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Safety Data Sheet

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **LOCTITE ECCOBOND FP4545FC known as 10CC FP4545FC -40CD**
IDH number: 945398
Product type/use: Underfill
Item number: FP4545-V20
Restriction of Use: None identified
Region: United States
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

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. SUSPECTED OF CAUSING GENETIC DEFECTS. SUSPECTED OF CAUSING CANCER. 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

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. 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: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 locked up.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

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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*
Silicon dioxide	7631-86-9	30 - 60
hexahydromethylphthalic anhydride	25550-51-0	10 - 30
6-glycidyloxynapht-1-yl oxymethyloxirane	27610-48-6	10 - 30
2-Propenenitrile, polymer with 1,3-butadiene, carboxy-terminated, polymer with 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)	68909-14-8	1 - 5
Epoxy resin	Proprietary	1 - 5
Epoxy resin	Proprietary	1 - 5
Phenol-formaldehyde polymer	9003-35-4	0.1 - 1
Epoxy resin	Proprietary	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. If symptoms develop and persist, get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes 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 unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, 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: Water or foam may cause frothing. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

Hazardous combustion products: Oxides of carbon. Oxides of nitrogen. Phenolics. Aldehydes. 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: Releases of this product may not be made into U.S. waters without primary and secondary wastewater treatment.

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Clean-up methods: 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, saw dust). Remove the absorbed material, and place in an appropriate chemical waste container for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

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 gas/fumes/vapor/spray. Keep container closed. Wash thoroughly after handling. 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
Silicon dioxide	6 mg/m3 TWA	20 MPPCF TWA 0.8 mg/m3 TWA	None	3 mg/m3 TWA Respirable fraction.
hexahydromethylphthalic anhydride	None	None	None	None
6-glycidyloxynapht-1-yl oxymethyloxirane	None	None	None	0.1 ppm TWA
2-Propenenitrile, polymer with 1,3-butadiene, carboxy-terminated, polymer with 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)	None	None	None	None
Epoxy resin	None	None	None	None
Epoxy resin	None	None	None	None
Phenol-formaldehyde polymer	None	None	None	None
Epoxy resin	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 NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Full face protection should be used if the potential for splashing or spraying of product exists. Safety goggles or safety glasses with side shields. 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: Odorless
Odor threshold: Not available.
pH: Not applicable
Vapor pressure: Not available.
Boiling point/range: Not available.
Melting point/ range: Not available.
Specific gravity: 1.60
Vapor density: Not available.
Flash point: > 100 °C (> 212°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: Insoluble

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Partition coefficient (n-octanol/water):	Not available.
VOC content:	0.02 %; 0.32 g/l (calculated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Phenolics. Aldehydes. Hydrocarbons.
Incompatible materials:	Alcohols. Water. Strong acids and strong bases. Amines. Strong oxidizing agents.
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

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Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation. May cause allergic respiratory reaction.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: May cause gastrointestinal tract irritation if sw allowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Silicon dioxide	Oral LD50 (Rat) = > 22,500 mg/kg Oral LD50 (Mouse) = > 15,000 mg/kg	Nuisance dust
hexahydromethylphthalic anhydride	None	Allergen, Respiratory, Irritant
6-glycidyloxynapht-1-yl oxymethyloxirane	None	Irritant, Allergen, Blood, Reproductive
2-Propenenitrile, polymer w ith 1,3-butadiene, carboxy-terminated, polymer w ith 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)	None	Allergen, Blood, Bone Marrow , Immune system, Irritant, Reproductive
Epoxy resin	None	Allergen, Blood, Bone Marrow , Immune system, Irritant, Reproductive
Epoxy resin	None	Allergen, Irritant
Phenol-formaldehyde polymer	None	Allergen, Corrosive, Irritant, Kidney, Respiratory, Skin
Epoxy resin	None	No Target Organs

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Silicon dioxide	No	No	No
hexahydromethylphthalic anhydride	No	No	No
6-glycidyloxynapht-1-yl oxymethyloxirane	No	No	No
2-Propenenitrile, polymer w ith 1,3-butadiene, carboxy-terminated, polymer w ith 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)	No	No	No
Epoxy resin	No	No	No
Epoxy resin	No	No	No
Phenol-formaldehyde polymer	No	No	No
Epoxy resin	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, how ever, does not supersede any applicable federal, state or local law s 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 (Up to 30 ml max per inner/primary package w hen shipped as originally packaged only)
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

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Proper shipping name:	Not regulated (Up to 30 ml 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 30 ml 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 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) 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:	Oxirane, 2,2'-(1,6-naphthalenediyl)bis(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.

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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