



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

**SAFETY DATA SHEET**  
 AUGUST 10, 2022

**File: E-400 PTA GSA 07-10**  
**Top Coat**  
**Tough Epoxy Coating**

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

1.1. Product Identifier: E-400 / E-400X Top Coat (Part A)  
 - Product Name: E-400 / E-400X Tough Epoxy Coating / Part A  
 - Product reference: E-400 / E-400X Epoxy Coating Compound

1.2. Product Use:  
 - Epoxy 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](http://www.flamemaster.com)

Emergency Contact Information :  
 See Below

<b>Specification: AS1129</b>		<b>EPOXY COATING / TOP COAT PART A</b>	
<b>NSN:</b>		6850-00-009-5032	
		E400/E400X T/C WHITE QUART KIT	

Emergency Contact:

CHEMTEL: WWW.CHEMTELINC.COM

Flamemaster Corporation Contract Number MIS2644301

Shipments of hazardous materials within United States, Canada, Puerto Rico, and U.S. Virgin Island should reference Chemtel's toll free phone number: 1-800-255-3924 - Reference Number MIS2644301

Shipments and safety applications outside of United States, Canada, Puerto Rico, and the U.S. Virgin Islands must reference Chemtel phone number +1-813-248-0585 - Reference Number MIS2644301

Collect Calls will be accepted. To ensure a bilingual operator please call collect.

Shipments originating in U.S.A. and going overseas must use both numbers.

Shipments originating overseas and destined for US, Canada, Puerto Rico or the Virgin Islands must also use both numbers.

Calls originating on board vessels should follow normal ship to shore protocols. Use international access number and alert the ship to shore operator you are involved in an emergency incident.

Shipments of hazardous materials within the listed countries should reference Chemtel's in-country phone numbers:

Australia : 1-300-954-583 : Reference Number MIS2644301

Brazil : 0-800-591-6042 : Reference Number MIS2644301

China : 400-120-0751 : Reference Number MIS2644301

India : 000-800-100-4086 : Reference Number MIS2644301

Mexico : 01-800-099-0731 : Reference Number MIS2644301

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Section -2. HAZARD ( S ) IDENTIFICATION

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

**CLASSIFICATION OF THE MIXTURE:**

FLAMMABLE LIQUID - CATEGORY 2

ASPIRATION HAZARD - CATEGORY 1

ACUTE TOXICITY, ORAL - CATEGORY 4

ACUTE TOXICITY (INHALATION) - CATEGORY 4

CARCINOGENICITY - Category 2

SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

SKIN SENSITIZATION - CATEGORY 1

GERM CELL MUTAGENICITY-CATEGORY 2

TOXIC TO REPRODUCTION - CATEGORY 2

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE - (NARCOTIC EFFECTS) - CATEGORY 3

SPECIFIC TARGET ORGAN TOXICITY-REPEAT EXPOSURE -CATEGORY 2

REPRODUCTIVE TOXICITY, EFFECTS ON OR VIA LACTATION

AQUATIC (CHRONIC) - CATEGORY 4

**GHS LABEL REQUIREMENTS:**

**HAZARD PICTOGRAMS:**



**SIGNAL WORD : DANGER**

**HAZARD STATEMENTS:**

HIGHLY FLAMMABLE LIQUID AND VAPOR - H225

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304

HARMFUL IF SWALLOWED - H302

HARMFUL IF INHALED - H332

SUSPECTED OF CAUSING CANCER - H351

CAUSES SKIN IRRITATION - H315

CAUSES SERIOUS EYE IRRITATION - H319

MAY CAUSE AN ALLERGIC SKIN REACTION - H317

SUSPECTED OF CAUSING GENETIC DEFECTS - H341

SUSPECTED OF DAMAGING FERTILITY. SUSPECTED OF DAMAGING THE UNBORN CHILD - H361fd

MAY CAUSE DROWSINESS OR DIZZINESS - H336

MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373

MAY CAUSE HARM TO BREAST-FED CHILDREN - H362

MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE - H413

**In the event of sanding, grinding, or abrading:**

H372 Causes damage to organs through prolonged or repeated exposure.

**Hazards Not Otherwise Classified (HNOC):**

Sanding and grinding dust may be harmful if inhaled. Sanding and grinding dust may form combustible concentrations in air. Emits toxic fumes when heated.

**GENERAL PRECAUTIONARY STATEMENTS:**

P101: If medical advice is needed, have product container or label at hand.

P102: keep out of reach of children.

P103: Read label before use.

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## PRECAUTIONARY STATEMENTS:

- P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking
- P233: Keep container tightly closed.
- P240: Ground / bond container and receiving equipment.
- P241: Use explosion-proof electrical / ventilating / lighting /.../ equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P260: Do not breathe dust / fumes / gas / mist / vapors / spray.
- P261: Avoid breathing dust / fumes / gas / mist / vapors / spray.
- P263: Avoid contact during pregnancy / while nursing.
- P264: Wash thoroughly after handling.
- P270: Do not eat, drink, or smoke when using this product.
- P271: Use only outdoors or in a well - ventilated area.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P273: Avoid release to the environment.
- P280: Wear protective gloves / protective clothing / eye protection / face protection.
- P281: Use personal protection equipment as required.
- P301+310: IF SWALLOWED: Immediately call a POISON CENTER / doctor / ...
- P301+312: IF SWALLOWED: Call a POISON CENTER / doctor / .../ if you feel unwell.
- P302+352: IF ON SKIN: Wash with plenty of water / ...
- P303+361+353: IF ON SKIN ( or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+351+338: IF IN EYES: Rinse cautiously for several minutes. Remove contact lenses if present and easy to do-continue rinsing.
- P308+313: If exposed: Call a POISON CENTER or doctor / physician.
- P312: Call a POISON CENTER / doctor /... / if you feel unwell.
- P314: Get medical advise / attention if you feel unwell.
- P321: Specific treatment...See Label Information
- P330: Rinse mouth
- P331: Do NOT induce vomiting.
- P332+313: If skin irritation occurs: Get medical advice / attention.
- P333+313: If skin irritation or a rash occurs: Get medical advice / attention.
- P337+313: If eye irritation persists: Get medical advice / attention.
- P362: Take off all contaminated clothing.
- P363: Wash contaminated clothing before reuse.
- P370+378: In case of fire: Use ... to extinguish.
- P391: Collect spillage.
- P403+233: Store in a well ventilated place. Keep container tightly closed.
- P403+235: Store in a well ventilated place. Keep cool.
- P405: Store locked up.
- P501: Dispose of contents / containers in accordance with local / regional / national / international regulations

## 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.

Irritating to the mucous membranes and may cause the skin to become sensitized.

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

Emits toxic fumes when heated.

## HAZARDS NOT OTHERWISE CLASSIFIED:

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

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

## In the event of sanding, grinding, or abrading:

H372 Causes damage to organs through prolonged or repeated exposure.

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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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<b>% BY WEIGHT IN PRODUCT-</b>	<b>HAZARDOUS INGREDIENT</b>	<b>CAS#-</b>
<70%	<b>Bisphenol A Epoxy Resin</b>	67924-34-9
FLAMMABLE LIQUID AND VAPOR - H226		
CAUSES SKIN IRRITATION - H315		
MAY CAUSE AN ALLERGIC SKIN REACTION - H317		
CAUSES SERIOUS EYE IRRITATION - H319		
MAY CAUSE DROWSINESS OR DIZZINESS - H336		
<70%	<b>Propylene Glycol Monomethyl Ether</b>	107-98-2
FLAMMABLE LIQUID AND VAPOR - H226		
CAUSES SKIN IRRITATION - H315		
MAY CAUSE AN ALLERGIC SKIN REACTION - H317		
CAUSES SERIOUS EYE IRRITATION - H319		
MAY CAUSE DROWSINESS OR DIZZINESS - H336		
<25%	<b>Isobutyl Acetate</b>	110-19-0
HIGHLY FLAMMABLE LIQUID AND VAPOR - H225		
MAY CAUSE DROWSINESS OR DIZZINESS - H336		
HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H412		
<25#	<b>Ethylene Glycol Monopropyl Ether</b>	2807-30-9
FLAMMABLE LIQUID AND VAPOR - H226		
HARMFUL IN CONTACT WITH SKIN - H312		
CAUSES SERIOUS EYE IRRITATION - H319		
<25%	<b>Solvent Naphtha</b>	64742-89-8
HIGHLY FLAMMABLE LIQUID AND VAPOR - H225		
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304		
CAUSES SKIN IRRITATION - H315		
MAY CAUSE DROWSINESS OR DIZZINESS - H336		
SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD - H361		
MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373		
TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H411		
<25%	<b>Heptane</b>	142-82-5
HIGHLY FLAMMABLE LIQUID AND VAPOR - H225		
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304		
CAUSES SKIN IRRITATION - H315		
MAY CAUSE DROWSINESS OR DIZZINESS - H336		
VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H410		

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% BY WEIGHT IN PRODUCT-	HAZARDOUS INGREDIENT	CAS#-
<25%	<b>Cyclohexanone</b>	108-94-1
FLAMMABLE LIQUID AND VAPOR - H226 HARMFUL IF SWALLOWED - H302 HARMFUL IN CONTACT WITH SKIN - H312 HARMFUL IF INHALED - H332 CAUSES SKIN IRRITATION - H315 CAUSES SERIOUS EYE DAMAGE - H318		
<5%	<b>Toluene</b>	108-88-3
CAUSES SKIN IRRITATION - H315 HIGHLY FLAMMABLE LIQUID AND VAPOR - H225 SUSPECTED OF DAMAGING THE UNBORN CHILD - H361d MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373 MAY CAUSE DROWSINESS OR DIZZINESS - H336 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304		
<5%	<b>XYLENE</b>	1330-20-7
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304 FLAMMABLE LIQUID AND VAPOR - H226 MAY CAUSE RESPIRATORY IRRITATION - H335 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373 HARMFUL IF INHALED - H332 CAUSES SKIN IRRITATION - H315 CAUSES SERIOUS EYE IRRITATION - H319 H400 - Toxic to Aquatic Life		
<5%	<b>ETHYLBENZENE</b>	100-41-4
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304 HIGHLY FLAMMABLE LIQUID AND VAPOR - H225 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373 SUSPECTED OF CAUSING CANCER - H351 HARMFUL IF INHALED - H332 H400 - Toxic to Aquatic Life HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H412		
<10%	<b>Glycol Ether EB</b>	111-76-2
Combustible Liquid Causes Skin Irritation Causes Eye Irritation May Cause Respiratory Irritation		
<10%	<b>Methyl Isobutyl Ketone</b>	108-10-1
Highly Flammable Liquid and Vapor Harmful If Inhaled Causes Serious Eye Irritation May Cause Respiratory Irritation		

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

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

**Ingestion:** If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

May be fatal if swallowed or vomited and enters lungs and/or airways. Never give anything by mouth to an unconscious person.

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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.

Emits toxic fumes when heated.

##### HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:

- Carbon Dioxide
- Carbon Monoxide
- Carbon Oxides
- Halogenated Compounds
- Airborn Solids and Liquid Particulates
- Nitrogen Oxides
- Nitrogen Oxides can react with water vapors to form corrosive nitric acid
- Unidentified Organic and Inorganic Compounds
- Toxic Fumes
- Smoke
- Phenolic Compounds
- Sulfur Oxides
- Other Hazardous Materials

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

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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.

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.

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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/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.

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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 )**

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OSHA	PRODUCT	ACGIH
N/A	Propylene Glycol Monomethyl Ether	50 ppm 8 hours
150 ppm	Isobutyl Acetate	150 ppm
200 ppm	Toluene	20 ppm
25 ppm	Glycol Ether EB	20 ppm
500 ppm	Solvent Naphtha	N/A
500 ppm	Heptane	400 ppm
N/A	Cyclohexanone	20 ppm
N/A	XYLENE	100 ppm

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## ETHYLBENZENE

100 ppm

20 ppm

## Methyl Isobutyl Ketone

50 ppm

20 ppm

### 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: 40 Deg. F ---5 Deg. C Method: TCC
- Specific gravity at: 68 ° F (20 ° C) N/A
- Vapor Density: N/A
- Lower Explosive Limit-N/A
- Upper Explosive Limit-N/A
- Miscibility in water at 20 ° C: Slight
- VOC : N/A
- Ph : N/A
- Volatile % by volume: N/A
- Vapor pressure at: 68 ° F (20 ° C) N/A
- Color: Clear Solution
- Appearance: Viscous Fluid
- Odor: Alcohol/Ketone Odor
- Boiling Point: N/A
- Material Supports Combustion : Yes

## 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 :

HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:

- Carbon Dioxide
- Carbon Monoxide
- Carbon Oxides
- Halogenated Compounds
- Airborn Solids and Liquid Particulates
- Nitrogen Oxides
- Nitrogen Oxides can react with water vapors to form corrosive nitric acid
- Unidentified Organic and Inorganic Compounds
- Toxic Fumes
- Smoke
- Phenolic Compounds
- Sulfur Oxides
- Other Hazardous Materials

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

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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

**ACUTE TOXICITY:**

ENDPOINT	SPECIES	PRODUCT	DOSE	EXPOSURE
		<b>Bisphenol A Epoxy Resin</b>		
LD50 Dermal	Rat		>2,000 mg/kg	-
LD50 ORAL	Rat		>2,000 mg/kg	-
		<b>Propylene Glycol Monomethyl Ether</b>		
LD50 ORAL	Rat		4016 mg/kg	-
LC50 Inhalation Vapor	Rat		>7000 ppm	-
LD50 Dermal	Rat		>2000 ppm	-
		<b>Isobutyl Acetate</b>		
LD50 ORAL	Rat		13413 mg/kg	-
LD50 Dermal	Rabbit		>17400 mg/kg	-
		<b>Ethylene Glycol Monopropyl Ether</b>		
LD50 Oral	Rat		3089 mg/kg	-
LC50 Inhalation Vapor	Mouse		1530 ppm	-
LD50 Dermal	Rabbit		1337 mg/kg	-
		<b>Solvent Naphtha</b>		
LD50 ORAL	Rat		>5.00 mg/kg	-
LC50 Inhalation Vapor	Rat		>20 mg/l	-
LD50 Dermal	Rabbit		>2.00 mg/kg	-
		<b>Heptane</b>		
LC50 Inhalation Vapor	Rat		103,000 mg/m <sup>3</sup>	4 Hours
		<b>Cyclohexanone</b>		
LD50 ORAL	Rat		1534 mg/kg	-
LC50 Inhalation Vapor	Rat		6.2 mg/l	4 Hours
LD50 Dermal	Rabbit		794-3160 mg/kg	-

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ENDPOINT	SPECIES	PRODUCT	DOSE	EXPOSURE
		<b>Toluene</b>		
LD50 ORAL	Rat		2600mg/kg	-
LD50 Dermal	Rabbit		12000 mg/kg	-
LC50 Inhalation Vapor	Rat		12.5 mg/l	4 hour
		<b>Xylene</b>		
LD50 ORAL	Rat		3523 mg/kg	
LC50 Inhalation	Rat		5000 ppm	4 hour
LD50 Dermal	Rabbit		12126 mg/kg	
		<b>Ethylbenzene</b>		
LD50 ORAL	Rat		3500 mg/kg	
LD50 DERMAL	Rabbit		15433 mg/kg	

**CORROSION / IRRITATION**

PRODUCT	SPECIES	RESULT
Propylene Glycol Monomethyl Ether	Rabbit	Eyes-Non-Irritant
	Rabbit	Skin-Non-Irritant
Ethylene Glycol Monopropyl Ether	Rabbit	Eyes- Irritant
	Rabbit	Skin-Non Irritant
Solvent Naphtha	-	Eyes - Irritant
	-	Skin - Irritant
Cyclohexanone	Rabbit	Serious Eye damage
	Rabbit	Skin - Irritant

**Sensitizer:**

ROUT OF EXPOSURE	PRODUCT: SPECIES	RESULT
Skin	<b>Propylene Glycol Monomethyl Ether</b> Guinea Pig	Not Sensitizing
	<b>Isobutyl Acetate</b>	Not Sensitizing
Skin	<b>Ethylene Glycol Monopropyl Ether</b> Guinea Pig	Not Sensitizing

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**CARCINOGENICITY:**

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards  
Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards

**MUTAGENICITY:**

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards  
Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards  
Isobutyl Acetate - Negative  
Cyclohexanone - Laboratory experiments have shown mutagenic effects

**TERATOGENICITY:**

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards  
Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards

**Developmental Effects:**

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards  
Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards  
Solvent Naphtha - Suspected of damaging fertility or the Unborn Child

**Fertility Effects:**

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards  
Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards

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

1-methoxy-2-propanol - Category 3 - Narcotic Effects  
Solvent Naphtha - Category 3 - Narcotic Effects  
Heptane - Category 3 - Narcotic Effects  
Cyclohexanone - Acute Inhalation Toxicity - Breathing Difficulties

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

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304  
HARMFUL IF SWALLOWED - H302  
HARMFUL IF INHALED - H332  
SUSPECTED OF CAUSING CANCER - H351  
CAUSES SKIN IRRITATION - H315  
CAUSES SERIOUS EYE IRRITATION - H319  
MAY CAUSE AN ALLERGIC SKIN REACTION - H317  
SUSPECTED OF CAUSING GENETIC DEFECTS - H341  
SUSPECTED OF DAMAGING FERTILITY. SUSPECTED OF DAMAGING THE UNBORN CHILD - H361fd  
MAY CAUSE DROWSINESS OR DIZZINESS - H336  
MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373  
MAY CAUSE HARM TO BREAST-FED CHILDREN - H362

**ASPIRATION HAZARD :**

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS

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.

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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)

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.

**Toxicity :**

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RESULT	PRODUCT SPECIES	EXPOSURE
	<b>Propylene Glycol Monomethyl Ether</b>	
EgC50 ->1000 - mg/l	Algae	7 days Static
IC50 - >1000mg/l	Bacteria	3 Hours Static
LC50 - 23300 mg/l	Daphnia Magna	48 Hours Static
LC50 ->1000 mg/l	Fish	96 Hours Static
	<b>Isobutyl Acetate</b>	
LC50 - 17mg/l	Oryzias Latipes	96 Hours
EC50 - 25 mg/l	Daphnia Magna	48 Hours
EC50 - 370 mg/l	Pseudokirchneriella Subcapitata	72 Hours
	<b>PRODUCT SPECIES</b>	<b>EXPOSURE</b>
	<b>Ethylene Glycol Monopropyl Ether</b>	
LC50 Static >5000 mg/l	Pimephales Promelas	96 Hours
LC50 Static >5000 mg/l	Daphnia Magna	48 Hours
EC50 Static >100 mg/l	Pseudokirchneriella Subcapitata	72 Hours
	<b>Heptane</b>	
LC50 - 4 mg/l	Carassius Auratus	24 Hours
LC50 - 375 mg/l	Tilapia Mossambica	96 Hours
EC50 - 1.5 mg/L	Daphnia Magna	48 Hours
	<b>Cyclohexanone</b>	
EC50 - 820 mg/l	Daphnia Magna	24 Hours
	<b>Toluene</b>	
LC50 6.26-8.4 mg/l	Rainbow Trout	24 hours
LC50 6.97-8.62 mg/l	Salmon	24 hours
LC50 7.45-8.75 mg/l	Salmon	24 hours
LC50 80 mg/l	Medaka	24 hours
	<b>Glycol Ether EB</b>	
LC50 1575 mg/l	Carp	48 Hours
LC50 1720 mg/l	Daphnia Magna	24 Hours

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LC50	672 mg/l	<b>Methyl Isobutyl Ketone</b>	
EC50	4280 mg/l	Carp	48 Hours
		Daphnia Magna	24 Hours

**PERSISTANCE AND DEGRADABILITY:**

TEST	PRODUCT PERIOD	RESULT
OECD 301F	<b>Bisphenol A Epoxy Resin</b> 28 DAYS	5%
OECD 301D	<b>Isobutyl Acetate</b> 20 DAYS	81% - Readily Biodegradable

AQUATIC HALF LIFE	PRODUCT PHOTOLYSIS	BIODEGRADABILITY
Fresh water 3.58 days Bisphenol A Epoxy Resin - Not Readily Biodegradable	<b>Bisphenol A Epoxy Resin</b> -	Not Readily

**Bioaccumulative Potential :**

Product / Ingredient	LogP(ow)	BCF	Potential
Bisphenol A Epoxy Resin	-	31	low
Propylene Glycol Monomethyl Ether	0.43	0.25	low
Heptane			Indication of Bioaccumulation Potential
Toluene	Partition Coefficient - 2.65		

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



US Regulations State

Ethylene Glycol Monopropyl Ether	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Heptane	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Cyclohexanone	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Toluene	California Proposition 65 (RTK) - Listed (Developmental Female)		
	New Jersey	(RTK)	- Listed
	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
Glycol Ether EB	New Jersey	(RTK)	- Listed
	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	Rhode Island	(RTK)	- Listed
Xylene	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Ethylbenzene	California Proposition 65 (RTK) - Listed		
	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
	Massachusetts	(RTK)	- Listed

**Methyl Isobutyl Ketone**

**California Proposition 65 (RTK) - Listed  
(Developmental Female)**

**New Jersey (RTK) - Listed**

**Massachusetts (RTK) - Listed**

**Pennsylvania (RTK) - Listed**

**Rhode Island (RTK) - Listed**

**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.

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):

Propylene Glycol Monomethyl Ether

Toluene

Glycol Ether EB

Bisphenol A Epoxy Resin

Methyl Isobutyl Ketone

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**16. OTHER INFORMATION**

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HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Customer and / or end user is responsible for determining PPE

**NFPA**

**HMIS**

**LIST OF ABBREVIATIONS :**

**OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**

**ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGENISTS**

**PNOC - PARTICULATES NOT OTHERWISE CLASSIFIED (ACGIH)**

**TWA - TIME WEIGHTED AVERAGE**

**IARC - INTERNATIONAL AGENCY FOR RESEARCH ON CANCER**

**NTP - NATIONAL TOXICOLOGY PROGRAM**

**SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT**

**NFPA - NATIONAL FIRE PROTECTION ASSOCIATION**

**HMIS - HAZARDOUS MATERIAL IDENTIFICATION SYSTEM**

Preparer:

Flamemaster / Compliance

Revision Date: 08/10/2022

Containers:

plastic jars, metal cans  
cartridge kits

Limited Quantity

See SDS Section 14

Maximum container size 50 Gallons / 190 Liters

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**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**