



Revision Number: 008.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE ECCOBOND FP4531 known as HYSOL FP4531 10CC FLPCHIP - 40CD
Product type/use: Encapsulant
Restriction of Use: None identified
Company address:
 Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 446513

Item number: FP4531-V20
Region: United States

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

This product contains an epoxy resin CAS # 27610-48-6 that is covered by a USEPA Significant New Use Requirement (SNUR) (40CFR 721.5192) that limits its use to binding fibers in aerospace composites or for encapsulating electronic devices. It is a violation of the SNUR to use this product for any other application.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CAUSES SKIN IRRITATION.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 CAUSES SERIOUS EYE DAMAGE.
 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
 MAY CAUSE RESPIRATORY IRRITATION.
 SUSPECTED OF CAUSING GENETIC DEFECTS.
 SUSPECTED OF CAUSING CANCER.
 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS	HAZARD CATEGORY
SERIOUS EYE DAMAGE	1
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
GERM CELL MUTAGENICITY	2
CARCINOGENICITY	2
REPRODUCTIVE TOXICITY	2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3
SKIN IRRITATION	2

PICTOGRAM(S)



Precautionary Statements

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection. In case of inadequate ventilation wear respiratory protection.

Response: IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

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*
Silica, vitreous	60676-86-0	30 - 60
hexahydromethylphthalic anhydride	25550-51-0	10 - 30
6-glycidyloxynaphth-1-yl oxymethyloxirane	27610-48-6	5 - 10
Bisphenol-F Epichlorhydrin resin	9003-36-5	5 - 10
Silicon dioxide	7631-86-9	5 - 10
2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane	39817-09-9	1 - 5
4,5-Bis(hydroxymethyl)-2-phenyl-1H-imidazole	61698-32-6	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 not breathing, give artificial respiration. If breathing is difficult, give oxygen. 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.

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. 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. Reacts with water or steam to form methyltetrahydrophthalic acid and methylhexahydrophthalic acid.

Hazardous combustion products:

Oxides of carbon. Oxides of nitrogen. Toxic and irritating vapors.
Hydrocarbons.

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. Ensure adequate ventilation. Isolate area. Keep unnecessary personnel away. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, saw dust). Store in a closed container until ready for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:

Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not taste or swallow. Refer to Section 8.

Storage:

Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

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
Silica, vitreous	None	20 MPPCF TWA 0.8 mg/m ³ TWA	None	None
hexahydromethylphthalic anhydride	None	None	None	None
6-glycidyloxynapht-1-yl oxymethyloxirane	None	None	None	0.1 ppm TWA
Bisphenol-F Epichlorhydrin resin	None	None	None	None
Silicon dioxide	6 mg/m ³ TWA	20 MPPCF TWA 0.8 mg/m ³ TWA	None	3 mg/m ³ TWA Respirable fraction.
2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane	None	None	None	None
4,5-Bis(hydroxymethyl)-2-phenyl-1H-imidazole	None	None	None	None

Engineering controls:

Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational 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. 4H gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid

Color:

Black

Odor:

Slight

Odor threshold:

Not available.

pH:

Not applicable

Vapor pressure:

Not available.

Boiling point/range:

Not available.

Melting point/range:

Not available.

Specific gravity:	1.7
Vapor density:	Not available.
Flash point:	> 121.00 °C (> 249.8 °F)
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:	Not miscible or difficult to mix
Partition coefficient (n-octanol/water):	Not available.
VOC content:	< 10 %
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Oxides of silicon. Hydrocarbons.
Incompatible materials:	Oxidizing agents. Acids and bases. Amines. Peroxides. Mercaptans. Alcohols. Avoid contact with water.
Reactivity:	Not available.
Conditions to avoid:	Exposure to moisture. High temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Product toxicity data:	The U.S. Environmental Protection Agency (EPA) has identified certain substances that are structurally similar to the epoxy resin component with CAS # 27610-48-6. These analogues are phenylglycidylether and diglycidylether of resorcinol. Based on the results of animal bioassays on these analogues, the EPA finds that the epoxy resin component (CAS # 27610-48-6) may be carcinogenic and may cause reproductive effects. The epoxy resin is expected to be absorbed via all routes.
Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation. May cause allergic respiratory reaction. This compound contains a material that may cause sensitization in some individuals, resulting in allergic symptoms of the respiratory tract producing asthma-like conditions (including wheezing, shortness of breath and difficulty breathing). Coughing.

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

Eye contact: Causes serious eye damage. Prolonged contact may cause eye burns and corneal injury.

Ingestion: May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Silica, vitreous	None	Nuisance dust
hexahydromethylphthalic anhydride	None	Allergen, Respiratory, Irritant
6-glycidyloxynaphth-1-yl oxymethyloxirane	None	Irritant, Allergen, Blood, Reproductive
Bisphenol-F Epichlorhydrin resin	None	Allergen, Irritant
Silicon dioxide	Oral LD50 (Rat) = > 22,500 mg/kg Oral LD50 (Mouse) = > 15,000 mg/kg	Nuisance dust
2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane	None	No Target Organs
4,5-Bis(hydroxymethyl)-2-phenyl-1H-imidazole	None	No Records

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silica, vitreous	No	No	No
hexahydromethylphthalic anhydride	No	No	No
6-glycidyloxynaphth-1-yl oxymethyloxirane	No	No	No
Bisphenol-F Epichlorhydrin resin	No	No	No
Silicon dioxide	No	No	No
2,2'-[Methylenebis(phenyleneoxymethylene)]bisoxirane	No	No	No
4,5-Bis(hydroxymethyl)-2-phenyl-1H-imidazole	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Any process stream associated with the use of this product must be disposed of by incineration or in a landfill. This provision, however, does not supersede any applicable federal, state or local laws and regulations.

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

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
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 as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.
TSCA 5 (a) (2) Proposed SNUR	This product contains an epoxy resin CAS # 27610-48-6 that is covered by a USEPA Significant New Use Requirement (SNUR) (40CFR 721.5192) that limits its use to binding fibers in aerospace composites or for encapsulating electronic devices. It is a violation of the SNUR to use this product for any other application. Manufacture, import, distribution, use and disposition of this product is restricted to the requirements listed in 40 CFR.
TSCA 12 (b) Export Notification:	Oxirane, 2,2'-(1,6-naphthalenediylbis(oxymethylene))bis- (CAS# 27610-48-6).
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/NDSL Status:	One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.
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16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 3,8,9,11,13,15,16

Prepared by: Product Safety and Regulatory Affairs

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