

Material Safety Data Sheet

Section 1. Product Identification and Use

Product Name - Trade Name **999-060 EPOXY HARDNER**

Supplier - Manufacturer **Chemcraft International Inc.,**
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For Transport Emergency or After Hours

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Code 999-060

Synonym EPOXY HARDNER

Chemical Name Not applicable.

Chemical Family Acid. (Acid.)

Chemical Formula Not applicable.

Material Uses Coatings: Hardener for resins.

Product Identification Number (PIN) 2924 Flammable Liquids, Corrosive N.O.S.

Section 2. Hazardous Ingredients

Name	CAS #	% by Weight	<u>Exposure Limits</u>	
			LC ₅₀ /LD ₅₀	TLV/PEL
Methyl ethyl ketone	78-93-3	10-30	ORAL (LD50): Acute: 3400 mg/kg [Rat]. DERMAL (LD50): Acute: 13000 mg/kg [Rabbit].	ACGIH (Canada, 1993). TWA: 590 mg/m ³ STEL: 585 mg/m ³ CEIL: 885 mg/m ³
Toluene	108-88-3	10-30	ORAL (LD50): Acute: 2600 mg/kg [Rat]. DERMAL (LD50): Acute: 12210 mg/kg [Rabbit].	ACGIH (Canada, 1993). TWA: 50 ppm TWA: 188 mg/m ³
Ethylbenzene	100-41-4	1-5	ORAL (LD50): Acute: 3500 mg/kg [Rat]. DERMAL (LD50): Acute: 5000 mg/kg [Rabbit].	ACGIH (Canada). TWA: 100 ppm STEL: 125 ppm
m-Methyltoluene	108-38-3	5-10	ORAL (LD50): Acute: 6750 mg/kg [Rat]. DERMAL (LD50): Acute: 12400 mg/kg [Rabbit].	Not available.
o-Methyltoluene	95-47-6	1-5	ORAL (LD50): Acute: 3600 mg/kg [Rat].	Not available.
p-Methyltoluene	106-42-3	1-5	ORAL (LD50): Acute: 4100 mg/kg [Rat].	Not available.
Tris-2,4,6-(Dimethylaminomethyl)Pp	90-72-2	1-5	ORAL (LD50): Acute: 1670 mg/kg [Rat]. DERMAL (LD50): Acute: 1400 mg/kg [Rabbit].	Not available.

Trace impurities and additional material names not listed above may appear in other sections of this MSDS. These materials may be listed for toxicological concerns, local compliance, or other reasons.

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Section 3. Physical Data

Physical State and Appearance	Liquid.				
Color	Not available.	Odor	Not available.	Taste	Not available.
Molecular Weight	Not applicable.				
pH (1% soln/water)	Acidic.				
Boiling Point	The lowest known value is 80°C (176°F) (2-Butanone). Weighted average: 106.46°C (223.6°F)				
Melting Point	May start to solidify at 13.3°C (55.9°F) based on data for: Benzene, 1,4-dimethyl-. Weighted average: -73.64°C (-100.6°F)				
Critical Temperature	Not available.				
Specific Gravity	Weighted average: 0.94 (Water = 1)				
Vapor Pressure	The highest known value is 10.3 kPa (77.5 mmHg) (at 20°C) (2-Butanone). Weighted average: 5.23 kPa (39.23 mmHg) (at 20°C)				
Vapor Density	The highest known value is 3.7 (Air = 1) (Benzene, 1,3-dimethyl-). Weighted average: 3.03 (Air = 1)				
Volatility	Not available.				
Odor Threshold	The lowest known value is 0.25 ppm (2-Butanone) Weighted average: 0.48 ppm				
Water/Oil Dist. Coeff.	The product is much more soluble in octanol.				
Ionicity (in Water)	Not available.				
Dispersion Properties	Is not dispersed in cold water, hot water. See solubility in methanol, diethyl ether, n-octanol, acetone.				
Solubility	Easily soluble in methanol, diethyl ether, acetone. Soluble in n-octanol. Insoluble in cold water, hot water.				

Section 4. Fire and Explosion Hazard

The Product is:	Flammable.
Fire Hazards in Presence of Various Substances	Highly flammable in presence of open flames, sparks and static discharge. Flammable in presence of heat.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Special Remarks on Fire Hazards	Vapor may travel considerable distance to source of ignition and flash back. (Benzene, methyl-)
Flash Points	The lowest known value is Closed cup: -6°C (21.2°F). (Tagliabue.). Open cup: -4°C (24.8°F). (2-Butanone)
Flammable Limits	The greatest known range is LOWER: 1.8% UPPER: 10% (2-Butanone)
Auto-Ignition Temperature	The lowest known value is 432°C (809.6°F) (Benzene, ethyl-).
Products of Combustion	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...).
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Highly explosive in presence of open flames, sparks and static discharge.
Special Remarks on Explosion Hazards	Not available.

Section 5. Reactivity Data

Stability	The product is stable.
Decomposition products	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Slightly reactive to reactive with oxidizing agents, acids.
Corrosivity	Not available.

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Special Remarks on Reactivity	N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes into contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. (Tris-2,4,6-(Dimethylaminomethyl)Phenol)
Special Remarks on Corrosivity	Not available.

Section 6. Toxicological Properties

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 1670 mg/kg [Rat]. (Tris-2,4,6-(Dimethylaminomethyl)Phenol). Acute dermal toxicity (LD50): 1400 mg/kg [Rabbit]. (Tris-2,4,6-(Dimethylaminomethyl)Phenol). Acute toxicity of the gas (LC50): 2000 ppm 4 hour(s) [Rat]. (2-Butanone). Acute toxicity of the vapor (LC50): 4785 ppm 4 hour(s) [Rat.]. (Benzene, 1,4-dimethyl-).
Effects of Acute Exposure	Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of skin contact (permeator), of ingestion, of inhalation. Slightly hazardous in case of skin contact (corrosive). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC, None. by OSHA [2-Butanone]. Classified A4 (Not classifiable for human or animal.) by ACGIH [Benzene, 1,3-dimethyl-]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys, the nervous system, liver. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Inhalation of vapors may cause dizziness, an irregular heartbeat, narcosis, nausea or asphyxiation. (Benzene, methyl-)
Special Remarks on Other Toxic Effects on Humans	Exposure can cause lung irritation, chest pain and oedema which may be fatal. (Benzene, methyl-)
Exposure Limits	Not available.

Section 7. Preventive Measures

Personal Protection	Full suit. Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves (impervious). Boots. Wear appropriate respirator when ventilation is inadequate.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Small Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.
Large Spill	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Call for assistance on disposal.
Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Precautions	Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).
TDG Classification	3

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PIN	2924 Flammable Liquids, PG: II Corrosive N.O.S.	
Special Provisions for Transport		
Federal and State Regulations	<p>California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Benzene, methyl-; Benzene, dimethyl-</p> <p>California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Benzene, methyl-</p> <p>Illinois toxic substances disclosure to employee act: Benzene, ethyl-</p> <p>New York release reporting list: Benzene, 1,3-dimethyl-</p> <p>New York acutely hazardous substances: Benzene, ethyl-</p> <p>Rhode Island RTK hazardous substances: Benzene, ethyl-</p> <p>Florida: Benzene, ethyl-; Benzene, 1,3-dimethyl-</p> <p>Minnesota: Benzene, ethyl-</p> <p>Massachusetts RTK: Benzene, ethyl-; Benzene, 1,3-dimethyl-</p> <p>New Jersey: Benzene, ethyl-</p> <p>TSCA 8(b) inventory: Benzene, methyl-; Benzene, dimethyl-; Tris-2,4,6-(Dimethylaminomethyl)Phenol</p> <p>TSCA 8(d) H and S data reporting: Benzene, ethyl-</p> <p>SARA 302/304/311/312 extremely hazardous substances: Tris-2,4,6-(Dimethylaminomethyl)Phenol</p> <p>SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Methyl ethyl ketone: Fire Hazard, Immediate (Acute) Health Hazard; Benzene, dimethyl-: Fire Hazard, Immediate (Acute) Health Hazard</p> <p>SARA 313 toxic chemical notification and release reporting: Methyl ethyl ketone 24.47%; Benzene, methyl- 15.45%; Benzene, dimethyl- 17.376%</p> <p>CERCLA: Hazardous substances.: Methyl ethyl ketone; Benzene, methyl-; Benzene, dimethyl-;</p>	
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).	
Other Classifications	WHMIS (Canada)	WHMIS CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).
	HCS (U.S.A.)	HCS CLASS: Flammable liquid having a flash point lower than 37.8°C (100°F). HCS CLASS: Irritating substance. HCS CLASS: Target organ effects.
Hazardous Material Information System (U.S.A.)	Health Hazard	* 3
	Fire Hazard	3
	Reactivity	0
	Personal Protection	
National Fire Protection Association (U.S.A.)	Health	3
	Fire Hazard	3
	Reactivity	0
	Specific Hazard	

Section 8. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Hazardous Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Hazardous Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

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Ingestion	Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Hazardous Ingestion	Not available.

Section 9. Preparation Information

References	-Manufacturers Material Safety Data Sheets.
Other Special Considerations	Not available.
Related Information	This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by CPR.
Preparation Information	Validated by C.M. Kelly on 8/26/2002. Verified by C.M. Kelly. Printed 9/18/2002.
Information Contact	Prepared by the Health, Safety and Environment Department, Chemcraft International Inc., P.O. Box 458, 155, Rose Glen Road North, Port Hope, ON. Canada. Phone: 905 885-6388 Fax: 905 885-5097

Notice to Reader

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