



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

**SAFETY DATA SHEET**  
**FEBRUARY 2014**

**File: CS3204AA GSA 7-10**  
**Integral Fuel Tank Sealant/  
 Base Compound**

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

1.1. Product Identifier: CS-3204 Part A Class A Base (ALL APPLICATION TIMES)  
 - Product Name: Integral Fuel Tank Sealant / Base compound Part-A  
 - Product reference: CS-3204 Part A Class A Compound

1.2. Product Use:  
 - Integral Fuel Tank Sealing Compound

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-S-8802      PART A CLASS A      BASE COMPOUND      ALL**

NSN:	8030-00-753-5008 CS3204 A1/2 2.5OZ	8030-00-753-5010 CS3204 A1/2 6OZ	8030-00-753-4596 CS3204 A1/2 1/2 PT	8030-00-965-2004 CS3204 A1/2 PINT	8030-00-842-8127 CS3204 A1/2 GALLON
	8030-00-386-3656 CS3204 A-1 QT	8030-00-753-5003 CS3204 A-2 2.5OZ	8030-00-753-5009 CS3204 A-2 6OZ	8030-00-753-4598 CS3204 A-2 1/2 PT	8030-00-723-5343 CS3204 A-2 PINT
	8030-00-723-5344 CS3204 A-2 QUART	8030-00-841-6832 CS3204 A-2 GALLON	8030-00-889-3531 CS3204 A-2 5-GAL	8030-00-007-8337 CS3204 A-2 50 GAL	

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

Flammable  
 Possible adverse risk to the fetus.  
 Skin and eye irritant.  
 Harmful if swallowed.  
 Harmful if inhaled.  
 Possible harm to aquatic organisms.  
 May cause long term adverse effects in the aquatic environment.

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

**Chemical family** : Mixture of organic compounds  
 For the hazards of the composition, (SDS see Section 2).

GHS CLASSIFICATION:LIQUID POLYSULFIDE POLYMER // OSHA HAZARDS: TARGET ORGAN EFFECT,IRRITANT,FLAMMABLE LIQUID  
 EYE IRRITATION (CATEGORY 2)  
 SKIN IRRITATION (CATEGORY 2)  
 SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE-(CATEGORY 3)  
 AQUATIC, CHRONIC (CATEGORY 3)

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GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS): TOLUENE

FLAMMABLE LIQUIDS (CATEGORY 2),H225

SKIN IRRITATION (CATEGORY 2),H315

REPRODUCTIVE TOXICITY (CATEGORY 2),H361

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE-(CATEGORY 3),CENTRAL NERVOUS SYSTEM,H336

SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSURE (CATEGORY 2),H373

ASPIRATION HAZARD (CATEGORY 1),H304

ACUTE AQUATIC TOXICITY (CATEGORY 2),H401

SUBSTANCE % by weight in the product	H&P STATEMENTS	CAS	EINECS/ELINCS
LIQUID POLYSULFIDE-POLYMER < 70%	H319,H335,H315,H412,H223, P210,P270,P305+P351+P338 +P313,P306+P361,P370+P260	68611-50-7	POLYMER
TOLUENE (Methylbenzene) < 12%	H225,H304,H315,H319,H332,H336, H361,H371,H401, P210P260,P281,P301+P310,P305+ P351+ P338,P331	108-88-3	203-625-9

#### 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.

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

##### Extinguishing agents

**Recommended:** Universal resistant foam, CO2, 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.

#### 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**

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**7.1 Handling:**

No smoking, eating and drinking during handling.

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.

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**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	OSHA	ACGIH TWA
ALIPHATIC POLYSULFIDE-POLYMER < 70%	Not known	Not known
TOLUENE (Methylbenzene)* < = 12%	100 ppm	50 ppm
* can be absorbed through skin		

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**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: 90 ° F (32 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) 1.5 g/cm<sup>3</sup>
- Vapor Density: 3.1
- Lower Explosive Limit (% vol.): 1.3 (toluene)
- Upper Explosive Limit (% vol.): 7.1 (toluene)
- Miscibility in water at 20 ° C: Negligible
- Ph : 8.5
- Volatile by Volume % : 15
- Vapor pressure at: 68 ° F (20 ° C) 2 mm Hg
- Color: Off white to white
- Appearance: Paste
- Odor: Polysulfide Odor
- Boiling Point: 231° F

## 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
- H<sub>2</sub>S,CO,CO<sub>2</sub>,SO<sub>2</sub>,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 effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, 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 may cause irritation and damage.

## 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)

## 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.

## 14. TRANSPORT INFORMATION

DOT: § 172.101 HAZARDOUS MATERIALS TABLE

UN Number: 1133

Proper Shipping Name: Adhesives

Labels: Flammable Liquid



Hazard Class: 3 Subclass: NO

Packaging Group: III

Limited Quantity: Passenger aircraft: 60 Liter (16 gallon)

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: 1133

Proper Shipping Name: Adhesives

Labels: Flammable Liquid

Hazard Class: 3 Subclass: NO

Packaging Group: III

Passenger Air Packing Instruction : 309

Passenger aircraft: 60 Liter (16 gallon)

Cargo Air Packing Instruction : 310

Cargo aircraft only: 220 Liter (58 gallon)

IMDG:

UN Number: 1133

Proper Shipping Name: Adhesives

Label: 3

Hazard Class: 3 Subclass: NO

Packaging Group: III

EMS No: F, E – S, D

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**15. REGULATORY INFORMATION**

**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
	TOLUENE (Methylbenzene)	108-88-3	5% - 12%	1.0%
	LIQUID POLYMER	68611-50-7	50%-75%	UNKNOWN

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

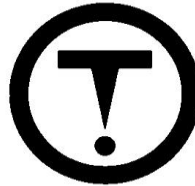
**US Regulations State**

California Proposition 65 (Developmental – Female)	<b>TOLUENE</b>	108-88-3	5% - 12%	unknown
Massachusetts	<b>TOLUENE</b>	108-88-3	5% - 12%	unknown
New Jersey	<b>TOLUENE</b>	108-88-3	5% - 12%	unknown
Pennsylvania	<b>TOLUENE</b>	108-88-3	5% - 12%	unknown
Rhode Island	<b>TOLUENE</b>	108-88-3	5% - 12%	unknown
California Proposition 65 (Developmental – Female)	LIQUID POLYMER	68611-50-7	50%-75%	unknown
	LIQUID POLYMER	68611-50-7	50%-75%	
Massachusetts	LIQUID POLYMER	68611-50-7	50%-75%	unknown
New Jersey	LIQUID POLYMER	68611-50-7	50%-75%	unknown
Pennsylvania	LIQUID POLYMER	68611-50-7	50%-75%	unknown
Rhode Island	LIQUID POLYMER	68611-50-7	50%-75%	unknown

**Canada**



**Class B – Flammable  
TOLUENE**



**Class D - Poisonous and Infectious  
materials Division 2: Materials Causing  
Other Toxic Effects D2A TOLUENE D2B  
TOLUENE**  
Liquid Polysulfide Polymer CAS#68611-50-7

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

Liquid Polysulfide Polymer cas#68611-50-7

**16. OTHER INFORMATION**



**NFPA**



**HMIS**



**PPE**

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Full text of P statements with N<sup>o</sup> 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.

**Full text of H statements with N<sup>o</sup> appearing in Section 3:**

- H412: Harmful to aquatic life with long lasting effects
- H360Fd: May damage fertility. Suspected of damaging the unborn child.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation
- H336: May cause drowsiness or dizziness
- H318: Causes serious eye damage
- H302+H332: Harmful if swallowed. Harmful if inhaled
- H340+H350: May cause genetic defects. May cause cancer.
- H225: Highly flammable liquid and vapor.

Preparer:	Flamemaster / Compliance Rev-A June/09/2010 Supersedes (conversion)	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

**End of Safety Data Sheet**

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**Pacoima, CA 91331 - USA**

**SAFETY DATA SHEET**  
**FEBRUARY 2014**

**File: CS3204BA GSA 07-10**  
**INTEGRAL FUEL TANK**  
**SEALANT/CATALYST**

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

1.1. Product Identifier: CS-3204 Part B Class A (all application times)  
 - Product Name: Integral Fuel Tank Sealant / Catalyst Part B  
 - Product reference: CS-3204-B

1.2. Product Use:  
 -Integral 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-S-8802		Catalyst Part B		CLASS A	
<b>NSN:</b>	8030-00-753-5008 CS3204 A1/2 2.5OZ	8030-00-753-5010 CS3204 A1/2 6OZ	8030-00-753-4596 CS3204 A1/2 1/2 PT	8030-00-965-2004 CS3204 A1/2 PINT	8030-00-842-8127 CS3204 A1/2 GALLON	
	8030-00-386-3656 CS3204 A-1 QT	8030-00-753-5003 CS3204 A-2 2.5OZ	8030-00-753-5009 CS3204 A-2 6OZ	8030-00-753-4598 CS3204 A-2 1/2 PT	8030-00-723-5343 CS3204 A-2 PINT	
	8030-00-723-5344 CS3204 A-2 QUART	8030-00-841-6832 CS3204 A-2 GALLON	8030-00-889-3531 CS3204 A-2 5-GAL	8030-00-007-8337 CS3204 A-2 50 GAL		

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

Possible adverse risk to the fetus.  
 Skin and eye irritant.  
 Harmful if swallowed.  
 Harmful if inhaled.  
 Possible harm to aquatic organisms.  
 May cause long term adverse effects in the aquatic environment.

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

**Chemical family** : Mixture of organic compounds  
 For the hazards of the composition, ( SDS see Section 2).

CHEMICAL NAME: MANGANESE DIOXIDE  
 OSHA HAZARDS: TARGET ORGAN EFFECT, TOXIC BY INHALATION  
 TARGET ORGANS: NERVES, LUNGS  
 GHS CLASSIFICATION:  
 ACUTE TOXICITY, ORAL (CATEGORY 5)  
 ACUTE TOXICITY, INHALATION (CATEGORY 4)

<b>SUBSTANCE</b> % by weight in the product	<b>H&amp;P Statements</b>	<b>CAS</b>	<b>EINECS/ELINCS</b>
Manganese Dioxide <65%	H272,H302,H332,H373	1313-13-9	215-202-6
Manganese Dioxide <65%	P280,P210,P221,P371+P380+ P375P304+P340,P312	1313-13-9	215-202-6

#### **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.

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

##### **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.

#### **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.

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

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

No smoking, eating and drinking during handling.

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.

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## 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.

### 8.2 Exposure limits

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

Substance	OSHA	ACGIH TLV
Manganese Dioxide <65%	5 ppm	5mg/m <sup>3</sup>
* can be absorbed through skin		

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### 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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- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Physical state at: 68 ° F (20 ° C) Liquid</li><li>• Flash point: 200 ° F (93 ° C) Method: TCC</li><li>• Specific gravity at: 68 ° F (20 ° C) 2.0</li><li>• Vapor Density: N/A</li><li>• Lower Explosive Limit (% vol.): N/A</li><li>• Upper Explosive Limit (% vol.): N/A</li><li>• Miscibility in water at 20 ° C: NEGLIGIBLE</li></ul> | <ul style="list-style-type: none"><li>• Ph : 9.0</li><li>• % VOLATILE BY VOLUME : 2.0</li><li>• Vapor pressure at: 68 ° F (20 ° C) N/A</li><li>• Color: BLACK</li><li>• Appearance: PASTE</li><li>• Odor: NEGLIGIBLE OILY ODOR</li><li>• Boiling Point: Unknown</li></ul> |
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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
- Oxides of nitrogen, Carbon, Manganese Compounds
- Sulfur oxides

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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

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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)

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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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**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

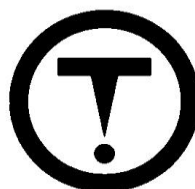
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All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

**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

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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

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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.

HEALTH 1  
 FLAMMABILITY 1  
 REACTIVITY 1  
 (OSHA) PPE D



## HMIS

## PPE

### Full text of P statements with N<sup>o</sup> associated to this compound:

Full text of P statements with N<sup>o</sup> 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.

### Full text of H statements with N<sup>o</sup> associated to this compound:

- H412: Harmful to aquatic life with long lasting effects
- H360Fd: May damage fertility. Suspected of damaging the unborn child.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation
- H336: May cause drowsiness or dizziness
- H318: Causes serious eye damage
- H302+H332: Harmful if swallowed. Harmful if inhaled
- H340+H350: May cause genetic defects. May cause cancer.
- H270: May Cause or Intensify Fire;Oxidizer

Preparer-Flamemaster/Compliance  
 Rev A June 2010  
 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

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