



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

SAFETY DATA SHEET
FEBRUARY 15, 2017

File: E-340 PTA GSA 07-10
Blast Resistant Ablative
Coating/Base Compound
Part A

Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- 1.1. Product Identifier: E-340 Blast Resistant Ablative Coating Compound (Part A)-All Colors
 - Product Name: E-340 Blast Resistant Ablative Coating Compound / Part A / All Colors
 - Product reference: E-340 Ablative Compound (Part A) Base / All Colors

- 1.2. Product Use:
 - Blast Resistant Ablative Coating 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

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

Specification: MIL-C-47244 / MIS 36199 BLAST RESISTANT ABLATIVE COATING PART A ALL COLORS					
NSN:	8030-00-097-9088 E-340 QUART KIT	8030-00-X76-1474 E-340 GALLON KIT	8030-01-032-1749 E-340 GALLON KIT	8030-00-164-4389 E-340N GALLON KIT	8030-01-353-8379 E-340 2-GALLON KIT
	8030-00-097-9088 E-340 GALLON KIT	8030-01-355-3030 E-340 GALLON KIT			

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.

Section -2. HAZARD (S) IDENTIFICATION

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Respiratory Sensitisation, (Category 1), H334

Skin Sensitisation, (Category 1), H317

Germ Cell Mutagenicity, (Category 2), H341

Carcinogenicity, (Category 1A), H351

Specific Target Organ Toxicity-Single Exposure-(Category 3), Respiratory Tract Irritation

Acute Aquatic Toxicity (Category 3), H412

Chronic Aquatic Toxicity, (Category 3), H413

Skin Irritation, (Category 2), H315

Reproductive Toxicity, (Category 2), H361

Specific Target Organ Toxicity-Single exposure-(Category 3), Narcotic Effects

Specific Target Organ Toxicity-Repeated Exposure-(Category 2), H372

Aspiration Hazard, (Category 1), H304

Acute Toxicity (Oral) (Category 4), H302

Hazards not otherwise classified (HNOC) or not covered by GHS:

If sanding, grinding or abrading material, combustible dust may form in air. Airborne dust damages the lungs by inhalation. Avoid physical exposure by allowing adequate ventilation and using proper personal protection equipment.

GHS Label Elements, Including Precautionary Statements

Pictograms:



Signal Word: DANGER

HAZARD STATEMENTS:

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes Serious Eye Irritation

H332 Harmful if inhaled

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H341 Suspected of causing genetic defects.

H350 May Cause Cancer

H361 Suspected of damaging fertility or the unborn child

H372 Causes damage to organs through prolonged or repeated exposure.

H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS

H413 May cause long lasting harmful effects to aquatic life

In the event of sanding, grinding, or abrading:

H372 Causes damage to organs through prolonged or repeated exposure.

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.

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.

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of organic compounds

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

BISPHENOL A AND EPOXY RESIN (PRODUCT NAME ARALDITE 506 EPOXY RESIN):

OSHA HAZARDS: SKIN SENSITISER,IRRITANT

GHS CLASSIFICATION:BISPHENOL A AND EPOXY RESIN

SKIN IRRITATION (CATEGORY 2), H315

EYE IRRITATION (CATEGORY 2A), H319

SKIN SENSITIZATION (CATEGORY1), H317

ACUTE AQUATIC TOXICITY (CATEGORY 2), H401

CHRONIC AQUATIC TOXICITY (CATEGORY 2), H411

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.

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)-BUTYL GLYCIDYL ETHER

FLAMMABLE LIQUID AND VAPOR - H226
HARMFUL IF SWALLOWED - H302
HARMFUL IF INHALED - H332
CAUSES SKIN IRRITATION - H315
MAY CAUSE AN ALLERGIC SKIN REACTION - H317
CAUSES SERIOUS EYE IRRITATION - H319
MAY CAUSE RESPIRATORY IRRITATION - H335
SUSPECTED OF CAUSING GENETIC DEFECTS - H341
SUSPECTED OF CAUSING CANCER - H351
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H372
HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H412

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

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

CARCINOGENICITY (CATEGORY 1A), H350
SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSURE-(STOT RE)- INHALATION (CATEGORY 1), LUNGS, H372

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

CARCINOGENICITY (CATEGORY 1A), H350

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

CARCINOGENICITY (CATEGORY 1B), H350

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS): CERAMIC FIBER (ALUMINO SILICATE WOOL)

CARCINOGENICITY (CATEGORY 2B), H351

SUBSTANCE % by weight in the product	H&P Statements	CAS	EINECS/ELINCS
Bisphenol A and Epoxy Resin <30%	H303,H315,H317,H319,H411 P280P305+P351+P338,P273	25068-38-6	500-033-5
Butyl Glycidyl Ether <5%	H226,H302,H314,H317,H331, H334,H335,H341,H350,H412, H301+H311+H331,H302+H332,H315, H318,H351,H402 P201,P202,P210,P233,P240,P241, P242,P243,P261,P262,P264,P270, P271,P272,P273,P280 P301+P330+P331,P303+P361+P353, P304+P340,P305+P351+P338,P310, P322,P333+P313,P361,P363 P370+P378,P403+P233, P403+P235,P405,P501	2426-08-6	219-376-4
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
SILICONE DIOXIDE <50%	H350, H372, P201,P202,P260,P264, P270,P280,P308+P313,P405,P501	14808-60-7	238-878-4
TALC <10%	H350, P201, P202, P281, P308+P313 P405, P501	14807-96-6	238-877-9
GLASS SPHERES <5%	H350, P201, P202, P281, P308+P313 P405, P501	65997-17-3	266-046-0
CERAMIC FIBER (ALUMINO SILICATE WOOL)	H351, P202, P281+P284, P308+P313	142844-00-6	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: Check for and remove any contact lenses. Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids 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. May be fatal if swallowed or vomited and enters lungs and/or airways. Never give anything by mouth to an unconscious person.

Section -5. FIRE-FIGHTING MEASURES

Extinguishing agents

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

Agents to avoid: None known

Attention

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: Carbon Dioxide, Carbon Monoxide, Traces of Benzene (if heated in air above 300° F), Formaldehyde (if heated in air above 300° F), Metal Oxides, Silicone Dioxide, Silicone Oxides, Magnesium Oxide, Carbon Oxides,

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.

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

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.

Avoid contact/exposure during pregnancy/while nursing.

Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed.

Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist.

Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

Preparation may charge electrostatically; always use grounding/ bonding/ earthing leads when transferring contents of containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational Exposure Limits.

Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are recommended.

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

SPECIAL COMMENTS: This Product, when heated in air above 300° F, can release traces of Benzene and/or Formaldehyde.

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering measures:

Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL).

If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

8.2 Exposure limits

Work place exposure limits (8 hour)

Substance	OSHA PEL	ACGIH TLV
Butyl Glycidyl Ether *	50PPM	3PPM
TOLUENE (Methylbenzene)*	200 ppm	20 ppm
SILICONE DIOXIDE *	10.000000 mg/m ³	0.025mg/m ³
Hydrous Magnesium Silicate *	20 million particles per cubic foot	2.000000 mg/m ³
CERAMIC FIBER (ALUMINO SILICATE WOOL)	NIOSH REL-0.5 f/cc, 8-HR TWA	0.2 f/cc TLV, 8-HR TWA
* 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.

Environmental Exposure Controls: Emissions from workplace ventilation systems or work process equipment should be periodically checked to ensure compliance with local environmental laws.

SPECIAL COMMENTS: This Product, when heated in air above 300° F, can release traces of Benzene and/or Formaldehyde.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 ° F (20 ° C) Liquid
- Flash point: +93 ° C --- +200 Deg. F Method: TCC
- Specific gravity at: 68 ° F (20 ° C) N/A
- Vapor Density: >N/A
- Lower Explosive Limit-None
- Upper Explosive Limit-None
- Miscibility in water at 20 ° C: Slight
- Ph : N/A
- Volatile % by volume: N/A
- Vapor pressure at: 68 ° F (20 ° C) N/A
- Color: All Colors
- Appearance: Paste
- Odor: Ester Odor
- Boiling Point: N/A

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
- Traces of Benzene
- Metal Oxides
- Carbon Dioxide
- Silicone Oxides
- Smoke
- Soot
- Silicone Dioxide
- Formaldehyde
- Benzene by products
- Magnesium Oxide
- Carbon Oxides

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 severe irritation and severe damage to the eyes.

ACUTE TOXICITY:

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Bisphenol A- Epoxy Resin	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 ORAL	Rat	>2000 mg/kg	-
	LC0 Inhalation	Rat	0.00001 ppm	5 Hours
Toluene	LC50 Inhalation Vapor	Rat	49 g/m ³	4 Hours
	LC50 Inhalation Vapor	Rat	8000 ppm	4 Hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 ORAL	Rat	636 mg/kg	-

CHRONIC TOXICITY:

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Bisphenol A- Epoxy Resin	Sub-Chronic	Rat-Male	50 mg/kg	14 weeks (7 days per week)
	NOAEL Oral	Female		
	Sub-Chronic	Rat-Male	10mg/kg	13 weeks (5 days per week)
	NOEL Dermal	Female		
	Sub-Chronic	Mouse Male	100mg/kg	13 weeks (3 days per week)
	NOAEL Dermal			

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.

IRRITATION/CORROSION:

PRODUCT:	RESULT	SPECIES
Bisphenol A- Epoxy Resin	Skin- Mild Irritant	Rabbit
	Eyes- Mild Irritant	Rabbit
Butyl Glycidyl Ether	Skin- Moderate Irritant	Rabbit
	Eyes- Severe Irritant	Rabbit
Skin:		
Bisphenol A- Epoxy Resin	Slightly Irritating to the skin	
Butyl Glycidyl Ether	Irritating to the skin	
Talc	Mild skin irritation	
Eyes:		
Bisphenol A- Epoxy Resin	Slightly Irritating to the eyes	
Butyl Glycidyl Ether	Severely Irritating to the eyes	

Sensitizer:

PRODUCT:	ROUTE OF EXPOSURE	SPECIES	RESULT
Bisphenol A- Epoxy Resin	Skin	Mouse	Sensitizing

CARCINOGENICITY:

INGREDIENT	IARC	OSHA	NTP	CAS#
Butyl Glycidyl Ether	2A	-	Reasonably anticipated to be a human carcinogen	2426-08-6
TOLUENE :	3	-	-	108-88-3
Silicone Dioxide:	1	-	Known to be a human carcinogen	14808-60-7
Talc:	1	-	Known to be a human carcinogen	14807-96-6
Ceramic Fiber	2B	-	Reasonably anticipated to be a human carcinogen	142844-00-6

MUTAGENICITY:

PRODUCT:	TEST	RESULT
Bisphenol A- Epoxy Resin	OECD 471 Bacterial Reverse Mutation Test	Positive
	OECD 476 In Vitro Mammalian Cell Gene Mutation Test	Positive
	OECD 478 Genetic Toxicology: Rodent Dominant Lethal Test	Negative
	EPA OPPTS	Negative

TERATOGENICITY

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Bisphenol A- Epoxy Resin	Negative- Oral	Rat- Female	>540mg/kg NOEL	10 days
	Negative- Dermal	Rabbit-Female	>300 mg/kg NOEL	13 days; 6 hours per day
	Negative- Oral	Rabbit- Female	>180mg/kg NOAEL	13 DAYS

Butyl Glycidyl Ether: A study in animals has shown that repeated exposures produce embryo/foetotoxic effects in the presence of maternal toxicity

REPRODUCTIVE TOXICITY

PRODUCT:

Bisphenol A- Epoxy Resin:

Maternal Toxicity: Negative

Fertility: Negative

Development Toxin: Negative

Species: Rat

Dose: Oral: 540mg/kg NOEL

Exposure: 238 days; 7 days per week

Toluene:

Damage to fetus possible, Suspected human reproductive toxicant

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE:

Butyl Glycidyl Ether-May Cause Respiratory irritation

SPECIFIC TARGET ORGAN TOXICITY-REPEATED EXPOSURE:

Silicone Dioxide- Inhalation-Causes damage to organs through prolonged or repeated exposure-Lungs

HAZARD STATEMENTS:

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes Serious Eye Irritation

H332 Harmful if inhaled

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H341 Suspected of causing genetic defects.

H350 May Cause Cancer

H361 Suspected of damaging fertility or the unborn child

H372 Causes damage to organs through prolonged or repeated exposure.

H413 May cause long lasting harmful effects to aquatic life

Chronic Effects:

Once sensitized, a severe allergic reaction may occur when exposed to very low levels.

This product contains material which may impair male fertility, based on animal data.

Pre-existing skin disorders may be aggravated by exposure to this product.

May cause cancer

May cause allergic skin reactions.

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.

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.

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)

Environmental Effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Aquatic Eco toxicity:

Product:	Test	Result	Species	Exposure
Bisphenol A- Epoxy Resin (Acute Immobilization Test)	OECD 202	Acute EC50 9.4mg/l Fresh water	Algae	72 Hours Static
		Acute EC50 1.7 mg/l Fresh Water	Daphnia	48 Hours Static
	OECD 203 (Acute Toxicity Test)	Acute IC50 >100 mg/l Fresh Water Acute LC50 1.5 mg/l Fresh Water	Bacteria Fish	3 hours Static 96 Hours Static
	OECD 211 (Reproduction Test)	Chronic NOEC.3 mg/l Fresh Water	Daphnia	21 days Semi Static
Toluene	NOEC	LC50 -7.63mg/l	Rainbow Trout	96 Hours
		5.44 mg/l	Fathead Minnow	7 days
		EC50-8.00mg/l	Daphnia Magna	24 Hours
	Immobilization Toxicity to Algae	EC50-6.00mg/l	Daphnia Magna	48 hours
		EC50-10mg/l	Green Algae	24 Hours
		EC50-245mg/l	Fresh Water Algae	24 Hours

Biodegradability:

Product:	Test	Result	Dose	Inoculum
Bisphenol A- Epoxy Resin	OECD Derived (OECD 301F) (Biodegradation Test)	5%-Not Readily 28 Days	20 mg/l Oxygen Consumption	-

Product:	Aquatic Half Life	Photolysis	Biodegradability
Bisphenol A- Epoxy Resin	Fresh Water 4.83 Days Fresh Water 3.58 Days Fresh Water 7.1 Days	-	Not Readily

Bioaccumulative Potential

Product:	LogPow	BCF	Potential
Bisphenol A- Epoxy Resin	3.242	31	Low
Toluene	2.73	8.32	low

Persistence and Degradability :

Product / Ingredient	Aquatic Half Life	Photolysis	Biodegradability
Toluene	-	-	Readily

Other Adverse Effects

Bisphenol A- Epoxy Resin: Toxic to aquatic life with long lasting effects

Butyl Glycidyl Ether: Harmful to aquatic life

Toluene: Toxic to aquatic life

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.

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

14. TRANSPORT INFORMATION

DOT: 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**HCS Classification:**

Butyl Glycidyl Ether: Combustible Liquid, Irritating Material, Sensitizing Material

SARA 311/312:

Bisphenol A- Epoxy Resin: Acute Health hazard

Butyl Glycidyl Ether : Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

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

Silicic Anhydride: Chronic Health Hazard

Silicone Dioxide: Chronic Health Hazard

Glass Spheres: Chronic Health Hazard

Talc: Chronic Health Hazard

Ceramic Fibers: Delayed Hazard

CERCLA HAZARDOUS SUBSTANCES

Components	Concentration %	Section 304 CERCLA Hazardous Substance
1-chloro-2,3-epoxypropane	<35%	Listed
Toluene	<12%	Listed

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
	Bisphenol A and Epoxy Resin	25068-38-6	<30%	>= 1.0%
	Butyl Glycidyl Ether	2426-08-6	<5%	>= 1.0%
	TOLUENE (Methylbenzene)	108-88-3	<12%	>= 1.0%

* Do not detach SARA 313 notifications from SDS. All copies of SDS must include SARA 313 notifications.

This sds is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage use and disposal are beyond our control and may be beyond our knowledge.

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

US Regulations State

California Proposition 65 (Developmental – Female)	Bisphenol A and Epoxy Resin	25068-38-6	<30%	>= 1.0%
Massachusetts	Bisphenol A and Epoxy Resin	25068-38-6	<30%	>= 1.0%
New Jersey	Bisphenol A and Epoxy Resin	25068-38-6	<30%	>= 1.0%
Pennsylvania	Bisphenol A and Epoxy Resin	25068-38-6	<30%	>= 1.0%
Rhode Island	Bisphenol A and Epoxy Resin	25068-38-6	<30%	>= 1.0%
California Proposition 65 (Developmental – Female)	Butyl Glycidyl Ether	2426-08-6	<5%	>= 1.0%
Massachusetts	Butyl Glycidyl Ether	2426-08-6	<5%	>= 1.0%
New Jersey	Butyl Glycidyl Ether	2426-08-6	<5%	>= 1.0%
Pennsylvania	Butyl Glycidyl Ether	2426-08-6	<5%	>= 1.0%
Rhode Island	Butyl Glycidyl Ether	2426-08-6	<5%	>= 1.0%
California Proposition 65 (Developmental – Female)	TOLUENE	108-88-3	<12%	>= 1.0%
Massachusetts	TOLUENE	108-88-3	<12%	>= 1.0%
New Jersey	TOLUENE	108-88-3	<12%	>= 1.0%
Pennsylvania	TOLUENE	108-88-3	<12%	>= 1.0%
Rhode Island	TOLUENE	108-88-3	<12%	>= 1.0%
New Jersey	Silicic Anhydride	112945-52-5	<3%	>= 1.0%
Pennsylvania	Silicic Anhydride	112945-52-5	<3%	>= 1.0%
California Proposition 65 (Developmental – Female)	Quartz	14808-60-7	<50%	>= 1.0%
Massachusetts	Quartz	14808-60-7	<50%	>= 1.0%
New Jersey	Quartz	14808-60-7	<50%	>= 1.0%
Pennsylvania	Quartz	14808-60-7	<50%	>= 1.0%
Massachusetts	Hydrous Magnesium Silicate	14807-96-6	<10%	>= 1.0%
New Jersey	Hydrous Magnesium Silicate	14807-96-6	<10%	>= 1.0%
Pennsylvania	Hydrous Magnesium Silicate	14807-96-6	<10%	>= 1.0%
New Jersey	Glass Spheres	65997-17-3	<5%	>= 1.0%
Pennsylvania	Glass Spheres	65997-17-3	<5%	>= 1.0%
New Jersey	Silicone Resin	68037-75-2	<10%	>= 1.0%
Pennsylvania	Silicone Resin	68037-75-2	<10%	>= 1.0%

California Proposition 65 warning: This product contains materials known by the state of California to cause cancer, birth defects, and/or other reproductive harm.

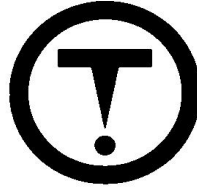
This sds is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage use and disposal are beyond our control and may be beyond our knowledge.

Canada



Class B – Flammable

Butyl Glycidyl Ether
Toluene



Class D - Poisonous and Infectious
materials Division 2: Materials Causing
Other Toxic Effects D2A:

Butyl Glycidyl Ether
Araldite Epoxy Resin
Toluene, D2B
Ceramic Fiber, D2B

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):

Butyl Glycidyl Ether 2426-08-6, Araldite Epoxy Resin 25068-38-6, Toluene 108-88-3

16. OTHER INFORMATION

HEALTH 2
FLAMMABILITY 1
REACTIVITY 0

Customer and/or end user is responsible for determining PPE code.

HEALTH 2
Chronic *
FLAMMABILITY 1
REACTIVITY 0

NFPA

HMIS

Preparer:	Flamemaster / Compliance Rev-A August / 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