



**FLAMEMASTER**  
 Flamemaster Corp.  
 13576 Desmond Street  
 Pacoima, CA 91331 - USA

**SAFETY DATA SHEET**  
**APRIL 2015**

**File: CS5500BB GSA 07-10**  
**High Temperature Fuel Tank**  
**Sealant / Catalyst**

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

1.1. Product Identifier: CS-5500 Part B Class B All  
 - Product Name: High Temperature Fuel Tank Sealant / Catalyst Part B  
 - Product reference: CS-5500-B

1.2. Product Use:  
 - High Temperature Fuel Tank Sealant

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 )

Technical Contact:  
 Flamemaster Corp.  
 Tel: 818-890-1401  
 Fax: 818-890-6001  
[www.flamemaster.com](http://www.flamemaster.com)

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

**Specification: AMS 3276/FMS1044/FMS3055/MIL-S-83430      Catalyst /Part B      CLASS B All**

<b>NSN:</b>	8030-01-252-7963 CS5500B1/2 2.5 OZ	8030-00-602-0045 CS5500B1/2 6OZ	8030-00-602-0039 CS5500B1/2 1/2 PINT	8030-00-348-7888 CS5500B1/2 PINT	8030-00-322-7275 CS5500B1/2 50 GAL
	8030-01-214-0374 CS5500B1/4 6OZ.	8030-00-560-8758 CS5500B-2 6 OZ.	8030-00-485-3237 CS5500B-2 PINT	8030-01-066-6444 CS5500B-2 QUART	8030-00-585-4900 CS5500B-2 GAL
	8030-00-560-8759 CS5500B-2 5-GAL	8030-00-035-0083 CS5500B-2 50 GAL	8030-00-602-0035 CS5500B-6 6OZ.	8030-00-602-0038 CS5500B-6 5-GAL	

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**Section -2. HAZARD ( S ) IDENTIFICATION**

ACUTE TOXICITY (ORAL) 4, H302

ACUTE TOXICITY (INHALATION) 4, H332

SKIN SENSITIZATION 1, H317

CARCINOGENICITY 2, H351

TOXIC TO REPRODUCTION (FERTILITY) 2, H361f

SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373

Percentage of mixture with ingredients of unknown toxicity is 9.5%

**For A Complete List of H-Statements and Classifications See Section 16**

**OSHA / HCS STATUS :** THIS MATERIAL IS CONSIDERED HAZARDOUS BY THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

Human and Environmental Hazards:

**HAZARD STATEMENTS:**

Harmful by Inhalation and / or Swallowing

Irritating to Eyes and Skin

May Cause An Allergic Skin Reaction

Suspected of Causing Cancer

Suspected of Damaging Fertility

May Cause Damage to Organs Through Prolonged or Repeated Exposure

**HAZARD PICTOGRAMS:**



**SIGNAL WORD:**

**WARNING**

Full text of P statements associated to this compound:

- P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
- Read label before use
- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from heat/sparks/open flames and hot surfaces-No Smoking
- P240:Ground/bond container and receiving equipment
- P261+P262+P263+P264:Avoid breathing dust/fumes/gas/mist/vapours/spray.Do not get in eyes , on skin, or on clothing. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling.
- P270+P271+P273: Do not eat drink or smoke when using this product. Use only outdoors or in a well ventilated area. Avoid release to the environment.
- P281+P280: Use personal protective equipment as required. Wear protective gloves/ protective clothing/ eye protection/face protection
- P301+P310+P331: If swallowed: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
- P305+P351+P338+P315: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,if present and easy to do. Continue rinsing. Get immediate medical advice attention.
- P304+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell
- P342+P340+P315: If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- P302+P352: If on skin: Wash with plenty of soap and water
- P306+P361: If on clothing: Remove/ take off immediately all contaminated clothing
- P402+P403+P404: Store in a dry place. Store in a well ventilated space. Store in a closed container.
- P233+P234+P235: Keep container tightly closed. Keep only in original container. Keep cool.

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.

**HAZARDS NOT OTHERWISE CLASSIFIED:** OXIDISING POTENTIAL: Contact with combustible material may result in fire. Keep away from combustible materials. This material increases the risk of fire and may aid in combustion.

**Other Hazards that do not result in classification:**

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

**Section -3. COMPOSITION / INFORMATION ON INGREDIENTS**

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**Chemical family :** Mixture of organic compounds

For the hazards of the composition, ( SDS see Section 2).

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<b>CHEMICAL NAME: MANGANESE DIOXIDE</b> 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	CAS# 1313-13-9	EC# 215-202-6	<65% by weight
<b>CHEMICAL NAME: TERPHENYL, HYDROGENATED</b> AQUATIC CHRONIC (CATEGORY 4) - H413	CAS# 61788-32-7	EC# 262-967-7	<50% by weight
<b>CHEMICAL NAME: ZEOLITES</b> NOT CLASSIFIED	CAS# 1318-02-1	EC# 215-283-8	<15% by weight
<b>CHEMICAL NAME: TALC</b> NOT CLASSIFIED	CAS# 14807-96-6	EC# 238-877-9	<10% by weight
<b>CHEMICAL NAME: CARBON BLACK</b> NOT CLASSIFIED	CAS# 1333-86-4	EC# 215-609-9	<10% by weight
<b>CHEMICAL NAME: TERPHENYL</b> AQUATIC ACUTE (CATEGORY 1) - H400 AQUATIC CHRONIC (CATEGORY 1) - H410	CAS# 26140-60-3	EC# 247-477-3	<10% by weight
<b>CHEMICAL NAME: 1,3 DIPHENYLGUANIDINE</b> 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	CAS# 102-06-7	EC# 203-002-1	<3% by weight
<b>CHEMICAL NAME: BIS(PIPERIDINOTHIOCARBONYL) TETRASULFIDE</b> SKIN SENSITIVITY (CATEGORY 1) - H317	CAS# 120-54-7	EC# 204-406-0	<3% by weight
<b>CHEMICAL NAME: POLYPHENYL, QUARTER AND HIGHER</b>	CAS# 68956-74-1		<10% by weight
<b>MAGNESIUM CARBONATE</b>	CAS# 546-93-0		<10% by weight

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#### **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:** Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek 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. Never give anything by mouth to an unconscious person.

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#### **Section -5. FIRE-FIGHTING MEASURES**

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##### **Extinguishing agents**

**Recommended:** Universal resistant foam, CO<sub>2</sub>, water, powder.

**Agents to avoid:** None known

##### **Attention**

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.

**Hazardous decomposition products include:** Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Sulfur Oxides  
Metal Oxide / Oxides

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#### **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.

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#### **Section -7. HANDLING AND STORAGE**

##### **7.1 Handling:**

No smoking, eating and drinking during handling.

Avoid exposure during pregnancy.

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.

##### **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

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### 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.

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### 8.2 Exposure limits

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#### Work place exposure limits ( 8 hour )

Substance	ACGIH TLV
Manganese Dioxide	TWA: 0.1mg/m <sup>3</sup> (as Mn) 8 hours (Inhalable Fraction)
	TWA: 0.02mg/m <sup>3</sup> (as Mn) 8 hours (Respirable Fraction)
Terphenyl, Hydrogenated	TWA: 4.9 mg/m <sup>3</sup> 8 hours
	TWA: 0.5 ppm 8 hours
Zeolites	TWA: 1mg/m <sup>3</sup> 8 hours (Respirable Fraction)
Talc	TWA: 2mg/m <sup>3</sup> 8 hours (Respirable Fraction)
Carbon Black	TWA: 3mg/m <sup>3</sup> 8 hours ( Inhalable Fraction)
Terphenyl	C: 5mg/m <sup>3</sup>
	C: 0.53 ppm
MAGNESIUM CARBONATE	TWA: 5mg/m <sup>3</sup> (Respirable Fraction)
	TWA: 15 mg/m <sup>3</sup> 8 hours (Total Dust)

### 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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## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 ° F (20 ° C) Liquid
- Flash point: 200 ° F (93 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) 2.0
- Vapor Density: N/A
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit (% vol.): N/A
- Miscibility in water at 20 ° C: NEGLIGIBLE
- Material Supports Combustion. : Yes
- Ph : 9.0
- % VOLATILE BY VOLUME - 2.0
- Vapor pressure at: 68 ° F (20 ° C) N/A
- Color: BLACK
- Appearance: PASTE
- Odor: NEGLIGIBLE OILY ODOR
- Boiling Point: Unknown

## 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
- Oxides of nitrogen
- Metal Oxide / Oxides
- Manganese Compounds
- Smoke

## 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

### ACUTE TOXICITY:

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Manganese Dioxide	LD50 ORAL	Rat	3478 mg/kg	-
Terphenyl,Hydrogenated	LD50 ORAL	Rat	17500 mg/kg	-
Zeolites	LD50 ORAL	Rat	>5 g/kg	-
Carbon Black	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400mg/kg	-
Terphenyl	LD50 Oral	Rat	>1400 mg/kg	-
Magnesium Carbonate	LD50 Oral	Rat	8000mg/kg	-
1, 3-Diphenylguanidine	LD50 Oral	Rat	323mg/kg	-

### CARCINOGENICITY:

INGREDIENT	IARC	OSHA	NTP
Zeolites	3	-	-
Carbon Black, Respirable Powder	2B	-	-

### Acute Toxicity Estimates:

Oral: 1099.7 mg/kg

Inhalation (gases): 10532.1 ppm

Inhalation (vapors) : 25.75 mg/l

Inhalation (Dust and Mist): 3.511mg/l

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**Specific Target Organ Toxicity (STOT)- Single Exposure**

1,3-Diphenylguanidine - (Category 3)

Zeolites - (Category 3)

Talc - (Category 3)

This Product is Harmful if Swallowed or Inhaled.

This Product also Causes Serious Eye Irritation.

This Product Causes Skin Irritation, Defatting of the Skin, and May Cause an Allergic Reaction.

**Specific Target Organ Toxicity (STOT) - Repeated Exposure:**

Manganese Dioxide - (Category 2)

**Potential chronic health effects include the following:**

May cause damage to organs through prolonged or repeated exposure. May lead to defatting of the skin and / or irritation.

May lead to allergic reactions.

Suspected of causing cancer.

Suspected of damaging fertility

**Target Organs:** lungs, skin, central nervous system, blood, kidneys, nervous system, liver, spleen, lymphatic system, cardiovascular system, upper respiratory tract, bone marrow, eye, lens, cornea

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**12. ECOLOGICAL INFORMATION**

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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)

**Bioaccumulative Potential:**

Product	LogPow	BCF	Potential
1,3 Diphenylguanidine	1.69	19.95	Low
Bis(piperidinothiocarbonyl) tetrasulfide	2.8	16.98	Low

**Mobility in Soil:**

Not Available

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**13. DISPOSAL CONSIDERATIONS**

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Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.

React with base and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.

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**14. TRANSPORT INFORMATION**

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**DOT:** Not regulated  
**UN Number:** Not regulated  
**IATA:** Not regulated  
**IMDG/IMO:** Not regulated  
**NMFC:** 4620 SUB.5 – CL.60  
**Schedule B #** 3506.91.0000

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**15. REGULATORY INFORMATION**

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**United States Inventory(TSCA 8B) :** All Components are Listed or Exempted  
**Australia Inventory (AICS) :** All Components are Listed or Exempted  
**Canada Inventory (DSL) :** All Components are Listed or Exempted  
**China Inventory (IECSC) :** All Components Are Listed Or Exempted  
**Japan Inventory (ENCS) :** All Components are Listed or Exempted  
**Korea Inventory (KECI) :** All Components are Listed or Exempted  
**New Zealand (NZIoC) :** All Components are Listed or Exempted  
**Philippines Inventory (PICCS) :** All Components are Listed or Exempted  
**Europe Inventory (REACH) :** Please contact your supplier concerning the status of this material

**Other EU Regulations:**

1,3-Diphenylguanidine - Reproductive (Category 2) H361f (Fertility)

**SARA 311/312**

Classification: Immediate (acute) health hazard  
Delayed (chronic) health hazard

**Composition of Ingredients :**

Manganese Dioxide : Immediate (acute) health hazard  
Delayed (chronic) health hazard

Zeolites : Immediate (acute) health hazard

Polyphenyls, quarter 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) : Fire Hazard  
tetrasulfide Immediate (acute) health hazard



**US Regulations Federal**

chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 (SARA)	Chemical Name	CAS No	Weight %	Threshold limit
	Manganese Dioxide	1313-13-9	<65%	Unknown

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

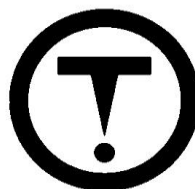
All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

**US Regulations State**

California Proposition 65 (Developmental – Female)	<b>MANGANESE DIOXIDE</b>	1313-13-9	< 65%	unknown
Massachusetts	<b>MANGANESE DIOXIDE</b>	1313-13-9	< 65%	unknown
New Jersey	<b>MANGANESE DIOXIDE</b>	1313-13-9	< 65%	unknown
Pennsylvania	<b>MANGANESE DIOXIDE</b>	1313-13-9	<65%	unknown
Rhode Island	<b>MANGANESE DIOXIDE</b>	1313-13-9	<65%	unknown

**California Prop 65 Warning :**

This Product contains one or more ingredients known by the state of California to cause cancer.



materials Division 2: Materials Causing Other Toxic Effects:  
Manganese Dioxide CAS#1313-13-9

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):Manganese Dioxide cas#1313-13-9

HEALTH 3  
FLAMMABILITY 1  
REACTIVITY 1  
(OSHA) PPE G

HEALTH 3  
FLAMMABILITY 1  
REACTIVITY 1  
(OSHA) PPE G



**NFPA**

**HMIS**

**PPE**

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**Section 16 Other Information**

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**Full Text of H Statements Associated with this Compound:**

ACUTE TOXICITY (ORAL) 4, H302  
ACUTE TOXICITY (INHALATION) 4, H332  
SKIN SENSITIZATION 1, H317  
CARCINOGENICITY 2, H351  
TOXIC TO REPRODUCTION (FERTILITY) 2, H361f  
SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373

**Full Text of Classifications Associated with this Compound:**

Acute Tox. 4, H302 : ACUTE TOXICITY (ORAL) - CATEGORY 4  
Acute Tox. 4, H332 : ACUTE TOXICITY (INHALATION) - CATEGORY 4  
Reproductive 2, H361f : TOXIC TO REPRODUCTION (FERTILITY) - CATEGORY 2  
Skin Sensitization 1, H317 : SKIN SENSITIZATION - CATEGORY 1  
STOT RE 2, H373 : SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - CATEGORY 2  
Carcinogenicity 2, H351 : CARCINOGENICITY - CATEGORY 2

Preparer-Flamemaster/Compliance  
Rev A April 2015  
Supercedes(Conversion)

Revision Notes: A

Conversion to ANSI format

Containers: Plastic Jars, Metal Cans, Cartridge Kits

Maximum Container Size: 50 Gallons/190 Liters

END OF SAFETY DATA SHEET



**FLAMEMASTER**  
 Flamemaster Corp.  
 13576 Desmond Street  
 Pacoima, CA 91331 - USA

**SAFETY DATA SHEET**  
 APRIL 2015

**File: CS5500BA GSA 07-10**  
**High Temperature Fuel Tank**  
**Sealant / Catalyst**

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

1.1. Product Identifier: CS-5500 Part B Class A ALL  
 - Product Name: High Temperature Fuel Tank Sealant / Catalyst Part B  
 - Product reference: CS-5500-B

1.2. Product Use:  
 - High Temperature Fuel Tank Sealant

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 )

Technical Contact:  
 Flamemaster Corp.  
 Tel: 818-890-1401  
 Fax: 818-890-6001  
[www.flamemaster.com](http://www.flamemaster.com)

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

**Specification: AMS 3276/FMS1044/FMS3055/MIL-S-83430 Catalyst /Part B CLASS A 1/2**

NSN:	8030-01-496-6811 CS5500A1/2 2.5 OZ	8030-00-312-6128 CS5500A1/2 6OZ.	8030-00-602-0107 CS5500A1/2 1/2 PINT	8030-01-395-5474 CS5500A1/2 PINT	
	8030-00-602-0049 CS5500A-2 6 OZ.	8030-00-602-0051 CS5500A-2 GALLON	8030-01-036-6936 CS5500A1/2 QUART		

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**Section -2. HAZARD ( S ) IDENTIFICATION**

ACUTE TOXICITY (ORAL) 4, H302

ACUTE TOXICITY (INHALATION) 4, H332

SKIN SENSITIZATION 1, H317

CARCINOGENICITY 2, H351

TOXIC TO REPRODUCTION (FERTILITY) 2, H361f

SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373

**For A Complete List of H-Statements and Classifications See Section 16**

**OSHA / HCS STATUS :** THIS MATERIAL IS CONSIDERED HAZARDOUS BY THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

Human and Environmental Hazards:

Harmful by Inhalation and / or Swallowing

May Cause an Allergic Skin Reaction

Suspected of Damaging Fertility

Suspected of Causing Cancer

May Cause Damage through Prolonged or Repeated Exposure

**HAZARD PICTOGRAMS:****SIGNAL WORD:****WARNING****HAZARD STATEMENTS:**

Harmful by Inhalation and / or Swallowing

May Cause an Allergic Skin Reaction

Suspected of Damaging Fertility

Suspected of Causing Cancer

May Cause Damage through Prolonged or Repeated Exposure

Full text of P statements associated to this compound:

- P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
- Read label before use
- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from heat/sparks/open flames and hot surfaces-No Smoking
- P240:Ground/bond container and receiving equipment
- P261+P262+P263+P264:Avoid breathing dust/fumes/gas/mist/vapours/spray.Do not get in eyes , on skin, or on clothing. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling.
- P270+P271+P273: Do not eat drink or smoke when using this product. Use only outdoors or in a well ventilated area. Avoid release to the environment.
- P281+P280: Use personal protective equipment as required. Wear protective gloves/ protective clothing/ eye protection/face protection
- P301+P310+P331: If swallowed: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
- P305+P351+P338+P315: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,if present and easy to do. Continue rinsing. Get immediate medical advice attention.
- P304+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell
- P342+P340+P315: If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- P302+P352: If on skin: Wash with plenty of soap and water
- P306+P361: If on clothing: Remove/ take off immediately all contaminated clothing
- P402+P403+P404: Store in a dry place. Store in a well ventilated space. Store in a closed container.
- P233+P234+P235: Keep container tightly closed. Keep only in original container. Keep cool.

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.

**HAZARDS NOT OTHERWISE CLASSIFIED:** OXIDISING POTENTIAL: Contact with combustible material may result in fire. Keep away from combustible materials. This material increases the risk of fire and may aid in combustion.

**Section -3. COMPOSITION / INFORMATION ON INGREDIENTS**

**Chemical family :** Mixture of organic compounds

For the hazards of the composition, ( SDS see Section 2).

<b>CHEMICAL NAME: MANGANESE DIOXIDE</b> 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	CAS# 1313-13-9	EC# 215-202-6	<50% by weight
<b>CHEMICAL NAME: TERPHENYL, HYDROGENATED</b> AQUATIC CHRONIC (CATEGORY 4) - H413	CAS# 61788-32-7	EC# 262-967-7	<50% by weight
<b>CHEMICAL NAME: ZEOLITES</b> NOT CLASSIFIED	CAS# 1318-02-1	EC# 215-283-8	<10% by weight
<b>CHEMICAL NAME: TALC</b> NOT CLASSIFIED	CAS# 14807-96-6	EC# 238-877-9	<5% by weight
<b>CHEMICAL NAME: CARBON BLACK</b> NOT CLASSIFIED	CAS# 1333-86-4	EC# 215-609-9	<3% by weight
<b>CHEMICAL NAME: TERPHENYL</b> AQUATIC ACUTE (CATEGORY 1) - H400 AQUATIC CHRONIC (CATEGORY 1) - H410	CAS# 26140-60-3	EC# 247-477-3	<2% by weight
<b>CHEMICAL NAME: 1,3 DIPHENYLGUANIDINE</b> 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	CAS# 102-06-7	EC# 203-002-1	<3% by weight
<b>CHEMICAL NAME: BIS(PIPERIDINOTHIOCARBONYL) TETRASULFIDE</b> SKIN SENSITIVITY (CATEGORY 1) - H317	CAS# 120-54-7	EC# 204-406-0	<3% by weight
<b>CHEMICAL NAME: POLYPHENYL, QUARTER AND HIGHER</b>	CAS# 68956-74-1		<10% by weight
<b>MAGNESIUM CARBONATE</b>	CAS# 546-93-0		<10% by weight

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**Section -4. FIRST-AID MEASURES**

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**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:** Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek 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. Never give anything by mouth to an unconscious person.

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**Section -5. FIRE-FIGHTING MEASURES**

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**Extinguishing agents**

**Recommended:** Universal resistant foam, CO<sub>2</sub>, water, powder.

**Agents to avoid:** None known

**Attention**

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.

**Hazardous decomposition products include:** Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Sulfur Oxides  
Metal Oxide / Oxides

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**Section -6. ACCIDENTAL RELEASE MEASURES**

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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.

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**Section -7. HANDLING AND STORAGE**

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**7.1 Handling:**

No smoking, eating and drinking during handling.

Avoid exposure during pregnancy.

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.

**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

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### 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.

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### 8.2 Exposure limits

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#### Work place exposure limits ( 8 hour )

Substance	ACGIH TLV
Manganese Dioxide	TWA: 0.1mg/m <sup>3</sup> (as Mn) 8 hours (Inhalable Fraction)
	TWA: 0.02mg/m <sup>3</sup> (as Mn) 8 hours (Respirable Fraction)
Terphenyl, Hydrogenated	TWA: 4.9 mg/m <sup>3</sup> 8 hours
	TWA: 0.5 ppm 8 hours
Zeolites	TWA: 1mg/m <sup>3</sup> 8 hours (Respirable Fraction)
Talc	TWA: 2mg/m <sup>3</sup> 8 hours (Respirable Fraction)
Carbon Black	TWA: 3mg/m <sup>3</sup> 8 hours ( Inhalable Fraction)
Terphenyl	C: 5mg/m <sup>3</sup>
	C: 0.53 ppm
MAGNESIUM CARBONATE	TWA: 5mg/m <sup>3</sup> (Respirable Fraction)
	TWA: 15 mg/m <sup>3</sup> 8 hours (Total Dust)

### 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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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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- Physical state at: 68 ° F (20 ° C) Liquid
- Flash point: 200 ° F (93 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) 2.0
- Vapor Density: N/A
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit (% vol.): N/A
- Miscibility in water at 20 ° C: NEGLIGIBLE
- Ph : 9.0
- % VOLATILE BY VOLUME - 2.0
- Vapor pressure at: 68 ° F (20 ° C) N/A
- Color: BLACK
- Appearance: PASTE
- Odor: NEGLIGIBLE OILY ODOR
- Boiling Point: Unknown

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**10. STABILITY AND REACTIVITY**

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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
- Oxides of nitrogen
- Metal Oxide / Oxides
- Manganese Compounds

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**11. TOXICOLOGICAL INFORMATION**

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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

**ACUTE TOXICITY:**

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Manganese Dioxide	LD50 ORAL	Rat	3478 mg/kg	-
Terphenyl,Hydrogenated	LD50 ORAL	Rat	17500 mg/kg	-
Zeolites	LD50 ORAL	Rat	>5 g/kg	-
Carbon Black	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400mg/kg	-
Terphenyl	LD50 Oral	Rat	>1400 mg/kg	-
1, 3-Diphenylguanidine	LD50 Oral	Rat	323mg/kg	-
Magnesium Carbonate	LD50 Oral	Rat	8000mg/kg	

**Acute Toxicity Estimates:**

Oral: 1099.7 mg/kg

Inhalation (gases): 10532.1 ppm

Inhalation (vapors) : 25.75 mg/l

Inhalation (Dust and Mist): 3.511mg/l

**Specific Target Organ Toxicity (STOT)- Single Exposure**

1,3-Diphenylguanidine - (Category 3) - Target Organ - Respiratory Tract Irritation

Zeolites - (Category 3) - Target Organ- Respiratory Tract Irritation

Talc - (Category 3) - Target Organ- Respiratory Tract Irritation

**Specific Target Organ Toxicity (STOT) - Repeated Exposure:**

Manganese Dioxide - (Category 2) - Target Organs - Not Determined



**CARCINOGENICITY:**

INGREDIENT	IARC	OSHA	NTP
Zeolites	3	-	-
Carbon Black, Respirable Powder	2B	-	-

This Product is Harmful if Swallowed or Inhaled.

This Product also Causes Serious Eye Irritation.

This Product Causes Skin Irritation, Defatting of the Skin, and May Cause an Allergic Reaction.

**Target Organs:** lungs, skin, central nervous system, blood, kidneys, nervous system, liver, spleen, lymphatic system, cardiovascular system, upper respiratory tract, bone marrow, eye, lens, cornea

**Potential chronic health effects include the following:**

May cause damage to organs through prolonged or repeated exposure. May lead to defatting of the skin and / or irritation.

May lead to allergic reactions.

Suspected of causing cancer.

**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)

**Bioaccumulative Potential:**

Product	LogPow	BCF	Potential
1,3 Diphenylguanidine	1.69	19.95	Low
Bis(piperidinothiocarbonyl) tetrasulfide	2.8	16.98	Low

**Mobility in Soil:**

Not Available

**13. DISPOSAL CONSIDERATIONS**

Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.

React with base and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.

**14. TRANSPORT INFORMATION**

**DOT:** Not regulated

**UN Number:** Not regulated

**IATA:** Not regulated

**IMDG/IMO:** Not regulated

**NMFC:** 4620 SUB.5 – CL.60

**Schedule B #** 3506.91.0000

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**15. REGULATORY INFORMATION**

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United States Inventory(TSCA 8B) : All Components are Listed or Exempted  
Australia Inventory (AICS) : All Components are Listed or Exempted  
Canada Inventory (DSL) : All Components are Listed or Exempted  
China Inventory (IECSC) : All Components Are Listed Or Exempted  
Japan Inventory (ENCS) : All Components are Listed or Exempted  
Korea Inventory (KECI) : All Components are Listed or Exempted  
New Zealand (NZIoC) : All Components are Listed or Exempted  
Philippines Inventory (PICCS) : All Components are Listed or Exempted

**Other EU Regulations:**

1,3-Diphenylguanidine - Reproductive (Category 2) H361f (Fertility)

**SARA 311/312**

Classification: Immediate (acute) health hazard  
Delayed (chronic) health hazard

**Composition of Ingredients :**

Manganese Dioxide : Immediate (acute) health hazard  
Delayed (chronic) health hazard

Zeolites : Immediate (acute) health hazard

Polyphenyls, quarter 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) : Fire Hazard  
tetrasulfide Immediate (acute) health hazard

**US Regulations Federal**

chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 (SARA)	Chemical Name	CAS No	Weight %	Threshold limit
	Manganese Dioxide	1313-13-9	<65%	Unknown

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

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

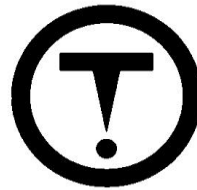
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**US Regulations State**

California Proposition 65 (Developmental – Female)	<b>MANGANESE DIOXIDE</b>	1313-13-9	< 65%	unknown
Massachusetts	<b>MANGANESE DIOXIDE</b>	1313-13-9	< 65%	unknown
New Jersey	<b>MANGANESE DIOXIDE</b>	1313-13-9	< 65%	unknown
Pennsylvania	<b>MANGANESE DIOXIDE</b>	1313-13-9	<65%	unknown
Rhode Island	<b>MANGANESE DIOXIDE</b>	1313-13-9	<65%	unknown

**California Prop 65 Warning :**

This Product contains one or more ingredients known by the state of California to cause cancer.



materials Division 2: Materials Causing  
Other Toxic Effects:  
Manganese Dioxide CAS#1313-13-9

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):Manganese Dioxide cas#1313-13-9

HEALTH	3	HEALTH	3
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	1	REACTIVITY	1
(OSHA) PPE	G	(OSHA) PPE	G



**NFPA**

**HMIS**

**PPE**

**Section 16 Other Information**

**Full Text of H Statements Associated with this Compound:**

- ACUTE TOXICITY (ORAL) 4, H302
- ACUTE TOXICITY (INHALATION) 4, H332
- SKIN SENSITIZATION 1, H317
- CARCINOGENICITY 2, H351
- TOXIC TO REPRODUCTION (FERTILITY) 2, H361f
- SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373

**Full Text of Classifications Associated with this Compound:**

- Acute Tox. 4, H302 : ACUTE TOXICITY (ORAL) - CATEGORY 4
- Acute Tox. 4, H332 : ACUTE TOXICITY (INHALATION) - CATEGORY 4
- Reproductive 2, H361f : TOXIC TO REPRODUCTION (FERTILITY) - CATEGORY 2
- Skin Sensitization 1, H317 : SKIN SENSITIZATION - CATEGORY 1
- STOT RE 2, H373 : SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - CATEGORY 2
- Carcinogenicity 2, H351 : CARCINOGENICITY - CATEGORY 2

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Preparer-Flamemaster/Compliance  
Rev A April 2015  
Supercedes(Conversion)

Revision Notes: A

Conversion to ANSI format

Containers: Plastic Jars, Metal Cans, Cartridge Kits

Maximum Container Size: 50 Gallons/190 Liters

END OF SAFETY DATA SHEET