



Revision Number: 011.0

Issue date: 11/01/2022

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name:</b>	<b>LOCTITE EA 3478 B known as</b>	<b>IDH number:</b>	702243
	<b>Loctite(R) Fixmaster(R) Superio</b>		
<b>Product type/use:</b>	Epoxy Hardener	<b>Item number:</b>	97473_240000
<b>Restriction of Use:</b>	None identified	<b>Region:</b>	United States
<b>Company address:</b>	<b>Contact information:</b>		
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		

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

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

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY INHALATION	3
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1
CARCINOGENICITY	2
REPRODUCTIVE TOXICITY	2

### PICTOGRAM(S)



### Precautionary Statements

<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. 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.
<b>Response:</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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.
<b>Storage:</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal:</b>	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

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 Product name: LOCTITE EA 3478 B known as Loctite(R) Fixmaster(R) Superio  
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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*
Calcium carbonate	471-34-1	30 - 60
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with bisphenol A diglycidyl ether homopolymer	68411-71-2	10 - 30
C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer	68082-29-1	10 - 30
Diethylenetriamine	111-40-0	5 - 10
3,6-diazaoctanethylenediamine	112-24-3	5 - 10
Silica Filler	112926-00-8	5 - 10
4-nonylphenol, branched	84852-15-3	1 - 5
Titanium dioxide < 1% particles with diameter $\leq 10 \mu\text{m}$	13463-67-7	1 - 5
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	1 - 5
1,2-Ethanediamine, N1,N1-bis(2-aminoethyl)-	4097-89-6	1 - 5
Phenol, 2-nonyl-, branched	91672-41-2	0.1 - 1
2-(2-aminoethylamino)ethanol	111-41-1	0.1 - 1
4-Methylimidazole	822-36-6	0.1 - 1
N-Aminoethylpiperazine	140-31-8	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>	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
<b>Eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>Ingestion:</b>	Rinse the mouth. Drink 1-2 glasses of water. DO NOT induce vomiting unless directed to do so by medical personnel. 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.
<b>Unusual fire or explosion hazards:</b>	Burning produces obnoxious and toxic fumes. Personnel in vicinity and downwind should be evacuated. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses.

**Hazardous combustion products:**

Oxides of carbon. Oxides of nitrogen. Acids. Ammonia. Calcium oxide. Chlorine. 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.

**Environmental precautions:**

Do not allow product to enter sewer or waterways.

**Clean-up methods:**

Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. 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

**Handling:**

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.

**Storage:**

For safe storage, store between 2 °C (35.6 °F) and 8 °C (46.4 °F)  
Store in original container until ready to use. Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame.

## 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
Calcium carbonate	10 mg/m3 TWA Total dust. 3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust. 5 mg/m3 PEL Respirable fraction. 15 mg/m3 TWA Total dust. 50 MPPCF TWA Total dust. 15 MPPCF TWA Respirable fraction. 5 mg/m3 TWA Respirable fraction.	None	None
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with bisphenol A diglycidyl ether homopolymer	None	None	None	None
C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer	None	None	None	None
Diethylenetriamine	1 ppm TWA (SKIN)	None	None	None
3,6-diazaoctanethylenediamine	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
Silica Filler	10 mg/m3 TWA Inhalable particles. 3 mg/m3 TWA Respirable particles. 6 mg/m3 TWA	20 MPPCF TWA 0.8 mg/m3 TWA 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust.	None	None
4-nonylphenol, branched	None	None	None	None
Titanium dioxide < 1% particles with diameter ≤ 10 µm	0.2 mg/m3 TWA Respirable nanoscale particles 2.5 mg/m3 TWA Respirable finescale particles	15 mg/m3 PEL Total dust. 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust. 15 mg/m3 TWA Total dust. 15 MPPCF TWA Respirable fraction.	None	None
Amines, polyethylenepoly-, triethylenetetramine fraction	None	None	None	None
1,2-Ethanediamine, N1,N1-bis(2-aminoethyl)-	None	None	None	None
Phenol, 2-nonyl-, branched	None	None	None	None
2-(2-aminoethylamino)ethanol	None	None	None	None
4-Methylimidazole	None	None	None	None
N-Aminoethylpiperazine	None	None	None	None

### Engineering controls:

Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established 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.

### 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

<b>Physical state:</b>	Paste, Solid, Product is a solid by ASTM D4359-90
<b>Color:</b>	Dark, Blue, Gray
<b>Odor:</b>	amine-like
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not applicable
<b>Vapor pressure:</b>	Not available.
<b>Boiling point/range:</b>	Not determined
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	1.57
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	> 93 °C (> 199.4 °F) Tagliabue closed cup
<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>	Slight
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	< 1.0 %; < 10 g/l (value for resin and hardener together) (estimated)
<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 carbon. Oxides of nitrogen. Acids. Ammonia. Calcium oxide. Chlorine. Phenolics. Toxic fumes. Nitrosamines. Irritating vapors.
<b>Incompatible materials:</b>	Acids. Oxidizing agents. Peroxides. Sodium hypochlorite. Amines. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Nitrous acid and other nitrosating agents. CAUTION! N-nitrosamines (many of which are known to be potent carcinogens) may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Keep away from heat, ignition sources and incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

<b>Relevant routes of exposure:</b>	Skin, Inhalation, Eyes, Ingestion
<b>Relevant routes of exposure:</b>	

## Potential Health Effects/Symptoms

<b>Inhalation:</b>	Can cause severe irritation and burns to the respiratory tract. May cause allergic respiratory reaction. Shortness of breath. Harmful if inhaled.
<b>Inhalation:</b>	
<b>Skin contact:</b>	Causes skin burns. May cause allergic skin reaction. Product may be absorbed through skin and cause nausea, headache and general discomfort.
<b>Skin contact:</b>	
<b>Eye contact:</b>	Causes serious eye damage.
<b>Eye contact:</b>	
<b>Ingestion:</b>	If ingested, severe burns of the mouth and throat may occur, as well as perforation of the esophagus and the stomach. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.
<b>Ingestion:</b>	

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Calcium carbonate	Oral LD50 (Rat) = 6,450 mg/kg Oral LD50 (Mouse) = 6,450 mg/kg Inhalation LC50 (Rat, 4 h) = > 3 mg/l	Nuisance dust
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with bisphenol A diglycidyl ether homopolymer	None	No Data
C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer	None	No Records
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
3,6-diazaoctanethylenediamine	None	Allergen, Corrosive, Developmental, Irritant, Mutagen
Silica Filler	None	Nuisance dust
4-nonylphenol, branched	None	Irritant, Corrosive
Titanium dioxide < 1% particles with diameter ≤ 10 µm	None	No Data
Amines, polyethylenepoly-, triethylenetetramine fraction	None	No Data
1,2-Ethanediamine, N1,N1-bis(2-aminoethyl)-	None	No Data
Phenol, 2-nonyl-, branched	None	No Data
2-(2-aminoethylamino)ethanol	Oral LD50 (Rat) = 3,000 mg/kg	Irritant, Allergen
4-Methylimidazole	Oral LD50 (Mouse) = 370 mg/kg Oral LD50 (Rat) = 751 mg/kg Dermal LD50 (Rabbit) = 440 mg/kg	No Data
N-Aminoethylpiperazine	None	Irritant, Corrosive, Allergen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Calcium carbonate	No	No	No
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with bisphenol A diglycidyl ether homopolymer	No	No	No
C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer	No	No	No
Diethylenetriamine	No	No	No
3,6-diazaoctanethylenediamine	No	No	No
Silica Filler	No	No	No
4-nonylphenol, branched	No	No	No
Titanium dioxide < 1% particles with diameter ≤ 10 µm	No	No	No
Amines, polyethylenepoly-, triethylenetetramine fraction	No	No	No
1,2-Ethanediamine, N1,N1-bis(2-aminoethyl)-	No	No	No
Phenol, 2-nonyl-, branched	No	No	No
2-(2-aminoethylamino)ethanol	No	No	No
4-Methylimidazole	No	Group 2B	No
N-Aminoethylpiperazine	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.

## 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, solid, corrosive, n.o.s. (Triethylenetetramine, Diethylenetriamine)  
Hazard class or division: 8  
Identification number: UN 3259  
Packing group: II

### International Air Transportation (ICAO/IATA)

Proper shipping name: Amines, solid, corrosive, n.o.s. (Triethylenetetramine, Diethylenetriamine, Nonylphenol)  
Hazard class or division: 8  
Identification number: UN 3259  
Packing group: II

### Water Transportation (IMO/IMDG)

Proper shipping name: AMINES, SOLID, CORROSIVE, N.O.S. (Triethylenetetramine, Diethylenetriamine, Nonylphenol)  
Hazard class or division: 8  
Identification number: UN 3259  
Packing group: II  
Marine pollutant: Nonylphenol

## 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 12 (b) Export Notification: Alkyl phenol (CAS# 84852-15-3).  
CERCLA/SARA Section 302 EHS: None above reporting de minimis.  
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health  
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). 4-nonylphenol, branched (CAS# 84852-15-3).  
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

### Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 2,3,8,10,11,13,15

Prepared by: Product Safety and Regulatory Affairs

Issue date: 11/01/2022

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