



Revision Number: 004.0

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## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** LOCTITE ECCOBOND F 112-H known as TRA-BOND F112-H  
**Product type:** Epoxy Hardener  
**Restriction of Use:** None identified  
**Company address:** Henkel Corporation  
 One Henkel Way  
 Rocky Hill, Connecticut 06067

**IDH number:** 1446133  
**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

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**DANGER:** CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.  
 MAY CAUSE AN ALLERGIC SKIN REACTION.  
 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING  
 DIFFICULTIES IF INHALED.  
 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS	HAZARD CATEGORY
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
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 SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. 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. Wash contaminated clothing before reuse.

**Storage:** 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*
Epoxy Polyamine Adduct~		40 - 50
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	20 - 30
Diethylenetriamine	111-40-0	10 - 20
Silica, amorphous, naturally	60676-86-0	5 - 10
Formaldehyde, polymer with epichlorohydrin and o-cresol	29690-82-2	1 - 5
Phenol-formaldehyde polymer	9003-35-4	0.1 - 1
Titanium dioxide	13463-67-7	0.1 - 1
Boron zinc hydroxide oxide (B12Zn4(OH)14O15)	138265-88-0	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

<b>Inhalation:</b>	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Skin contact:</b>	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.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
<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>	Oxides of carbon. Oxides of nitrogen. Ammonia. Toxic and 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.
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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, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal.

## 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
Epoxy Polyamine Adduct~	None	None	None	None
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	None	None	None	None
Diethylenetriamine	(SKIN) 1 ppm TWA	None	None	None
Silica, amorphous, naturally	None	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Formaldehyde, polymer with epichlorohydrin and o-cresol	None	None	None	None
Phenol-formaldehyde polymer	None	None	None	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 PEL Total dust. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction.	None	None
Boron zinc hydroxide oxide (B12Zn4(OH)14O15)	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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Blue
Odor:	Ammonia
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	Not available.
Boiling point/range:	> 146 °C (> 294.8 °F)
Melting point/ range:	Not determined
Specific gravity:	1
Vapor density:	> 1.0
Flash point:	> 93 °C (> 199.4 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not determined
Flammability:	Not applicable
Evaporation rate:	Not applicable
Solubility in water:	Slightly soluble
Partition coefficient (n-octanol/water):	Not determined
VOC content:	< 0.1 %
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 carbon. Oxides of nitrogen. Ammonia. Chlorine. Nitric acid. Nitrosamines. Irritating vapors.
Incompatible materials:	Acids and bases. Strong oxidizing agents. Peroxides. Sodium hypochlorite. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
Reactivity:	Not available.
Conditions to avoid:	Elevated temperatures. Store away from incompatible materials. Keep away from heat, spark and flame.

## 11. TOXICOLOGICAL INFORMATION

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. 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).

**Skin contact:** May cause allergic skin reaction. Causes skin burns.

**Eye contact:** Causes serious eye damage.

**Ingestion:** Irritation and corrosive action can occur in the mouth, stomach tissue and digestive tract if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Epoxy Polyamine Adduct~	None	No Data
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	None	Corrosive
Diethylenetriamine	Oral LD50 (Rat) Approximate 1,140 mg/kg Oral LD50 (Rat) = 1,080 mg/kg Oral LD50 (Rat) = 2.33 g/kg	Allergen, Irritant, Eyes
Silica, amorphous, naturally	None	Nuisance dust
Formaldehyde, polymer with epichlorohydrin and o-cresol	None	Irritant, Allergen
Phenol-formaldehyde polymer	None	Allergen, Corrosive, Irritant, Kidney, Respiratory, Skin
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity
Boron zinc hydroxide oxide (B12Zn4(OH)14O15)	None	No Records

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Epoxy Polyamine Adduct~	No	No	No
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	No	No	No
Diethylenetriamine	No	No	No
Silica, amorphous, naturally	No	No	No
Formaldehyde, polymer with epichlorohydrin and o-cresol	No	No	No
Phenol-formaldehyde polymer	No	No	No
Titanium dioxide	No	Group 2B	No
Boron zinc hydroxide oxide (B12Zn4(OH)14O15)	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.

**Hazardous waste number:** D002: Corrosive.

## 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:** Amines, liquid, corrosive, n.o.s. (3,3'-oxybis(ethyleneoxy)bis(propylamine), Diethylenetriamine)  
**Hazard class or division:** 8  
**Identification number:** UN 2735  
**Packing group:** II

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Amines, liquid, corrosive, n.o.s. (3,3'-oxybis(ethyleneoxy)bis(propylamine), Diethylenetriamine)  
**Hazard class or division:** 8  
**Identification number:** UN 2735  
**Packing group:** II

### Water Transportation (IMO/IMDG)

**Proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (3,3'-oxybis(ethyleneoxy)bis(propylamine), Diethylenetriamine)  
**Hazard class or division:** 8  
**Identification number:** UN 2735  
**Packing group:** II

## 15. REGULATORY INFORMATION

### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**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 to the State of California to cause birth defects or other reproductive harm. This product contains a chemical known in the State of California to cause cancer.

### 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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