



Revision Number: 005.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE ECCOBOND FP4470 known as HYSOL FP4470 (51g) -40CD	IDH number:	468135
Product type:	Encapsulant	Item number:	FP4470-V25
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	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. Contains one or more components for which a Toxic Substances Control Act (TSCA) Low Volume Exemption (LVE) applies. See Section 15.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

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

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
CARCINOGENICITY	1A
REPRODUCTIVE TOXICITY	2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

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. If eye irritation persists: 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	60 - 70
Hexahydromethylphthalic anhydride	25550-51-0	10 - 20
Silicon dioxide	7631-86-9	5 - 10
Oxirane, 2,2'-(1,6-naphthalenediylbis(oxymethylen	27610-48-6	5 - 10
Epichlorohydrin-4,4'-isopropylidene diphenol resin	25068-38-6	1 - 5
Bisphenol-F Epichlorhydrin resin	9003-36-5	0.1 - 1
Quartz (SiO ₂), <1% respirable	14808-60-7	0.1 - 1
Carbon black	1333-86-4	0.1 - 1
4,4'-carbonyldipthalic acid compd. with 2-methyl-1H-imidazole (1:2)	172140-94-2	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. Wash clothing before reuse. Get medical attention.
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. Give a conscious person several glasses of water. 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.
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Special firefighting procedures:	In case of fire, keep containers cool with water spray. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Hydrocarbons. Oxides of silicon. Oxides of carbon, oxides of nitrogen, irritating organic 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. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until 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. Keep container closed. 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/m3 TWA	None	None
Hexahydromethylphthalic anhydride	None	None	None	None
Silicon dioxide	6 mg/m3 TWA	20 MPPCF TWA 0.8 mg/m3 TWA	None	3 mg/m3 TWA Respirable fraction.
Oxirane, 2,2'-(1,6-naphthalenediyl)bis(oxy)methylene	None	None	None	0.1 ppm TWA
Epichlorohydrin-4,4'-isopropylidene diphenol resin	None	None	None	None
Bisphenol-F Epichlorohydrin resin	None	None	None	None
Quartz (SiO ₂), <1% respirable	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.05 mg/m3 TWA (Respirable dust.) 0.025 mg/m3 OSHA_ACT (Respirable dust.) 0.05 mg/m3 PEL Respirable dust.	None	None
Carbon black	3 mg/m3 TWA Inhalable fraction.	3.5 mg/m3 PEL	None	None
4,4'-carbonyldipthalic acid compd. with 2-methyl-1H-imidazole (1:2)	None	None	None	None

Engineering controls:

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

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

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 impermeable gloves and protective clothing as necessary to prevent skin contact. 4H gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste, Liquid
Color:	Black
Odor:	Aromatic
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	None Not available.
Melting point/ range:	Not available.
Specific gravity:	1.8
Vapor density:	Not available.
Flash point:	> 93 °C (> 199.4 °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:	0 %
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.
Hazardous decomposition products:	Oxides of nitrogen. Oxides of silicon. Hydrocarbons. Oxides of carbon. Irritating organic vapours.
Incompatible materials:	Acids and bases. Magnesium. Zinc. Sodium. Water. Amines. Oxidizing agents. Alcohols.
Reactivity:	Not available.
Conditions to avoid:	Exposure to moisture. 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 allergic respiratory reaction. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). May cause respiratory tract irritation. Inhalation of vapors or mists of the product may be irritating to the respiratory system. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

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
Silica, vitreous	None	Nuisance dust
Hexahydromethylphthalic anhydride	None	Allergen, Respiratory, Irritant
Silicon dioxide	Oral LD50 (Rat) = > 22,500 mg/kg Oral LD50 (Mouse) = > 15,000 mg/kg	Nuisance dust
Oxirane, 2,2'-(1,6-naphthalenediyl)bis(oxymethylen	None	Irritant, Allergen, Blood, Reproductive
Epichlorohydrin-4,4'-isopropylidene diphenol resin	None	Allergen, Irritant
Bisphenol-F Epichlorohydrin resin	None	Allergen, Irritant
Quartz (SiO ₂), <1% respirable	None	Immune system, Lung, Some evidence of carcinogenicity
Carbon black	Oral LD50 (Rat) = > 8,000 mg/kg	Respiratory, Some evidence of carcinogenicity
4,4'-carbonyldipthalic acid compd. with 2-methyl-1H-imidazole (1:2)	None	No Records

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silica, vitreous	No	No	No
Hexahydromethylphthalic anhydride	No	No	No
Silicon dioxide	No	No	No
Oxirane, 2,2'-(1,6-naphthalenediyl)bis(oxymethylen	No	No	No
Epichlorohydrin-4,4'-isopropylidene diphenol resin	No	No	No
Bisphenol-F Epichlorohydrin resin	No	No	No
Quartz (SiO ₂), <1% respirable	Known To Be Human Carcinogen.	Group 1	Yes
Carbon black	No	Group 2B	No
4,4'-carbonyldipthalic acid compd. with 2-methyl-1H-imidazole (1:2)	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.
Hazardous waste number:	This product may contain traces of: Benzene. Therefore, it may be classified as hazardous waste under EPA RCRA (40 CFR 261.24), with waste number(s): D018. Benzene. However this product is only classifiable as hazardous waste if it exhibits the characteristics of toxicity as shown by the toxicity characteristic leaching procedure (TCLP). Under RCRA, it is the responsibility of the end user of this product to determine whether it meets this criteria at the time of disposal.

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 (Up to 6 oz. max per inner/primary package when shipped as originally packaged only)
Hazard class or division:	None
Identification number:	None
Packing group:	None

International Air Transportation (ICAO/IATA)

Proper shipping name:	Not regulated (Up to 6 oz. max per inner/primary package when shipped as originally packaged only)
Hazard class or division:	None
Identification number:	None
Packing group:	None

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated (Up to 6 oz. max per inner/primary package when shipped as originally packaged only)
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 5 (a) (2) SNUR:	This product contains an ingredient for which a Significant New Use Rule (SNUR) has been promulgated by the USEPA under the Toxic Substances Control Act (TSCA) section 5(a)(2). This SNUR (40CFR 721.5192) limits its use to binding fibers in aerospace composites or for encapsulating electronic devices. It is in 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:	Substituted 1,6-dihydroxy naphthalene (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/NDL 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.

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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