



Revision Number: 006.1

Issue date: 03/17/2025

## 1. IDENTIFICATION

**Product name:** LOCTITE ECCOBOND FP4470 known as HYSOL FP4470 (51g) -40CD  
**Product type/Recommended use:** 1-c- epoxide adhesive  
**Restriction of Use:** None identified  
**Company address:** Henkel Corporation  
 One Henkel Way  
 Rocky Hill, Connecticut 06067

**IDH number:** 468135  
**Item number:** FP4470-V25  
**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  
 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

Contains one or more components for which a Toxic Substances Control Act (TSCA) Low Volume Exemption (LVE) applies. See Section 15. This product contains one or more components that are exempt from listing on the U.S. Toxic Substances Control Act (TSCA) inventory because a Low Volume Exemption (LVE) has been granted in accordance with 40 CFR 723.50. Quantities may be limited.  
 This product contains one or more components regulated under a Significant New Use Rule (SNUR) by the US EPA. See Section 15 for more information.

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**DANGER:** H315 - CAUSES SKIN IRRITATION.  
 H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.  
 H318 - CAUSES SERIOUS EYE DAMAGE.  
 H334 - MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.  
 H335 - MAY CAUSE RESPIRATORY IRRITATION.  
 H341 - SUSPECTED OF CAUSING GENETIC DEFECTS.  
 H351 - SUSPECTED OF CAUSING CANCER.  
 H361 - SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
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

### PICTOGRAM(S)



### Precautionary Statements

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<b>Prevention:</b>	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P261 - Avoid breathing mist/vapours. P264 - Wash affected area thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves, clothing, eye and face protection. P284 - [In case of inadequate ventilation] wear respiratory protection.
<b>Response:</b>	P302+P352 - IF ON SKIN: Wash with plenty of water. P304+P340+P312 - 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. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical attention. P333+P313 - If skin irritation or rash occurs: Get medical attention. P342+P311 - If experiencing respiratory symptoms: Call a poison center or physician. P362+P364 - Take off contaminated clothing and wash it before reuse.
<b>Storage:</b>	P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up.
<b>Disposal:</b>	P501 - Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

**Other hazards** Not available.

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	Weight %*
Silica, vitreous	60676-86-0	60 - 80
hexahydromethylphthalic anhydride	25550-51-0	10 - 30
Si-oxide amorphous (fumed)	7631-86-9	5 - 10
6-glycidyloxynapht-1-yl oxymethyloxirane	27610-48-6	5 - 10
Epichlorohydrin-4,4'-isopropylidene diphenol resin	25068-38-6	1 - 5
Methacrylic acid methyl ester, polymer with butyl acrylate and ethyl acrylate	25767-43-5	1 - 5

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

### 4. FIRST AID MEASURES

#### First Aid Measures by likely routes of exposure

<b>Inhalation:</b>	If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Move to fresh air. If symptoms persist, seek medical advice.
<b>Skin contact:</b>	Rinse with running water and soap. Remove contaminated clothing and shoes. If symptoms develop and persist, get medical attention. Wash contaminated clothing before reuse. Thoroughly clean shoes before reuse. Discard any shoes or clothing items that cannot be decontaminated.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention immediately.
<b>Ingestion:</b>	Seek immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
<b>Most important symptoms and effects (acute and delayed):</b>	The most important known symptoms and effects, both acute and delayed, are described in Section 11: Toxicological Information.
<b>Indication of any immediate medical attention / special treatment needed:</b>	Not available.

## 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Improper extinguishing agents:</b>	Not available.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Keep unnecessary personnel away.
<b>Unusual fire or explosion hazards:</b>	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. In case of fire, keep containers cool with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
<b>Hazardous combustion products:</b>	Oxides of carbon. Phenolics. Toxic fumes. 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.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Remove all sources of ignition. Keep unnecessary personnel away. Wear appropriate personal protective equipment. 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

<b>Handling:</b>	Use only with adequate ventilation. Remove all sources of ignition. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Wear suitable protective clothing, safety glasses and gloves. See Section 8 of the SDS for Personal Protective Equipment. When using do not eat, drink or smoke. Keep container closed.
<b>Storage:</b>	Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Store in a dry place. Avoid moisture. Keep away from heat, spark and flame. Store in original container until ready to use. Store away from incompatible materials identified in section 10.

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	3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	20 MPPCF TWA 0.8 mg/m3 TWA 15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction. 15 MPPCF TWA Respirable fraction. 50 MPPCF TWA Total dust.	None	None
Si-oxide amorphous (fumed)	3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles. 6 mg/m3 TWA	15 MPPCF TWA Respirable fraction. 50 MPPCF TWA Total dust. 15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction. 20 MPPCF TWA 0.8 mg/m3 TWA	None	3 mg/m3 TWA Respirable fraction.
6-glycidyloxynapht-1-yl oxymethyloxirane	None	None	None	0.1 ppm TWA
Carbon black - Nano	3 mg/m3 TWA Inhalable fraction.	3.5 mg/m3 PEL 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust.	None	None

### Engineering controls:

Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits. 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 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, Liquid
Color:	Black
Odor:	Aromatic
Odor threshold:	Not available.
pH:	Not applicable, Product is non-soluble (in water).
Vapor pressure:	< 0.1 hPa (20 °C (68°F))
Boiling point/range:	Not applicable, Polymerizes before boiling point is reached.
Melting point/ range:	Not applicable, Product is a liquid
Density/Relative density:	1.8
Relative vapor density:	20 °C Heavier than air
Flash point:	> 93 °C (> 199.4 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	The product is not flammable.
Evaporation rate:	Not available.
Solubility:	Insoluble Water
Partition coefficient n-octanol/water (logarithmic value):	Not available.

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Product name: LOCTITE ECCOBOND FP4470 known as HYSOL FP4470 (51g) -40CD

<b>VOC content:</b>	0 %
<b>Dynamic viscosity:</b>	Not available.
<b>Kinematic viscosity:</b>	> 20.5 mm <sup>2</sup> /s
<b>Particle characteristics:</b>	Not applicable, Product is a liquid
<b>Decomposition temperature:</b>	> 200 °C

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	None under normal processing.
<b>Hazardous decomposition products:</b>	Oxides of nitrogen. Oxides of silicon. Hydrocarbons. Oxides of carbon. Irritating organic vapours.
<b>Incompatible materials:</b>	Oxidizing agents. Acids. Bases. Amines.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Exposure to moisture. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

<b>Product toxicity data:</b>	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.
<b>Likely routes of exposure:</b>	Skin, Inhalation, Eyes, Ingestion

## Potential Health Effects/Symptoms

<b>Inhalation:</b>	May cause respiratory tract irritation. 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).
<b>Skin contact:</b>	Causes skin irritation. May cause allergic skin reaction.
<b>Eye contact:</b>	Causes serious eye damage.
<b>Ingestion:</b>	May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s
Silica, vitreous	None
hexahydromethylphthalic anhydride	None
Si-oxide amorphous (fumed)	Oral LD50 (Rat) = > 22,500 mg/kg Oral LD50 (Mouse) = > 15,000 mg/kg Inhalation LC50 (Rat, 4 h) = > 2.08 mg/l Inhalation LC50 (Rat, 4 h) = > 0.69 mg/l
6-glycidyloxynapht-1-yl oxymethyloxirane	None
Epichlorohydrin-4,4'-isopropylidene diphenol resin	None
Methacrylic acid methyl ester, polymer with butyl acrylate and ethyl acrylate	None

Hazardous Component(s)	Immediate Health Effects	Delayed Health Effects	Chronic Health Effects
Silica, vitreous	Nuisance dust		
hexahydromethylphthalic anhydride	Irritant	Allergen	Respiratory
Si-oxide amorphous (fumed)	Nuisance dust		
6-glycidyloxynapht-1-yl oxymethyloxirane	Irritant	Allergen	Blood Reproductive
Epichlorohydrin-4,4'-isopropylidene diphenol resin	Irritant	Allergen	
Methacrylic acid methyl ester, polymer with butyl acrylate and ethyl acrylate			

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silica, vitreous	No	No	No
hexahydromethylphthalic anhydride	No	No	No
Si-oxide amorphous (fumed)	No	No	No
6-glycidyloxynapht-1-yl oxymethyloxirane	No	No	No
Epichlorohydrin-4,4'-isopropylidene diphenol resin	No	No	No
Methacrylic acid methyl ester, polymer with butyl acrylate and ethyl acrylate	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 packaging.

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

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

#### International Air Transportation (ICAO/IATA)

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

#### Water Transportation (IMO/IMDG)

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

## 15. REGULATORY INFORMATION

#### United States Regulatory Information

<b>TSCA 8 (b) Inventory Status:</b>	All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory. This product contains one or more components with a Low Volume Exemption (LVE) in accordance with 40 CFR 723.50. Quantities may be limited.
<b>TSCA 5(a) SNUR:</b>	This product contains the following component(s) subject to a Significant New Use Rule (SNUR) by the US EPA: 6-glycidylloxynaphth-1-yl oxymethyloxirane (CAS # 27610-48-6). The SNUR is codified at Section number: 40 CFR 721.5192
<b>TSCA 12 (b) Export Notification:</b>	Substituted 1,6-dihydroxy naphthalene (CAS# 27610-48-6).
<b>CERCLA/SARA Section 302 EHS:</b>	None above reporting de minimis. Epichlorohydrin (CAS# 106-89-8).
<b>CERCLA/SARA Section 311/312:</b>	Please refer to the GHS classification in Section 2
<b>CERCLA/SARA Section 313:</b>	None above reporting de minimis.
<b>California Proposition 65:</b>	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

<b>CEPA DSL/NDL Status:</b>	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:** First issue. 1,2,3,8,9,11,13,15,16

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 03/17/2025

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