 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQUATIC, CHRONIC (CATEGORY 3)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

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CALCIUM CARBONATE:

GHS CLASSIFICATION: CALCIUM CARBONATE
EYE DAMAGE (CATEGORY 1)
SKIN IRRITATION (CATEGORY 2)
SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE-(CATEGORY 3)

PHENOLIC FORMALDEHYDE POLYMER: HAZARD INFORMATION

PHYSICAL/CHEMICAL HAZARDS: CORROSIVE
HUMAN HEALTH HAZARDS: HARMFUL BY INHALATION, CORROSIVE TO THE EYES AND SKIN
ENVIRONMENTAL HAZARDS: TOXIC TO AQUATIC ORGANISMS
GHS CLASSIFICATION: PHENOLIC RESIN
ACUTE TOXICITY, ORAL (CATEGORY 4)
ACUTE TOXICITY, DERMAL (CATEGORY 4)
SKIN CORROSIVE (CATEGORY 1B)
EYE IRRITATION (CATEGORY 2)
SKIN IRRITATION (CATEGORY 2)
EYE DAMAGE (CATEGORY 1)
AQUATIC CHRONIC (CATEGORY 2)

TITANIUM DIOXIDE

OSHA HAZARDS: CARCINOGEN
GHS CLASSIFICATION: TITANIUM DIOXIDE
SKIN IRRITATION: (CATEGORY 3)
CARCINOGENICITY (CATEGORY 2)

CHEMICAL NAME: MANGANESE DIOXIDE
OSHA HAZARDS: TARGET ORGAN EFFECT, TOXIC BY INHALATION
TARGET ORGANS: NERVES, LUNGS
GHS CLASSIFICATION:
ACUTE TOXICITY, ORAL (CATEGORY 4) - H302
ACUTE TOXICITY, INHALATION (CATEGORY 4) - H332

CHEMICAL NAME: TERPHENYL, HYDROGENATED
AQUATIC CHRONIC (CATEGORY 4) - H413

CHEMICAL NAME: ZEOLITES
NOT CLASSIFIED

CHEMICAL NAME: TALC
NOT CLASSIFIED

CHEMICAL NAME: CARBON BLACK
NOT CLASSIFIED

CHEMICAL NAME: TERPHENYL
AQUATIC ACUTE (CATEGORY 1) - H400
AQUATIC CHRONIC (CATEGORY 1) - H410

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CHEMICAL NAME: 1,3 DIPHENYLGUANIDINE  
CAS# 102-06-7  
EC# 203-002-1  <3% by weight

ACUTE TOXICITY (CATEGORY 4) - H302
SKIN IRRITATION (CATEGORY 2) - H315
EYE IRRITATION (CATEGORY 2) - H319
REPRODUCTIVE (CATEGORY 2) - H361f (FERTILITY)
STOT-SINGLE EXPOSURE (CATEGORY 3) - H335
AQUATIC CHRONIC (CATEGORY 2) - H411

CHEMICAL NAME: 1,3 DIPHENYLGUANIDINE  
CAS# 102-06-7  
EC# 203-002-1  <3% by weight

CHEMICAL NAME: POLYPHENYL, QUATER AND HIGHER  
CAS# 68956-74-1  
<10% by weight

MAGNESIUM CARBONATE  
CAS# 546-93-0  
<10% by weight

Section -4. FIRST-AID MEASURES

General: When in doubt or symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air, if breathing has stopped, administer artificial respiration. Give nothing by mouth, seek immediate medical attention.

Eye contact: Check for and remove any contact lenses. Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek immediate medical attention.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use aromatic solvents, thinners or petroleum products.

Ingestion: If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. May be fatal if swallowed or vomited and enters lungs and/or airways. Never give anything by mouth to an unconscious person.

Section -5. FIRE-FIGHTING MEASURES

Extinguishing agents

Recommended: Universal resistant foam, CO2, water, powder.

Agents to avoid: None known

Attention

Promptly remove all persons in the event of a fire from the fire area. If safe to do so, remove all containers from fire area as well.

Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.

Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.

Do not weld, flame cut or expose to extreme heat or ignition sources, empty containers which have contained flammable products.

Do not allow run-off from fire fighting to enter drains or water courses.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

In case of inhalation of decomposition products released in a fire, symptoms may be delayed. Exposed persons may need to be kept under medical surveillance for at least 48 hours.

HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE: CARBON DIOXIDE, CARBON MONOXIDE, HALOGENATED COMPOUNDS, AND METAL OXIDE / OXIDES, FORMALDEHYDE, NITROGEN OXIDES, SULFUR OXIDES.

Oxides of Carbon, Nitrogen, Sulfur Dioxide, Manganese Compounds

Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus.

MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY
Section -6. ACCIDENTAL RELEASE MEASURES
Eliminate sources of ignition, ventilate the area. Avoid breathing vapors by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8. Collect spill with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses. Clean-up with a detergent/ water mix; avoid use of aromatic solvents. If the product enters drains or watercourses, inform authority with jurisdiction in accordance with state/ local regulations. Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and/or the ocean. Avoid release into environment.

Section -7. HANDLING AND STORAGE

7.1 Handling:
No smoking, eating and drinking during handling. Avoid exposure during pregnancy/while nursing. Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed. Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist. Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a pressure vessel. Clean or discard contaminated clothing and shoes. Preparation may charge electrostatically; always use grounding/ bonding/ earthing leads when transferring contents of containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational Exposure Limits. Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are recommended. Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus. MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

7.2 Storage:
Observe label precautions. Store between 32/F and 95/F (0/C and 35/C) in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight. For flash points below 23 °C store in an area constructed to the appropriate standard. Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus. MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering measures:
Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL). If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus. MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

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8.2 Exposure limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>OSHA</th>
<th>ACGIH TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALIPHATIC POLYSULFIDE-POLYMER *</td>
<td>Not known</td>
<td>Not known</td>
</tr>
<tr>
<td>TOLUENE (Methylbenzene)*</td>
<td>Not known</td>
<td>Not known</td>
</tr>
<tr>
<td>ALIPHATIC POLYSULFIDE-POLYMER *</td>
<td>Not known</td>
<td>Not known</td>
</tr>
<tr>
<td>PHENOLIC FORMALDEHYDE POLYMER *</td>
<td>N/E</td>
<td>N/E</td>
</tr>
<tr>
<td>CALCIUM CARBONATE *</td>
<td>5 mg/m³ (RESPIRABLE FRACTION)</td>
<td>3 mg/m³ (RESPIRABLE FRACTION)</td>
</tr>
<tr>
<td>CALCIUM CARBONATE *</td>
<td>15 mg/m³ (TOTAL DUST)</td>
<td>10 mg/m³ (TOTAL DUST)</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE *</td>
<td>15 mg/m³ (TOTAL DUST)</td>
<td>10 mg/m³ (TOTAL DUST)</td>
</tr>
<tr>
<td>Manganese Dioxide</td>
<td>Not known</td>
<td>TWA: 0.1 mg/m³ (as Mn) 8 hours (Inhalable Fraction)</td>
</tr>
<tr>
<td>Terphenyl, Hydrogenatec *</td>
<td>TWA: 4.9 mg/m³ 8 hours</td>
<td>TWA: 0.5 ppm 8 hours</td>
</tr>
<tr>
<td>Zeolites *</td>
<td>TWA: 1 mg/m³ 8 hours (Respirable Fraction)</td>
<td></td>
</tr>
<tr>
<td>Talc *</td>
<td>TWA: 2 mg/m³ 8 hours (Respirable Fraction)</td>
<td></td>
</tr>
<tr>
<td>Carbon Black *</td>
<td>TWA: 3 mg/m³ 8 hours (Inhalable Fraction)</td>
<td></td>
</tr>
<tr>
<td>Terphenyl *</td>
<td>C: 5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C: 0.53 ppm</td>
<td></td>
</tr>
<tr>
<td>MAGNESIUM CARBONATE *</td>
<td>TWA: 5 mg/m³ (Respirable Fraction)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³ 8 hours (Total Dust)</td>
<td></td>
</tr>
</tbody>
</table>

* can be absorbed through skin

8.3 Personal protection

All Personal Protective Equipment, including Respiratory Protection, used to control exposure to hazardous substances must be selected to meet the requirements of OSHA Regulations.

Respiratory protection:
Appropriate respiratory protection equipment should be selected according to the type of contaminants, following regulatory (OSHA / NIOSH) and manufacturers instructions including proper fitting of devices.

Hand protection:
For prolonged or repeated contact, recommend gloves type: polyvinyl alcohol, nitrile rubber, latex rubber (some people may exhibit sensitivity to Latex). Barrier creams may help to protect exposed areas of the skin. However, they should not be applied post exposure.

Eye protection:
Use safety glasses with side shields to protect against splashes. Face shields may also be worn.

Skin protection:
Protective clothing made of antistatic and fire resistant fibers. All parts of the body should be washed after contact. Use good hygiene and industrial practices, keep working clothes clean.

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Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus.

MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 °F (20 °C) SOLID
- Flash point: 200 °F (16.67 °C) Method: TCC
- Specific gravity: N/A
- Vapor Density: N/A
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit (% vol.): N/A
- Miscibility in water at 20 °C: Negligible
- VOC: N/A
- Ph: N/A
- Volatile by Volume %: N/A
- Vapor pressure at: 68 °F (20 °C) N/A
- Color: Dark Grey to Black
- Appearance: Paste
- Odor: Polysulfide Odor
- Boiling Point: N/A
- Material Supports Combustion: Yes

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products such as:
- Carbon Monoxide
- Sulfur Oxides
- Carbon Dioxide
- Formaldehyde
- Halogenated Compounds
- Oxides of Carbon, Nitrogen, Sulfur Dioxide, Trace Hydrogen Sulfide
- Metal Oxide / Oxides
- Manganese Compounds

In case of inhalation of decomposition products released in a fire, symptoms may be delayed. Exposed persons may need to be kept under medical surveillance for at least 48 hours.

Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus.

MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See (SDS Sections 3 and 15) for details.

Exposure to component solvents vapors at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms and signs of overexposure include headache, dizziness, fatigue, muscular weakness, drowsiness, reduced fetal weight, increase in fetal deaths, skeletal malformations, and in extreme cases loss of consciousness.

Repeated or prolonged contact with the preparation may cause Defatting of the skin resulting in non-allergic dermatitis and absorption through the skin.

The liquid splashed in the eyes causes serious eye irritation and damage.

Irritating to mouth, throat and stomach. Ingestion causes reduced fetal weight, increased fetal deaths and skeletal malformations.
### ACUTE TOXICITY:

<table>
<thead>
<tr>
<th>PRODUCT:</th>
<th>RESULT</th>
<th>SPECIES</th>
<th>DOSE</th>
<th>EXPOSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>6450 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Toluene</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>49 g/m³</td>
<td>4 Hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>8000 ppm</td>
<td>4 Hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>8.39 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>636 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>&gt;10g/kg</td>
<td>-</td>
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</table>

<table>
<thead>
<tr>
<th>PRODUCT:</th>
<th>RESULT</th>
<th>SPECIES</th>
<th>DOSE</th>
<th>EXPOSURE</th>
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<tbody>
<tr>
<td>Manganese Dioxide</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>3478 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Terphenyl, Hydrogenated</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>17500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Zeolites</td>
<td>LD50 ORAL</td>
<td>Rat</td>
<td>&gt;5 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;3 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;15400mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Terphenyl</td>
<td>LD50 Oral</td>
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<tr>
<td>1, 3-Diphenylguanidine</td>
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<td>Rat</td>
<td>323mg/kg</td>
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<tr>
<td>Magnesium Carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>8000mg/kg</td>
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</tbody>
</table>

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MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

May cause damage to organs through prolonged or repeated exposure.
Suspected of causing cancer. Risk depends on level and duration of exposure.
Suspected of damaging the unborn child.

### CARCINOGENICITY:

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>IARC</th>
<th>OSHA</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENE</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE</td>
<td>2B</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Zeolites</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Carbon Black, Respirable Powder</td>
<td>2B</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### SPECIFIC TARGET ORGAN TOXICITY-STOT (SINGLE EXPOSURE)

- LIQUID POLYMER - CATEGORY 3
- TOLUENE - CATEGORY 3
- LIQUID POLYMER - CATEGORY 3
- 1,3-Diphenylguanidine - (Category 3)
- Zeolites - (Category 3)
- Talc - (Category 3)

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SPECIFIC TARGET ORGAN TOXICITY-STOT (REPEATED EXPOSURE)
TOLUENE - CATEGORY 2
Manganese Dioxide - (Category 2)

TARGET ORGANS: BRAIN, BLOOD, KIDNEYS, LUNGS, REPRODUCTIVE SYSTEM, LIVER, HEART, PERIPHERAL NERVOUS SYSTEM, GASTROINTESTINAL TRACT, UPPER RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS AND/OR CORNEA.

ASPIRATION HAZARD:
TOLUENE - CATEGORY 1

ASPIRATION HAZARD - (CATEGORY 1)
May Be Fatal if Swallowed and Enters Airways

12. ECOLOGICAL INFORMATION
There is no data available on the preparation itself. Do not allow the product to enter drains or water ways. See (SDS Sections 3 and 15)
Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and/or the ocean. Avoid release into environment.

Empty containers and/or liners may contain material residue. Empty contaminated packagings thoroughly. Dispose in accordance with all Federal, State, and local health and environmental regulations.

<table>
<thead>
<tr>
<th>Product / Ingredient</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide</td>
<td>Acute LC50&gt;100mg/l Fresh Water</td>
<td>Daphnia</td>
<td>48 Hours</td>
</tr>
</tbody>
</table>

Persistance and Degradability:

<table>
<thead>
<tr>
<th>Product / Ingredient</th>
<th>Aquatic Half Life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

Bioaccumulative Potential:

<table>
<thead>
<tr>
<th>Product / Ingredient</th>
<th>LogP(ow)</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>2.73</td>
<td>8.32</td>
<td>low</td>
</tr>
<tr>
<td>1,3 Diphenylguanidine</td>
<td>1.69</td>
<td>19.95</td>
<td>Low</td>
</tr>
<tr>
<td>Bis(piperidinothiocarbonyl) tetrasulfide</td>
<td>2.8</td>
<td>16.98</td>
<td>Low</td>
</tr>
</tbody>
</table>

Mobility in Soil: Not Available

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13. DISPOSAL CONSIDERATIONS

Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.
React with curing agent and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.
Empty containers and/or liners may contain material residue. Empty contaminated packagings thoroughly. Dispose in accordance with all Federal, State, and local health and environmental regulations.
Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

14. TRANSPORT INFORMATION

DOT: § 172.101 HAZARDOUS MATERIALS TABLE
UN Number: 1845
Proper Shipping Name: Carbon Dioxide Solid (Dry Ice)
Labels: Carbon Dioxide Solid (Dry Ice)

Hazard Class: 9 Subclass: NO
Packaging Group: III
Limited Quantity: Passenger aircraft: 10 Liter (2.64 Gallons)
Cargo aircraft only: 220 Liter (58 gallon)
Vessel stowage: A
ERG: 128
NMFC 4620 sub.5-CL.60
Schedule B # 3506.91.0000

IATA:
UN Number: 1845
Proper Shipping Name: Carbon Dioxide Solid (Dry Ice)
Labels: Carbon Dioxide Solid (Dry Ice)
Hazard Class: 9 Subclass: NO
Packaging Group: III
Passenger Air Packing Instruction: 355
Passenger aircraft: 60 Liter (16 gallon)
Cargo Air Packing Instruction: 366
Cargo aircraft only: 220 Liter (58 gallon)

IMDG:
UN Number: 1845
Proper Shipping Name: Carbon Dioxide Solid (Dry Ice)
Label: Carbon Dioxide Solid (Dry Ice)
Hazard Class: 9 Subclass: NO
Packaging Group: III
EMS No: F, E – S, D

Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus.
MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

15. REGULATORY INFORMATION

US Regulations Federal

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
<th>Threshold limit (Reporting Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENE (Methylbenzene)</td>
<td>108-88-3</td>
<td>&lt;=15%</td>
<td>unknown</td>
</tr>
<tr>
<td>LIQUID POLYMER</td>
<td>N/A</td>
<td>50%-71%</td>
<td>unknown</td>
</tr>
<tr>
<td>LIQUID POLYMER</td>
<td>N/A</td>
<td>50%-71%</td>
<td>unknown</td>
</tr>
<tr>
<td>PHENOLIC POLYMER</td>
<td>N/A</td>
<td>&lt;5%</td>
<td>unknown</td>
</tr>
<tr>
<td>Calcium Carbonate</td>
<td>72608-12-9</td>
<td>&lt;35%</td>
<td>unknown</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>*13463-67-7</td>
<td>&lt;3%</td>
<td>unknown</td>
</tr>
<tr>
<td>Manganese Dioxide</td>
<td>1313-13-9</td>
<td>&lt;65%</td>
<td>unknown</td>
</tr>
</tbody>
</table>

SARA notifications must remain attached to this SDS. Any copies and/or distribution of this SDS must include all SARA notifications.

This sds is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.
All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

SARA 311/312
Classification: Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition of Ingredients:
Polysulfide Polymer: Immediate (acute) Health Hazard
Polysulfide Polymer: Immediate (acute) Health Hazard
Toluene: Fire Hazard, Immediate (acute) Health Hazard, Delayed (chronic) Health Hazard
Phenolic Formaldehyde Polymer: Immediate (acute) Health Hazard
Titanium Dioxide: Delayed (chronic) Health Hazard
Manganese Dioxide: Immediate (acute) health hazard
Delayed (chronic) health hazard
Zeolites: Immediate (acute) health hazard
Polyphenyls, quater and higher: Immediate (acute) health hazard
Talc: Immediate (acute) health hazard
Carbon Black: Fire Hazard
Delayed (chronic) health hazard
Terphenyl: Immediate (acute) health hazard
1,3-Diphenylguanidine: Fire Hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard
Bis(piperidinothiocarbonyl) tetrasulfide: Fire Hazard
Immediate (acute) health hazard

Sudden Release Of Pressure: No Products
Reactivity: No Products

United States: Sara 302/304 (Sara 304 RQ): Not Applicable
Information On Ingredients: None Were Found

Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus. MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY
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<table>
<thead>
<tr>
<th>US Regulations State</th>
<th>TOLUENE</th>
<th>Calcium Carbonate</th>
<th>Titanium Dioxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Proposition 65 (Developmental – Female)</td>
<td>108-88-3</td>
<td>&lt;= 15%</td>
<td>&gt;= 1.0%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>108-88-3</td>
<td>&lt;=15%</td>
<td>&gt;= 1.0%</td>
</tr>
<tr>
<td>New Jersey</td>
<td>108-88-3</td>
<td>&lt;=15%</td>
<td>&gt;= 1.0%</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>108-88-3</td>
<td>&lt;=15%</td>
<td>&gt;= 1.0%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>108-88-3</td>
<td>&lt;=15%</td>
<td>&gt;= 1.0%</td>
</tr>
<tr>
<td>California Proposition 65 (Developmental – Female)</td>
<td>LIQUID POLYMER</td>
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<td>50%-71%</td>
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</table>
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**California Prop. 65 : Warning**

This product contains a chemical or chemicals known by the State of California to cause cancer, birth defects or other reproductive harm.

Vapors are heavier than air and will collect at low points. Dry ice releases Carbon Dioxide and poses serious suffocation hazard. In confined areas or areas without proper ventilation wear self contained breathing apparatus.

**MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY**

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class D - Poisonous and Infectious materials Division 2: Materials Causing Other Toxic Effects D2A</strong></td>
<td>TOLUENE</td>
</tr>
<tr>
<td><strong>D2B</strong></td>
<td>TOLUENE</td>
</tr>
</tbody>
</table>

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

Listed National Pollutant Release Inventory (NPRI): TOLUENE CAS: 108-88-3

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Polysulfide Polymer</td>
<td>cas#N/A</td>
</tr>
<tr>
<td>PHENOLIC FORMALDEHYDE POLYMER</td>
<td>cas#N/A</td>
</tr>
<tr>
<td>Calcium Carbonate</td>
<td>72608-12-9</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
</tr>
<tr>
<td>Manganese Dioxide</td>
<td>1313-13-9</td>
</tr>
</tbody>
</table>

**16. OTHER INFORMATION**

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
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<tr>
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<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Customer and / or end user is responsible for determining PPE

**NFPA**

**HMIS**

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MAY CAUSE CRYOGENIC BURNS OR OTHER INJURY

Preparer: Flamemaster / Compliance
Revision Notes: A
Conversion to ANSI format

Containers: plastic jars, metal cans, cartridge kits

Limited Quantity See SDS Section 14

Maximum container size 50 Gallons / 190 Liters

Notice to reader:
This SDS is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.
In all cases, the user must determine the applicability of all information and recommendations contained herein as well as the suitability of this product for their own particular needs or purposes.
This product may be hazardous and should always be used with care and discretion. Every effort has been made to describe all known hazards, but this in no way guarantees the above mentioned hazards are the only hazards present.
Flamemaster Corporation, its Affiliates and its Agents, shall in no way be held liable for any damages resulting from handling, using, storing, disposing of, or from contact with this product. User assumes all risk.

End of Safety Data Sheet