



Revision Number: 005.0

Issue date: 09/28/2018

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product name:** LOCTITE ECCOBOND FP4470 known as 10CC IC ENCAP FOR 260C R -40CD  
**Product type:** Encapsulant  
**Restriction of Use:** None identified  
**Company address:** Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067

**IDH number:** 556652  
**Item number:** FP4470-V24  
**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.henkeln.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(oxy)methylene                 | 27610-48-6  | 5 - 10      |
| Epichlorohydrin-4,4'-isopropylidene diphenol resin                  | 25068-38-6  | 1 - 5       |
| Bisphenol-F Epichlorohydrin resin                                   | 9003-36-5   | 0.1 - 1     |
| Quartz (SiO <sub>2</sub> ), <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.

|   |  |
|---|--|
| <b>Special firefighting procedures:</b>   | In case of fire, keep containers cool with water spray. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. |
| <b>Unusual fire or explosion hazards:</b> | Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.  |
| <b>Hazardous combustion products:</b>     | 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.**

|                                   |   |
|-----------------------------------|---|
| <b>Environmental precautions:</b> | Do not allow product to enter sewer or waterways.   |
| <b>Clean-up methods:</b>          | 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

|                  |   |
|------------------|---|
| <b>Handling:</b> | 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. |
| <b>Storage:</b>  | 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<br>0.8 mg/m <sup>3</sup> TWA   | None      | None  |
| Hexahydromethylphthalic anhydride                                   | None  | None  | None      | None  |
| Silicon dioxide   | 6 mg/m <sup>3</sup> TWA                             | 20 MPPCF TWA<br>0.8 mg/m <sup>3</sup> TWA   | None      | 3 mg/m <sup>3</sup> TWA<br>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 <sub>2</sub> ), <1% respirable                          | 0.025 mg/m <sup>3</sup> TWA<br>Respirable fraction. | 2.4 MPPCF TWA<br>Respirable.<br>0.1 mg/m <sup>3</sup> TWA<br>Respirable.<br>0.05 mg/m <sup>3</sup> TWA<br>(Respirable dust.)<br>(Respirable dust.)<br>0.025 mg/m <sup>3</sup><br>OSHA_ACT<br>(Respirable dust.)<br>0.05 mg/m <sup>3</sup> PEL<br>Respirable dust. | None      | None  |
| Carbon black  | 3 mg/m <sup>3</sup> TWA<br>Inhalable fraction.      | 3.5 mg/m <sup>3</sup> 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

|  |                      |
|--|----------------------|
| <b>Physical state:</b>                     | Paste, Liquid        |
| <b>Color:</b>                              | Black                |
| <b>Odor:</b>                               | Aromatic             |
| <b>Odor threshold:</b>                     | Not available.       |
| <b>pH:</b>                                 | Not available.       |
| <b>Vapor pressure:</b>                     | Not available.       |
| <b>Boiling point/range:</b>                | None Not available.  |
| <b>Melting point/ range:</b>               | Not available.       |
| <b>Specific gravity:</b>                   | 1.8                  |
| <b>Vapor density:</b>                      | Not available.       |
| <b>Flash point:</b>                        | > 93 °C (> 199.4 °F) |
| <b>Flammable/Explosive limits - lower:</b> | Not available.       |
| <b>Flammable/Explosive limits - upper:</b> | Not available.       |
| <b>Autoignition temperature:</b>           | Not available.       |
| <b>Flammability:</b>                       | Not applicable       |
| <b>Evaporation rate:</b>                   | Not available.       |

|   |                                  |
|---|----------------------------------|
| <b>Solubility in water:</b>                     | Not miscible or difficult to mix |
| <b>Partition coefficient (n-octanol/water):</b> | Not available.                   |
| <b>VOC content:</b>                             | 0 %                              |
| <b>Viscosity:</b>                               | Not available.                   |
| <b>Decomposition temperature:</b>               | Not available.                   |

## 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>           | Acids and bases. Magnesium. Zinc. Sodium. Water. Amines. Oxidizing agents. Alcohols.                              |
| <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>Relevant routes of exposure:</b> | 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<br>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 <sub>2</sub> ), <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 <sub>2</sub> ), <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.

|  |   |
|--|---|
| <b>Recommended method of disposal:</b> | 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.   |
| <b>Hazardous waste number:</b>         | 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)

|                                  |  |
|----------------------------------|--|
| <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 5 (a) (2) SNUR:</b>             | 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. |
| <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.   |
| <b>CERCLA/SARA Section 311/312:</b>     | Immediate Health, Delayed Health   |
| <b>CERCLA/SARA Section 313:</b>         | 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.

**16. OTHER INFORMATION**

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

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

**Issue date:** 09/28/2018

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