



Revision Number: 007.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE EA 445 RESIN known as Fast Cure Epoxy RESIN
IDH number: 701930
Product type: Epoxy resin
Item number: 21425_150345
Restriction of Use: None identified
Region: United States
Company address:
 Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067
Contact information:
 Telephone: +1 (860) 571-5100
 MEDICAL EMERGENCY Phone: Poison Control Center
 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC
 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: CAUSES SKIN IRRITATION.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 CAUSES SERIOUS EYE IRRITATION.

| HAZARD CLASS | HAZARD CATEGORY |
|--------------------|-----------------|
| SKIN IRRITATION | 2 |
| EYE IRRITATION | 2A |
| SKIN SENSITIZATION | 1 |

PICTOGRAM(S)



Precautionary Statements

Prevention: Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.
Response: IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
Storage: Not prescribed
Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s) | CAS Number | Percentage* |
|--|------------|-------------|
| Epichlorohydrin-4,4'-isopropylidene diphenol resin | 25068-38-6 | 40 - 50 |
| Aluminium hydroxide | 21645-51-2 | 40 - 50 |
| Titanium dioxide | 13463-67-7 | 5 - 10 |
| Bisphenol A, polymer with formaldehyde and epichlorohydrin | 28906-96-9 | 1 - 5 |
| Ethylene glycol | 107-21-1 | 0.1 - 1 |
| Distillates, petroleum, heavy thermal cracked | 64741-81-7 | 0.1 - 1 |

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

| | |
|----------------------|--|
| Inhalation: | Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. |
| Skin contact: | Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse. |
| Eye contact: | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Ingestion: | DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. |
| Symptoms: | See Section 11. |

5. FIRE FIGHTING MEASURES

| | |
|---|--|
| Extinguishing media: | Water spray (fog), foam, dry chemical or carbon dioxide. |
| Special firefighting procedures: | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray. |
| Unusual fire or explosion hazards: | Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. |
| Hazardous combustion products: | Oxides of carbon. Acids. Aldehydes. Irritating vapors. |

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

| | |
|-----------------------------------|---|
| Environmental precautions: | Do not allow product to enter sewer or waterways. |
| Clean-up methods: | Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal. |

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed. Refer to Section 8.

Storage: Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Store in original container until ready to use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

| Hazardous Component(s) | ACGIH TLV | OSHA PEL | AIHA WEEL | OTHER |
|--|--|---|-----------|-------|
| Epichlorohydrin-4,4'-isopropylidene diphenol resin | None | None | None | None |
| Aluminium hydroxide | 1 mg/m3 TWA Respirable fraction. 10 mg/m3 TWA (as Al) Total dust. | 15 mg/m3 TWA (as Al) Total dust. 5 mg/m3 TWA (as Al) Respirable fraction. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust. | None | None |
| Titanium dioxide | 10 mg/m3 TWA | 15 mg/m3 PEL Total dust. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. | None | None |
| Bisphenol A, polymer with formaldehyde and epichlorohydrin | None | None | None | None |
| Ethylene glycol | 25 ppm TWA Vapor fraction 50 ppm STEL Vapor fraction 10 mg/m3 STEL Aerosol, inhalable. | None | None | None |
| Distillates, petroleum, heavy thermal cracked | None | None | None | None |

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

Skin protection: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Physical state: | Paste |
| Color: | White |
| Odor: | Mild |
| Odor threshold: | Not available. |
| pH: | Not applicable |
| Vapor pressure: | Negligible |
| Boiling point/range: | > 149 °C (> 300.2 °F) |
| Melting point/ range: | Not available. |
| Specific gravity: | 1.68 |
| Vapor density: | Not available. |
| Flash point: | > 93 °C (> 199.4 °F) Tagliabue closed cup |
| Flammable/Explosive limits - lower: | Not available. |
| Flammable/Explosive limits - upper: | Not available. |
| Autoignition temperature: | Not available. |
| Flammability: | Not applicable |
| Evaporation rate: | Not available. |
| Solubility in water: | Slight |
| Partition coefficient (n-octanol/water): | Not available. |
| VOC content: | 0.47 %; 7.9 g/l 0.04 % (value for resin and hardener together) |
| Viscosity: | Not available. |
| Decomposition temperature: | Not available. |

10. STABILITY AND REACTIVITY

| | |
|--|--|
| Stability: | Stable under normal conditions of storage and use. |
| Hazardous reactions: | Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization. |
| Hazardous decomposition products: | Oxides of carbon. Acids. Aldehydes. Irritating vapors. |
| Incompatible materials: | Strong bases. Strong oxidizing agents. Strong acids. |
| Reactivity: | Not available. |
| Conditions to avoid: | Keep away from heat, ignition sources and incompatible materials. Note: Heating the epoxy resin in this product above 148.9 °C (300 °F) in the presence of air may cause slow oxidative decomposition. Above 260 °C (500 °F) polymerization of the epoxy resin may occur. Aliphatic polyamines can produce exothermic reactions with epoxy resins which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breathe fumes. |

11. TOXICOLOGICAL INFORMATION

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|-------------------------------------|-----------------------------------|
| Relevant routes of exposure: | Skin, Inhalation, Eyes, Ingestion |
|-------------------------------------|-----------------------------------|

Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: May cause gastrointestinal tract irritation if swallowed.

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|--|--|---|
| Epichlorohydrin-4,4'-isopropylidene diphenol resin | None | Allergen, Irritant |
| Aluminium hydroxide | Oral LD50 (Rat) = > 5,000 mg/kg | Irritant, Lung, Respiratory |
| Titanium dioxide | None | Irritant, Respiratory, Some evidence of carcinogenicity |
| Bisphenol A, polymer with formaldehyde and epichlorohydrin | None | Irritant, Allergen |
| Ethylene glycol | Oral LD50 (Rat) = 5.89 g/kg Oral LD50 (Mouse) = 14.6 g/kg Dermal LD50 (Rabbit) = 9,530 mg/kg | Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic |
| Distillates, petroleum, heavy thermal cracked | None | No Target Organs |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|--|----------------|-----------------|--|
| Epichlorohydrin-4,4'-isopropylidene diphenol resin | No | No | No |
| Aluminium hydroxide | No | No | No |
| Titanium dioxide | No | Group 2B | No |
| Bisphenol A, polymer with formaldehyde and epichlorohydrin | No | No | No |
| Ethylene glycol | No | No | No |
| Distillates, petroleum, heavy thermal cracked | No | Group 2B | No |

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Epoxy resin

15. REGULATORY INFORMATION**United States Regulatory Information**

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis.

CERCLA/SARA Section 311/312: Immediate Health, Delayed Health

CERCLA/SARA Section 313: None above reporting de minimis.

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 2,3

Prepared by: Product Safety and Regulatory Affairs

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