

Material Safety Data Sheet

Material Name: Koester VAP I[®] - 2000, part B

ID: KAC-002

*** Section 1 – Chemical Product and Company Identification ***

Product Use: Epoxy resin

Manufacturer Information

Koester America Corp.
2585 Aviator Drive
Virginia Beach, VA 23453

Phone: 1-757-425-1206

Emergency # INFOTREC: 1-800-535-5053

General Comments

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

*** Section 2 – Composition / Information on Ingredients ***

CAS #	Component	Percent
2855-13-2	Isophorone diamine	50-61.5
98-54-4	p-tert-Butylphenol	10-15
25068-38-6	Bisphenol A – (epichlorohydrin), reaction product	6.0-8.5
15520-10-2	2-Methylpentamethylene diamine	1-5
100-51-6	Benzyl alcohol	<1

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

*** Section 3 – Hazards Identification ***

Emergency Overview

This product is a combustible, colorless liquid epoxy resin with an amine-like odor, used as half of a two part system. This product is harmful by inhalation and if it is swallowed. Contact with this material will caused burns to the skin, eyes and mucous membranes. This product may cause sensitization by skin contact.

Potential Health Effects: Eyes

This product causes eye burns. Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Potential Health Effects: Skin

This product is severely irritating to the skin and may cause burns. This product may cause an allergic skin reaction.

Potential Health Effects: Ingestion

This product may be harmful if it is swallowed. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Potential Health Effects: Inhalation

This product is harmful by inhalation. Excessive inhalation of vapors from this product may cause nausea, vomiting and diarrhea. Inhalation of vapors or mists of the product may be irritating to the respiratory system.

HMIS Ratings: Health: 3 Fire: 2 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 4 – First Aid Measures ***

First Aid: Eyes

Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

First Aid: Skin

For skin contact flush with large amounts of water. Wash affected area with mild soap and water. If irritation persists, get medical attention. Immediately take off all contaminated clothing. Wash contaminated clothing before reuse.

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First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice – Do not induce vomiting.

First Aid: Inhalation

If inhaled, immediately remove the affected person to fresh air. Seek medical attention if symptoms develop or persist.

***** Section 5 – Fire Fighting Measures *****

Flash Point: >194° F (>90° C)

Upper Flammable Limit (UFL): Not available

Auto Ignition: Not available

Rate of Burning: Not available

General Fire Hazards

This product is combustible at high temperatures.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, various hydrocarbon fragments as well as thick smoke.

Extinguishing Media

Water spray, dry chemical, carbon dioxide. Use water to cool fire-exposed containers and to protect personnel.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

Method Used: Not available

Lower Flammable Limit (LFL): Not available

Flammability Classification: Combustible

NFPA Ratings: Health: 3 Fire: 2 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

***** Section 6 – Accidental Release Measures *****

Containment Procedures

Do not allow contact with skin, eyes or mucous membranes. Avoid inhalation of vapor from the spilled material. Contain the discharged material.

Clean-Up Procedures

Absorb spill with inert material. Shovel material into appropriate container for disposal. Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

Remove soiled clothing and laundry before reuse. Follow all Local, State, Federal and Provincial regulations for disposal. Do not allow product to enter sewer or waterways.

***** Section 7 – Handling and Storage *****

Handling Procedures

Do not get this material in your eyes, on your skin, or on your clothing. Do not inhale vapors or mists of this product. Do not reuse the empty container. Use this product with adequate ventilation. Wash thoroughly after handling. Keep this product from heat, sparks, or open flame. Do not eat, drink or smoke when using this product. Do not mix this product with fluids which contain NITRITES/NITRATES. NITROSAMINE may be formed.

Storage Procedures

Store only in the original container. Store tightly closed and in an upright position in a cool, dry, well-ventilated area.

***** Section 8 – Exposure Controls / Personal Protection *****

Exposure Guidelines

A: General Product Information

No information available for the product. Attempts should be made to eliminate all contact with skin and eyes, and to limit inhalation exposure.

B: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

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Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin

Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of vapors, appropriate NIOSH approved respiratory protection must be provided.

Personal Protective Equipment: General

Eyewash fountains and emergency showers are required.

*** Section 9 – Physical & Chemical Properties ***

Appearance:	Colorless	Odor:	Amine-like
Physical State:	Liquid	pH:	Not applicable
Vapor Pressure:	Not available	Vapor Density:	Not available
Boiling Point:	Not available	Melting Point:	Not available
Solubility (H2O):	Not available	Specific Gravity:	1.02 g/cm (Density)
Viscosity:	800 mPas @ 73.4° F (23° C)	VOC:	<10 g/L

*** Section 10 – Chemical Stability & Reactivity Information ***

Chemical Stability

Stable under normal conditions.

Chemical Stability: Conditions to Avoid

Keep away from heat, ignition sources and incompatible materials. Do not mix this product with nitrates or other nitrosating agents because a carcinogenic nitrosamine may be formed.

Incompatibility

This product may react with oxidizers, acids, bases, amines, phenols, mercaptans, isocyanates and anhydrides.

Hazardous Decomposition

Upon decomposition, this product emits carbon monoxide. Carbon dioxide, chlorine, aldehydes and phenol.

Hazardous Polymerization

Will not occur.

*** Section 11 – Toxicological Information ***

Acute and Chronic Toxicity

A: General Product Information

Product contains Bisphenol A which may cause allergic skin sensitization reactions in sensitive individuals.

B: Component Analysis – LD50/LC50

p-tert-Butylphenol (98-54-4)

Oral LD50 Rat : 3250 uL/kg

Dermal LD50 Rabbit : 2520 uL/kg

Bisphenol A – (epichlorohydrin), reaction product (25068-38-6)

SL6475000:Phenol, 4,4''-isopropylidenedi-, polymer with 1-chloro-2,3-epoxypropane (10/1/97)

Oral LD50 Rat : 11400 mg/kg

Dermal LD50 Rabbit : 15600 mg/kg

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Benzyl alcohol (100-51-6)

Oral LD50 Rat : 1230 mg/kg

Oral LD50 Mouse : 1360 mg/kg

Dermal LD50 Rabbit : 2 gm/kg

Carcinogenicity

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

***** Section 12 – Ecological Information *****

Ecotoxicity

No data available for this product.

Environmental Fate

Slightly harmful to aquatic systems. Keep liquid from entering sewers and natural waterways.

***** Section 13 – Disposal Considerations *****

US EPA Waste Number & Descriptions

A: General Product Information

Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. As shipped, this product would be considered a D002 (corrosive) waste.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Purchaser is advised to review regulations referenced for applicability as determined by purchaser's use of the product. All wastes must be handled in accordance with local, state and federal regulations.

***** Section 14 – Transportation Information *****

US DOT Information

Shipping Name: Polyamines, liquid, corrosive, n.o.s. (Isophoronediamine , p-tert-Butylphenol , 2-Methyl-1,5-pentamethylenediamine)

Hazard Class: 8

UN/NA #: UN 2735

Packing Group: II

Required Label(s): CORROSIVE

Additional Info.: This product contains a Marine Pollutant which must be added to the shipping information if the product is shipped in bulk packaging (containers >119 gallons or 450 liters) via surface transportation and all packages shipped via water transportation.

International Transportation Regulations

International Air Transportation Association (IATA):

Shipping Name: Polyamines, liquid, corrosive, n.o.s. (Isophorondiamine, p-tert-butylphenol,2-methyl-1,5-pentmethylenediamine)

Hazard Class: 8

UN/NA #: UN 2735

Packing Group: II

Required Label(s): Corrosive

Additional Info.: This product contains a Marine Pollutant which must be added to the shipping information if the product is shipped in bulk packaging (containers >119 gallons or 450 liters) via surface transportation and all packages shipped via water transportation.

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*** Section 15 – Regulatory Information ***

US Federal Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

Acute Health: Yes Chronic Health: No Fire: Yes Pressure: No Reactive: Yes

State Regulations

A: General Product Information

Other state regulations may apply. Check state requirements.

B: Component Analysis

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Isophoronediamine	2855-13-2	No	No	No	No	Yes	No
Benzyl alcohol	100-51-6	No	Yes	Yes	Yes	No	Yes

Component Analysis – WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Isophoronediamine	2855-13-2	1%; English Item 899; French Item 1048
p-tert-Butylphenol	98-54-4	1%; English Item 258; French Item 366

Additional Regulatory Information

A: General Product Information

No additional information available.

B: Component Analysis – Inventory

Component	CAS #	TSCA	DSL	EINECS
Isophoronediamine	2855-13-2	Yes	Yes	Yes
p-tert-Butylphenol	98-54-4	Yes	Yes	Yes
Bisphenol A – (epichlorohydrin), reaction product	25068-38-6	Yes	Yes	No
2-Methylpentamethylenediamine	15520-10-2	Yes	Yes	Yes
Benzyl alcohol	100-51-6	Yes	Yes	Yes

*** Section 16 – Other Information ***

Other Information

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

MSDS History

New MSDS Date: 04/30/2007

Revision Update: 04/30/2007

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists. BOD = Biological Oxygen Demand. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. EINECS = European Inventory of Existing Commercial Chemical Substances. EPA = Environmental Protection Agency. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Information System. IARC = International Agency for Research on Cancer. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. NA = Not available or Not Applicable. SARA = Superfund Amendments and Reauthorization Act. ThOD = Theoretical Oxygen Demand. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act.

This is the end of MSDS # KAC-002