



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

**SAFETY DATA SHEET**  
 APRIL 2015

**File:** CS3201AB GSA 07-10  
 Optical Sealant Base

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

1.1. Product Identifier: CS-3201 Part-A Class-B Base (all application times) Black  
 - Product Name: Sealing Compound Part-A  
 - Product reference: CS-3201-B (BLACK)

**1.2. Product Use:**  
 - Aircraft 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 7124 / MIL-S-7502**

**Base PART A**

**CLASS B**

<b>NSN:</b>					
		8030-00-262-9045 CS3201 B4 PINT KIT	8030-00-031-7781 CS3201 B1/2 PINT KIT	8030-00-322-6928 CS3201 B4 GAL KIT	
		8030-00-851-8379 CS3201 B-2 2.5 OZ	8030-00-613-9083 CS3201 B-2 PINT KIT	8030-01-839-2099 CS3201 B4 QT KIT	

## Section -2. HAZARD ( S ) IDENTIFICATION

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OSHA/HCS STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

### CLASSIFICATION OF THE MIXTURE:

SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (UNBORN CHILD) - Category 2  
TOXIC TO AQUATIC LIFE - Category 4

### GHS LABEL REQUIREMENTS

#### HAZARD PICTOGRAMS



#### SIGNAL WORD : WARNING

#### HAZARD STATEMENTS:

CAUSES SERIOUS EYE IRRITATION - (H319)  
CAUSES SKIN IRRITATION - (H315)  
SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)  
SUSPECTED OF CAUSING CANCER - (H351)  
MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE - (H413)

#### PRECAUTIONARY STATEMENTS:

- 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 (or in hair) : Wash with plenty of soap and water. If skin irritation occurs seek medical attention
- 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.

## 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.

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## 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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**GHS CLASSIFICATION: LIQUID 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)

### **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

### **CALCIUM CARBONATE:**

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

### **Bisphenol A- Epoxy Resin with Toluene**

FLAMMABLE LIQUIDS - CATEGORY 2  
SKIN CORROSION/IRRITATION - CATEGORY 2  
SERIOUS EYE DAMAGE/EYE IRRITATION - CATEGORY 2A  
SKIN SENSITIZATION - CATEGORY 1  
TOXIC TO REPRODUCTION (UNBORN CHILD) - CATEGORY 2  
SPECIFIC TARGET ORGAN TOXICITY ( SINGLE EXPOSURE) (NARCOTIC EFFECTS) - CATEGORY 3  
AQUATIC HAZARD (ACUTE) - CATEGORY 2  
AQUATIC HAZARD (LONG TERM) - CATEGORY 3

SUBSTANCE % by weight in the product	H&P STATEMENTS	CAS	EINECS/ELINCS
LIQUID POLYMER < 70%	H319,H335,H315,H412,H223, P210,P270,P305+P351+P338 +P313,P306+P361,P370+P260	N/A	POLYMER
TOLUENE (Methylbenzene) < 2%	H225,H304,H315,H319,H332,H336, H361,H371,H401, P210P260,P281,P301+P310,P305+ P351+ P338,P331	108-88-3	203-625-9
Calcium Carbonate <45%	H319 P305+P351+P313,P280	72608-12-9	207-439-9
Bisphenol A- Epoxy Resin with Toluene <3%	H225, H319, H315, H317, H361d, H336, H400, H412	N/A	N/A

#### 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:** Remove any contact lenses if present and easy to do. Irrigate with clean, fresh water for at least 15 minutes, holding the eye lids apart, and 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. 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, 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.

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

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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. Wash hands and face before eating, drinking, or smoking.

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.

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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

### Work place exposure limits ( 8 hour )

Substance	OSHA	ACGIH TWA
LIQUID POLYMER	Not known	Not known
TOLUENE (Methylbenzene)*	200 ppm	20 ppm
CALCIUM CARBONATE *	5 mg/m <sup>3</sup> ( RESPIRABLE FRACTION)	3 mg/m <sup>3</sup> (RESPIRABLE FRACTION)
CALCIUM CARBONATE *	15mg/m <sup>3</sup> (TOTAL DUST)	10 mg/m <sup>3</sup> (TOTAL DUST)
* 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.

## 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) N/A</li><li>• Vapor Density: NIL</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><li>• VOC: N/A</li></ul> | <ul style="list-style-type: none"><li>• Ph : N/A</li><li>• Volatile by VOLUME: N/A</li><li>• Vapor pressure at: 68 ° F (20 ° C) NIL</li><li>• Color: Black</li><li>• Appearance: PASTE</li><li>• Odor: Polysulfide Odor</li><li>• Boiling Point: Unknown</li><li>• Material Supports Combustion: Yes</li></ul> |
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## 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 :

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|---|--|
| <ul style="list-style-type: none"><li>• Carbon Monoxide</li><li>• Sulfur Oxides</li><li>• Carbon Dioxide</li><li>• Formaldehyde</li></ul> | <ul style="list-style-type: none"><li>• Halogenated Compounds</li><li>• Oxides of Carbon,Nitrogen,Sulfur Dioxide,Trace Hydrogen Sulfide</li><li>• Metal Oxide / Oxides</li><li>• Smoke</li></ul> |
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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 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

Formaldehyde is released during curing.

**ACUTE TOXICITY:**

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Calcium Carbonate	LD50 ORAL	Rat	6450 mg/kg	-
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 Hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 Hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
Bisphenol A- Epoxy Resin	LD50 ORAL	Rat	636 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 ORAL	Rat	>2000 mg/kg	-

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:**

INGREDIENT	IARC	OSHA	NTP	CAS#
TOLUENE :	3	-	-	108-88-3

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

LIQUID POLYMER - CATEGORY 3

TOLUENE - CATEGORY 3

**SPECIFIC TARGET ORGAN TOXICITY-STOT (REPEATED EXPOSURE)**

TOLUENE - 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

## 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)

Toxicity :

Persistence and Degradability :

Product / Ingredient	Aquatic Half Life	Photolysis	Biodegradability
Toluene	-	-	Readily (5 days - 81 %)
bisphenol A - epoxy resins	-	-	Not Readily Biodegradeable (28 days - 5%)

Bioaccumulative Potential :

Product / Ingredient	LogP(ow)	BCF	Potential
Toluene	2.73	8.32	low
bisphenol A - epoxy resins	-	31	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 curing agent 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

## 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 (Reporting Value)
	TOLUENE (Methylbenzene)	108-88-3	<2%	Unknown
	LIQUID POLYMER	N/A	<70%	Unknown
	Calcium Carbonate	72608-12-9	<45%	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>TOLUENE</b>	108-88-3	<2%	>= 1.0%
Massachusetts	<b>TOLUENE</b>	108-88-3	<2%	>= 1.0%
New Jersey	<b>TOLUENE</b>	108-88-3	<2%	>= 1.0%
Pennsylvania	<b>TOLUENE</b>	108-88-3	<2%	>= 1.0%
Rhode Island	<b>TOLUENE</b>	108-88-3	<2%	>= 1.0%
California Proposition 65 (Developmental – Female)	LIQUID POLYMER	N/A	<70%	>= 1.0%
Massachusetts	LIQUID POLYMER	N/A	<70%	>= 1.0%
New Jersey	LIQUID POLYMER	N/A	<70%	>= 1.0%
Pennsylvania	LIQUID POLYMER	N/A	<70%	>= 1.0%
Rhode Island	LIQUID POLYMER	N/A	<70%	>= 1.0%
California Proposition 65 (Developmental – Female)	Calcium Carbonate	72608-12-9	<45%	>= 1.0%
Massachusetts	Calcium Carbonate	72608-12-9	<45%	>= 1.0%
New Jersey	Calcium Carbonate	72608-12-9	<45%	>= 1.0%
Pennsylvania	Calcium Carbonate	72608-12-9	<45%	>= 1.0%
Rhode Island	Calcium Carbonate	72608-12-9	<45%	>= 1.0%

**United States:** Sara 302/304 (Sara 304 RQ): Not Applicable

Information On Ingredients: None Were Found

Sara 311/312

Classification: Immediate (acute) Health Hazard, Delayed (chronic) Health Hazard

**Information On Ingredients:**

**Liquid Polymer:** Immediate (acute) Health Hazard

**Toluene:** Fire Hazard, Immediate (acute) Health Hazard, Delayed (chronic) Health Hazard

**Bisphenol A- Epoxy Resin with Toluene :** Fire Hazard, Immediate (acute) Health Hazard, Delayed (chronic) Health Hazard

**Sudden Release Of Pressure:** No Products

**Reactivity:** No Products

**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.

Canada



**Class B – Flammable  
TOLUENE**



**Class D - Poisonous and Infectious  
materials Division 2: Materials Causing  
Other Toxic Effects D2A TOLUENE D2B  
TOLUENE CAS# 108-88-3  
Liquid Polymer CAS# N/A  
Calcium Carbonate CAS# 72608-12-9**

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):TOLUENE CAS:108-88-3

Calcium Carbonate CAS#72608-12-9

Liquid Polymer cas# N/A

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**16. OTHER INFORMATION**

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HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
PPE	H

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
PPE	H

\* Customer and / or end user is responsible for determining Personal Protection Equipment

**NFPA**

**HMIS**

Preparer:

Flamemaster / Compliance  
Rev-A 4/02/2015  
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

**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**