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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE EA 3478 B known as Loctite(R) Fixmaster(R) Superio	IDH number:	702243
Product type:	Epoxy Hardener	Item number:	97473_240000
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: (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: CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
MAY CAUSE AN ALLERGIC SKIN REACTION.
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING
DIFFICULTIES IF INHALED.

HAZARD CLASS	HAZARD CATEGORY
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention:	Do not breathe dust or fumes. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, 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 person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. If experiencing respiratory symptoms: Call a poison center or physician. 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*
Calcium carbonate	471-34-1	30 - 60
Epoxy polyamine adduct	Unknown	10 - 30
Amine adduct	Proprietary	10 - 30
Triethylenetetramine	112-24-3	5 - 10
Diethylenetriamine	111-40-0	5 - 10
Silica Filler	112926-00-8	5 - 10
Nonylphenol	25154-52-3	1 - 5
Titanium dioxide	13463-67-7	1 - 5
4-Methylimidazole	822-36-6	0.1 - 1

* Exact percentage is a 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:	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.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	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.
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.
Unusual fire or explosion hazards:	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.
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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. 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.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Epoxy polyamine adduct	None	None	None	None
Amine adduct	None	None	None	None
Triethylenetetramine	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
Diethylenetriamine	1 ppm TWA (SKIN)	None	None	None
Silica Filler	6 mg/m3 TWA	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Nonylphenol	None	None	None	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 PEL Total dust.	None	None
4-Methylimidazole	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

Physical state:

Paste, Solid

Color:

Dark, Blue, Gray

Odor:

amine-like

Odor threshold:

Not available.

pH:

Not available.

Vapor pressure:

Not available.

Boiling point/range:

Not determined

Melting point/ range:

Not available.

Specific gravity:

1.57

Vapor density:	Not available.
Flash point:	> 93 °C (> 199.4 °F) Tagliabue closed cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available.
VOC content:	< 1.0 %; < 10 g/l (value for resin and hardener together) (estimated)
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. Acids. Ammonia. Calcium oxide. Chlorine. Phenolics. Toxic fumes. Irritating vapors.
Incompatible materials:	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.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion
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Potential Health Effects/Symptoms

Inhalation:	Can cause severe irritation and burns to the respiratory tract. May cause allergic respiratory reaction.
Skin contact:	Causes skin burns. May cause allergic skin reaction. Product may be absorbed through skin and cause nausea, headache and general discomfort.
Eye contact:	Causes serious eye damage.
Ingestion:	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.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Calcium carbonate	Oral LD50 (RAT) = 6,450 mg/kg	Nuisance dust
Epoxy polyamine adduct	None	No Data
Amine adduct	None	No Records
Triethylenetetramine	None	Allergen, Corrosive, Developmental, Irritant, Mutagen
Diethylenetriamine	Oral LD50 (RAT) = 1,080 mg/kg Oral LD50 (RAT) = 2.33 g/kg Oral LD50 (RAT) Approximate 1,140 mg/kg	Allergen, Irritant, Eyes
Silica Filler	None	Nuisance dust
Nonylphenol	Oral LD50 (RAT) = 1,600 mg/kg Oral LD50 (RAT) = 1,620 mg/kg Dermal LD50 (RABBIT) = 2,140 mg/kg	Allergen, Corrosive, Irritant, Kidney
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity
4-Methylimidazole	Oral LD50 (RAT) = 751 mg/kg Dermal LD50 (RABBIT) = 440 mg/kg	No Data

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Calcium carbonate	No	No	No
Epoxy polyamine adduct	No	No	No
Amine adduct	No	No	No
Triethylenetetramine	No	No	No
Diethylenetriamine	No	No	No
Silica Filler	No	No	No
Nonylphenol	No	No	No
Titanium dioxide	No	Group 2B	No
4-Methylimidazole	No	Group 2B	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:	It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

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, Nonylphenol)
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 or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	Alkyl phenol (CAS# 25154-52-3).
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.

Canada Regulatory Information

CEPA DSL/NDL 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.
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16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

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