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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite 3616
Product type: One-Part Epoxy
Company address:
Henkel Corporation
15051 East Don Julian Road
Industry, California 91746

Item No. : 29848 / IDH No. 244565
Region: United States
Contact Information:
Telephone: 626.968.6511
Emergency Telephone: 860.571.5100
Internet: www.electronics.henkel.us

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	30-60	None	None	None
Calcium carbonate 1317-65-3	10-30	10 mg/m ³ TWA (particulate matter containing no asbestos and <1% crystalline silica)	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Epoxy amine adduct Proprietary	10-30	None	None	None
Glycidyl ester 26761-45-5	5-10	None	None	None
Amorphous fumed silica 68611-44-9	5-10	None	None	None
Treated fumed silica 67762-90-7	1-5	10mg/m ³ Inhalable fraction, 3mg/m ³ Respirable fraction, TWA	5mg/m ³ Respirable dust, 15mg/m ³ Total dust	None
Phenol, polymer with formaldehyde, glycidyl ether 28064-14-4	1-5	None	None	None
Titanium dioxide 13463-67-7	0.1-1	10 mg/m ³ TWA	15 mg/m ³ TWA total dust	None

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****HMIS:**

Physical state: Liquid
Color: Red
Odor: Mild

HEALTH: 2*
FLAMMABILITY: 1
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF SWALLOWED OR INHALED.

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

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. May cause irritation to nose and throat. Coughing. Sneezing.

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Skin contact:	May cause allergic skin reaction. May cause severe skin irritation. May cause sensitization by skin contact. Repeated or prolonged contact can result in drying of skin. Contact at elevated temperatures may cause thermal burns. Redness.
Eye contact:	May cause irritation. Blurred vision. Burning sensation. Swelling. Redness.
Ingestion:	May be harmful if swallowed.
Existing conditions aggravated by exposure:	Pre-existing skin, eye and respiratory allergies. Skin disorders. Dermatitis. Eczema. Respiratory disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
Skin contact:	Remove contaminated clothing and shoes. Immediately flush skin with plenty of water (using soap, if available). Get medical attention if symptoms develop and persist. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Give a conscious person several glasses of water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms develop and persist.

5. FIRE-FIGHTING MEASURES

Flash point:	Greater than 93°C (200°F) Tagliabue closed cup
Autoignition temperature:	Not determined
Flammable/Explosive limits-lower %:	Not determined
Flammable/Explosive limits-upper %:	Not determined
Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special fire fighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Use water spray to keep fire exposed containers cool.
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Calcium oxide. Aldehydes. Phenolics. Hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent product from entering drains or open waters.
Clean-up methods:	Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain the spill in a closed container until disposal.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Do not breathe mist or vapors. Keep container closed. Wash thoroughly after handling.
Storage:	Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
Incompatible products:	Refer to Section 10.

For information on product shelf life contact Henkel Customer Service at (626) 968-6511

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.
Eye/face protection:	Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Red
Odor:	Mild
Vapor pressure:	Less than 1 mm Hg at 20°C (68°F)
pH:	Not determined
Boiling point/range:	Not determined
Melting point/range:	Not determined
Specific gravity:	Not determined
Vapor density:	Not determined
Evaporation rate:	Not determined
Solubility in water:	Insoluble.
Partition coefficient (n-octanol/water):	Not available
VOC content:	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions
Hazardous polymerization:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Calcium oxide. Aldehydes. Phenolics. Hydrocarbons.
Incompatibility:	Can react vigorously with strong oxidizing agents, strong lewis or mineral acids, and strong mineral and organic bases, especially primary and secondary aliphatic amines. Mercaptans. Fluorine. Aluminum. Ammonium salts. Alkalis. Water.
Conditions to avoid:	Storage with incompatible materials. Heat, flames, sparks and other sources of ignition. Avoid contact with acids and oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	No	No	No
Calcium carbonate 1317-65-3	No	No	No
Epoxy amine adduct Proprietary	No	No	No
Glycidyl ester 26761-45-5	No	No	No
Amorphous fumed silica 68611-44-9	No	No	No
Treated fumed silica 67762-90-7	No	No	No
Phenol, polymer with formaldehyde, glycidyl ether 28064-14-4	No	No	No
Titanium dioxide 13463-67-7	No	Group 2B	Yes

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	Allergen, Irritant
Calcium carbonate 1317-65-3	Nuisance dust
Epoxy amine adduct Proprietary	No data
Glycidyl ester 26761-45-5	Allergen, Irritant
Amorphous fumed silica 68611-44-9	No Target Organs
Treated fumed silica 67762-90-7	Irritant
Phenol, polymer with formaldehyde, glycidyl ether 28064-14-4	Allergen, Irritant
Titanium dioxide 13463-67-7	Irritant, Respiratory

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

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

Proper shipping name: Not regulated (Up to 300 ml when shipped as originally packaged by Henkel only)
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Not regulated (Up to 300 ml when shipped as originally packaged by Henkel only)
Hazard class or division: None
Identification number: None
Packing group: None

WaterTransportation (IMO/IMDG):

Proper shipping name: Not regulated (Up to 300 ml when shipped as originally packaged by Henkel only)
Hazard class or division: None
Identification number: None
Packing group: None

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.

CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: None above reporting de minimus.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances list. All other components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format. Updated WHMIS.

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