

SECTION 1: Identification

Product identifiers:

Product trade name: EPALLOY* 5000
Company product number: 5000
Other means of identification: Not Available

Recommended use of the chemical and restrictions on use:

Uses: Epoxy resin
Restrictions on use: None identified

Details of the supplier:

Manufacturer/Supplier: CVC Thermoset Specialties
2980 Route 73 North
Maple Shade, New Jersey 08052 United States
Customer service telephone: +1-856-533-3000
For further information about this SDS: Email: cts.customerservice@huntsm.com

Emergency telephone number:

ChemTel (24 hours): 1-800-255-3924 (USA); +1-813-248-0585 (outside USA);
1-300-954-583 (Australia); 000-800-100-4086 (India).

SECTION 2: Hazard(s) identification

Classification of the substance or mixture:

Acute Toxicity, Oral, category 5, H303
Skin sensitizer, category 1B, H317
Hazardous to the aquatic environment, Acute, category 3, H402
Hazardous to the aquatic environment, Chronic, category 3, H412

Label elements:

Hazard pictogram(s):



Signal word:

Warning

Hazard statements:

H303 May be harmful if swallowed.
H317 May cause an allergic skin reaction.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

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P501 Dispose of contents/container in accordance with local, regional and international regulations.

Supplemental information: No Additional Information

Classification and hazards statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Regulations in individual countries/regions may determine which classifications and hazard statements are applicable based on adopted hazard classes and categories. Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

Other hazards: No Additional Information

See Section 11 for toxicological information.

SECTION 3: Composition/information on ingredients

Substance:

| <u>CAS-No.</u> | <u>Chemical Name</u> | <u>Weight%</u> |
|----------------|--|----------------|
| 0030583-72-3 | 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 99-100 |

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4: First-aid measures

Description of first aid measures:

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. If eye irritation persists: Get medical advice/attention.

Skin contact: Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Inhalation: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Most important symptoms and effects, both acute and delayed: Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact. See section 11 for additional information.

Indication of any immediate medical attention and special treatment needed, if necessary: Treat symptomatically.

SECTION 5: Fire-fighting measures

Extinguishing media:

Suitable: Use water spray, ABC dry chemical, foam or carbon dioxide. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unsuitable: None known.

Special hazards arising From the chemical:

Unusual fire/explosion hazards: Product is not considered a fire hazard, but will burn if ignited. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

Hazardous combustion products: Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See section 10 (Hazardous decomposition products) for additional information.

Special protective equipment and precautions for fire-fighters: Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing.

Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn.

Environmental precautions: Do not flush liquid into public sewer, water systems or surface waters.

Methods and materials for containment and cleaning up: Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and laundry before reuse.

SECTION 7: Handling and storage

Precautions for safe handling: As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Avoid eye and skin contact. Avoid inhalation of aerosol, mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse. Discard shoes contaminated with this product. Provide eyewash fountains and safety showers in the work area.

Conditions for safe storage, including any incompatibilities: Store cool and dry, under well-ventilated conditions. Keep away from heat, sparks and open flames. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning. Empty container contains residual product which may exhibit hazards of product.

SECTION 8: Exposure controls / personal protection

Control parameters:

Occupational exposure limits (OEL):

| | | | | |
|---|-----------------------------------|----------------------------|----------------------|-------------------------|
| Chemical Name 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | ACGIH - TWA/Ceiling N/E | ACGIH - STEL N/E | | |
| Chemical Name 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Australia N/E | New Zealand N/E | Korea N/E | Indonesia N/E |
| Chemical Name 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Japan ISHL N/E | Japan JSOH N/E | Taiwan N/E | Malaysia N/E |
| Chemical Name 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Philippines N/E | Singapore N/E | | |

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Safety glasses or goggles required.

Skin and body protection: Wear chemical resistant (impervious) gloves. Wear chemical resistant protective clothing. Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator

for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.

Further information: Eyewash fountains and safety showers are recommended in the work area.

SECTION 9: Physical and chemical properties

| | | | |
|--------------------------------------|-----------------------|---|--|
| Form: | Viscous liquid | pH: | Not Available |
| Appearance: | Clear to light yellow | Relative density: | 1.1 |
| Odor: | Slight | Partition coefficient (n-octanol/water): | 3.84 (OECD 107) |
| Odor threshold: | Not Available | % Volatile by weight: | Not Available |
| Solubility in water: | Negligible | VOC: | Not Available |
| Evaporation rate: | Not Available | Boiling point °C: | Not Available |
| Vapor pressure: | Not Available | Boiling point °F: | Not Available |
| Vapor density: | Heavier than air | Flash point: | >115 °C (>240 °F) Cleveland Open Cup |
| Viscosity: | 1300-2500 cps @ 25°C | Auto-ignition temperature: | Not Available |
| Melting point/Freezing point: | Not Available | Flammability (solid, gas): | Not Applicable (liquid) |
| Oxidizing properties: | Not oxidizing | Flammability or explosive limits: | LFL/LEL: Not Available UFL/UEL: Not Available |
| Explosive properties: | Not explosive | Surface tension: | |
| Decomposition temperature: | Not Available | | |

Other information: Amounts specified are typical and do not represent a specification.

SECTION 10: Stability and reactivity

Reactivity: Exothermic reactions including polymerization may occur in contact with amines, strong acids, strong bases, alcohols, strong oxidizing agents and excessive heat.

Chemical stability: This product is stable.

Possibility of hazardous reactions: Hazardous polymerization will occur. This product will autopolymerize at very high temperatures.

Conditions to avoid: Excessive heat and ignition sources.

Incompatible materials: Avoid strong acids, bases, and oxidizing agents. Avoid contact with amines.

Hazardous decomposition products: Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Hydrogen chloride.

SECTION 11: Toxicological information

Information on likely routes of exposure:

General: Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

Eyes: May cause eye irritation.

Skin: May cause skin irritation. May cause allergic skin reaction.

Inhalation: High airborne concentrations of vapors resulting from heating, misting or spraying may cause irritation of the respiratory tract and mucous membranes.

Ingestion: May be harmful if swallowed. Ingestion may cause irritation.

Acute toxicity information: May be harmful if swallowed - Category 5.

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| <u>Chemical Name</u> | <u>Inhalation LC50</u> | <u>Species</u> | <u>Oral LD50</u> | <u>Species</u> | <u>Dermal LD50</u> | <u>Species</u> |
|--|------------------------|----------------|------------------|-------------------|--------------------|----------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | N/E | N/E | >2000 mg/kg | Rat/ adult female | >2000 mg/kg | Rat/ adult |

Skin corrosion/irritation: Not classified (based on available data, the classification criteria are not met).

| <u>Chemical Name</u> | <u>Skin irritation</u> | <u>Species</u> |
|--|-------------------------|----------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Non-irritant (OECD 404) | Rabbit/ adult |

Serious eye damage/irritation: Not classified (based on available data, the classification criteria are not met).

| <u>Chemical Name</u> | <u>Eye irritation</u> | <u>Species</u> |
|--|----------------------------|-------------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Slight irritant (OECD 405) | Similar materials |

Respiratory or skin sensitization: Skin sensitization - Category 1B.

| <u>Chemical Name</u> | <u>Skin sensitisation</u> | <u>Species</u> |
|--|---------------------------|-----------------------------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Sensitizer | Local Lymph Node Assay (OECD 429) |

Carcinogenicity: Not classified (no relevant information found).

Germ cell mutagenicity: Not classified (no relevant information found).

Reproductive toxicity: Not classified (no relevant information found).

Specific target organ toxicity (STOT) - single exposure: Not classified (no relevant information found).

Specific target organ toxicity (STOT) - repeated exposure: Not classified (no relevant information found).

Aspiration hazard: Not classified (based on available data, the classification criteria are not met).

Other toxicity information: No additional information available.

SECTION 12: Ecological information

Ecotoxicity:

| <u>Chemical Name</u> | <u>Species</u> | <u>Acute</u> | <u>Acute</u> | <u>Chronic</u> |
|--|-----------------|---------------------------|--------------|--------------------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Fish | LC50 11.5 mg/L (96 hours) | N/E | N/E |
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Invertebrates | EC50 18.3 mg/L (48 hours) | N/E | N/E |
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Algae | EC50 >100 mg/L (72 hours) | N/E | NOEC >100 mg/L(72 hours) |
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Micro-organisms | EC50 >1000 mg/L (3 hours) | | |

Persistence and degradability:

| <u>Chemical Name</u> | <u>Biodegradation</u> |
|--|---------------------------------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Not readily biodegradable (OECD 301D) |

Bioaccumulative potential:

| <u>Chemical Name</u> | <u>Bioconcentration Factor (BCF)</u> | <u>Log Kow</u> |
|--|--------------------------------------|-----------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | N/E | 3.84 (OECD 107) |

Mobility in soil:

| <u>Chemical Name</u> | <u>Mobility in soil (Koc/Kow)</u> |
|--|-----------------------------------|
| 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | 425 |

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Other adverse effects: No additional information available.

SECTION 13: Disposal considerations

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14: Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

UN number: N/A

UN proper shipping name:

Not regulated - See Bill of Lading for Details

Transport hazard class(es):

U.S. DOT hazard class: N/A

Canada TDG hazard class: N/A

Europe ADR/RID hazard class: N/A

IMDG Code (ocean) hazard class: N/A

ICAO/IATA (air) hazard class: N/A

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

Packing group: N/A

Environmental hazards:

Marine pollutant: Not Applicable

Hazardous substance (USA): Not Applicable

Special precautions for user: Not Applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:

Not Applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question:

Japan regulations:

Japan Industrial Safety and Health Law:

Chemical name

No subject chemicals

Category

Japan Fire Service Law:

Chemical name

No subject chemicals

Category

Japan Poisonous and Deleterious Substances:

Chemical name

No subject chemicals

Category

Threshold

Japan Prevention of Marine Pollution and Disaster:

Chemical name

No subject chemicals

Category

Japan Chemical Substances Control Law:

Chemical name

No subject chemicals

Category

Notes

Korean regulations:

Korea Industrial Safety and Health Act:

Chemical name

No subject chemicals

Category

Threshold

Korea Act on Registration and Evaluation of Chemical Substances (K-REACH) - Substances subject to registration:

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No subject chemicals

Korea Chemical Control Act (CCA):

Chemical name

Category

Code

Threshold

No subject chemicals

Korea Safety Control of Dangerous Substances Act (MPSS):

Chemical name

Class

Threshold

No subject chemicals

Korea Waste Control Act: Waste disposal methods must comply with local and national laws.

Chemical name

Notes

No subject chemicals

Other regulations: No Additional Information

Chemical inventories:

Regulation

Status

Australian Inventory of Chemical Substances (AICS):

Y

Canadian Domestic Substances List (DSL):

Y

Canadian Non-Domestic Substances List (NDSL):

N

China Inventory of Existing Chemical Substances (IECSC):

Y

European EC Inventory (EINECS, ELINCS, NLP):

Y

Japan Existing and New Chemical Substances (ENCS):

Y

Japan Industrial Safety and Health Law (ISHL):

Y

Korean Existing and Evaluated Chemical Substances (KECL):

Y

New Zealand Inventory of Chemicals (NZIoC):

Y

Philippines Inventory of Chemicals and Chemical Substances (PICCS):

Y

Taiwan Inventory of Existing Chemicals:

Y

U.S. Toxic Substances Control Act (TSCA) (Active):

Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory (or is not on the ACTIVE inventory for U.S. TSCA); 2) no information is available; or 3) the component has not been reviewed. A "Y" for New Zealand may mean that a qualified group standard may exist for the components in this product.

Chemical inventory notes: New Zealand: One or more components may be covered by a group standard.

Europe REACH (EC) 1907/2006: Applicable components are registered, exempt or otherwise compliant. REACH is only relevant to substances either manufactured or imported into the EU. Huntsman Corporation has met its obligations under the REACH regulation. REACH information regarding this product is provided for informational purposes only. Each Legal Entity may have differing REACH obligations, depending on their place in the supply chain. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

SECTION 16: Other information

Legend:

* : Trademark owned by Huntsman Corporation.

ACGIH: American Conference of Governmental Industrial Hygienists

N/A: Not Applicable

N/E: None Established

STEL: Short Term Exposure Limit

TWA: Time Weighted Average (exposure for 8-hour workday)

Users Responsibility/Disclaimer of Liability:

The information set forth herein is based on our current knowledge, and is intended to describe the product solely with respect to health, safety and the environment. As such, it must not be interpreted as a guarantee of any specific property of the product. As a result, the customer shall be solely responsible for deciding whether said information is suitable and beneficial.

Safety Data Sheet Preparer:

Product Compliance Department