



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

SAFETY DATA SHEET
APRIL 2016

File: CS2725B GSA 07-10
EPOXY COMPOUND-CATALYST

Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: CS-2725 PT B EPOXY BONDING COMPOUND-CATALYST
 - Product Name: EPOXY BONDING COMPOUND
 - Product reference: CS-2725-B

1.2. Product Use:
 - EPOXY BONDING 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	DOD-C-24176 TYPE 1 & TYPE 2			CATALYST	
NSN:	8030-00-670-8556 CS2725TY1 QT KIT	8030-00-227-1698 CS2725TY1 GAL KIT	8030-00-051-4011 CS2725TY2 1/2 PT KIT	8030-00-903-6545 CS2725	8030-00-104-6702 CS2725TY2 PT KIT
	8030-00-670-8553 CS2725TY2 QT KIT	8030-00-159-5032 CS2725TY2 2GAL KIT			

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:

ASPIRATION HAZARD - CATEGORY 1
ACUTE TOXICITY, ORAL - CATEGORY 4
ACUTE TOXICITY (DERMAL) - CATEGORY 4
SKIN CORROSION/IRRITATION - Category 1B
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
RESPIRATORY SENSITIZATION - CATEGORY 1
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION (Fertility) - CATEGORY 2
TOXIC TO REPRODUCTION (UNBORN CHILD) - Category 2
SKIN SENSITIZATION, CATEGORY 1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - CATEGORY 1
SPECIFIC TARGET ORGAN TOXICITY - REPEAT EXPOSURE - CATEGORY 1
AQUATIC TOXICITY - CATEGORY 4

GHS LABEL REQUIREMENTS

HAZARD PICTOGRAMS



SIGNAL WORD : DANGER

HAZARD STATEMENTS:

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304
HARMFUL IF SWALLOWED - (302)
CAUSES SEVERE SKIN BURNS AND EYE DAMAGE - H314
CAUSES SERIOUS EYE DAMAGE - (H318)
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED - H334
SUSPECTED OF DAMAGING FERTILITY - H361f
SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)
CAUSES DAMAGE TO ORGANS - H370
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H372
MAY CAUSE CANCER - H350
HARMFUL IN CONTACT WITH SKIN - H312
MAY CAUSE AN ALLERGIC SKIN REACTION - H317
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.
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.

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of organic compounds

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

PRODUCT	CAS#	% WEIGHT IN PRODUCT
GHS PRODUCT IDENTIFIER: EPIKURE CURING AGENT 3055	N/A	<40%
ACUTE TOXICITY (DERMAL) - CATEGORY 4		
SKIN CORROSION/IRRITATION - Category 1B		
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1		
RESPIRATORY SENSITIZATION - CATEGORY 1		
SKIN SENSITIZATION, CATEGORY 1		
TOXIC TO REPRODUCTION (Fertility) - CATEGORY 2		
TOXIC TO REPRODUCTION (UNBORN CHILD) - Category 2		
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - CATEGORY 1		
SPECIFIC TARGET ORGAN TOXICITY - REPEAT EXPOSURE - CATEGORY 1		

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

TETRAETHYLENEPENTAMINE

112-57-2

<40%

ACUTE TOXICITY (DERMAL) - CATEGORY 4
SKIN CORROSION/IRRITATION - Category 1B
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
RESPIRATORY SENSITIZATION - CATEGORY 1
ACUTE AQUATIC TOXICITY (CATEGORY 2)
CHRONIC AQUATIC TOXICITY (CATEGORY 2)

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

TRIETHYLENETETRAMINE

112-24-3

<5%

ACUTE TOXICITY (DERMAL) - CATEGORY 3
SKIN CORROSION/IRRITATION - Category 1B
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
SKIN SENSITIZATION - CATEGORY 1
AQUATIC (ACUTE) - CATEGORY 3
AQUATIC (CHRONIC) - CATEGORY 3

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

QUARTZ

14808-60-7

<5%

SPECIFIC TARGET ORGAN TOXICITY - REPEAT EXPOSURE - (CATEGORY 1)

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.

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

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.

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.

HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE: CARBON DIOXIDE, CARBON MONOXIDE, HALOGENATED COMPOUNDS, SULFUR OXIDES, SULFUR COMPOUNDS, SMOKE, OXIDES OF NITROGEN, METAL OXIDE / OXIDES, OXIDES OF CARBON, SULFUR DIOXIDE, HYDROGEN SULFIDE and OTHER ORGANIC COMPOUNDS.

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.

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.

Section -7. HANDLING AND STORAGE

7.1 Handling:

No smoking, eating and drinking during handling. Wash hands and face before eating, drinking, or smoking.

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.

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

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	AIHA
TETRAETHYLENEPENTAMINE *	-	5mg/m ³
TRIETHYLENETETRAMINE	-	WEEL-1 ppm
CALCIUM CARBONATE *	-	ACGIH-10mg/m ³
LIMESTONE *	-	ACGIH-2mg/m ³
QUARTZ *	-	ACGIH-.025mg/m ³
* 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

- Physical state at: 68 ° F (20 ° C) Liquid
- Flash point: 200 ° F (93 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) N/A
- Vapor Density: NIL
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit (% vol.): N/A
- Miscibility in water at 20 ° C: NEGLIGIBLE
- VOC: N/A

- Ph : N/A
- Volatile by VOLUME: N/A
- Vapor pressure at: 68 ° F (20 ° C) NIL
- Color: Off White to Grey
- Appearance: PASTE
- Odor: Slight Ammonia Odor
- Boiling Point: Unknown
- Material Supports Combustion: Yes

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products such as :

- Carbon Monoxide
- Sulfur Oxides
- Carbon Dioxide
- Formaldehyde
- Oxides of Nitrogen
- Halogenated Compounds
- Oxides of Carbon, Sulfur Dioxide, Hydrogen Sulfide
- Metal Oxide / Oxides
- Smoke
- Other Organic Compounds

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 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
Tetraethylenepentamine	LD50 ORAL	RAT	3990 mg/kg	-
Triethylenetetramine	LD50 ORAL	RAT	2500 mg/kg	-
Quartz	LD50 ORAL	RAT	6450 mg/kg	-
Calcium Carbonate	LD50 ORAL	RAT	>5000 mg/kg	-

Corrosion /Irritation

Triethylenetetramine- Severe Irritant to Eyes and Skin

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304
 HARMFUL IF SWALLOWED - (302)
 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE - H314
 CAUSES SERIOUS EYE DAMAGE - (H318)
 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED - H334
 SUSPECTED OF DAMAGING FERTILITY - H361f
 SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)
 CAUSES DAMAGE TO ORGANS - H370
 CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H372
 MAY CAUSE CANCER - H350
 HARMFUL IN CONTACT WITH SKIN - H312
 MAY CAUSE AN ALLERGIC SKIN REACTION - H317
 MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE - H413

CARCINOGENICITY:

INGREDIENT	IARC	OSHA	NTP	CAS#
No data Available				

SPECIFIC TARGET ORGAN TOXICITY-STOT (SINGLE EXPOSURE)

Tall oil fatty acids with tetraethylenepentamine	-	Category 3		
Tetraethylenepentamine	-	Category 1		
Triethylenetetramine	-	Category 1		

SPECIFIC TARGET ORGAN TOXICITY-STOT (REPEATED EXPOSURE)

Tetraethylenepentamine	-	Category 1	skin, respiratory tract
		Category 2	liver, kidneys
Triethylenetetramine	-	Category 1	respiratory tract, skin
		Category 2	liver, kidneys

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:

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - (H304)

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)

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.

Toxicity :

Product / Ingredient	Result	Species	Exposure
3,6-diazaoctanethylenediamin	LC50 33900 µg/l Fresh water	Water Flea	48 hours
3,6-diazaoctanethylenediamin	EC50 3700 µg/l Fresh Water	Green Algae	96 hours
Tetraethylenepentamine	LC50 420 mg/l	Guppy	96 hours
Tetraethylenepentamine	EC50 24 mg/l	Water Flea	48 hours
Tetraethylenepentamine	IC50 2mg/l	Green Algae	72 hours

Persistence and Degradability :

Product / Ingredient	PERIOD	RESULT	Biodegradability
No Data Available			

Bioaccumulative Potential :

Product / Ingredient	LogP(ow)	BCF	Potential
Triethylenetetramine	-1.66-1.4	-	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.

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.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: CORROSIVE LIQUID, N.O.S. (TETRAETHYLENE PENTAMINE)

UN Number: UN 1760

HAZARD CLASS: 8

PACKING GROUP: II

HAZARD LABEL REQUIRED: CORROSIVE

NMFC: 4620 SUB.6 – CL.60

Schedule B # 3506.91.0000

ERG# 154

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)
	tetraethylene pentamine	112-57-2	<40 %	Unknown
	Quartz	14808-60-7	< 5%	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

- Massachusetts - Tetraethylenepentamine - Cas# 112-57-2
- Pennsylvania - Tetraethylenepentamine - Cas# 112-57-2
- New Jersey - Tetraethylenepentamine - Cas# 112-57-2
- Massachusetts - Triethylenetetramine - Cas#112-24-3
- Pennsylvania - Triethylenetetramine - Cas#112-24-3
- New Jersey - Triethylenetetramine - Cas#112-24-3

United States: Sara 302/304 (Sara 304 RQ):

Not Available

Sara 311/312

Information On Ingredients:

Tetraethylenepentamine : Acute Health Hazard

Triethylenetetramine : Acute Health Hazard

Quartz : Immediate and Delayed 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.

16. OTHER INFORMATION

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

HEALTH	2 *
FLAMMABILITY	1
REACTIVITY	0
CHRONIC	*

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

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