



Revision Number: 007.1

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1. IDENTIFICATION

Product name:	LOCTITE EA 3471 known as Fixmaster Steel Putty	IDH number:	702304
Product type/Recommended use:	2-Component epoxy adhesive	Item number:	99913_319000
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
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		
	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: H314 - CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
 H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.
 H361 - SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS	HAZARD CATEGORY
SKIN CORROSION	1
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1
REPRODUCTIVE TOXICITY	2

PICTOGRAM(S)



Precautionary Statements

Prevention:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P261 - Avoid breathing mist/vapours. P264 - Wash affected area thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves, clothing, eye and face protection.
Response:	P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. P304+P340+P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical attention. P333+P313 - If skin irritation or rash occurs: Get medical attention. P362+P364 - Take off contaminated clothing and wash it before reuse.
Storage:	P405 - Store locked up.
Disposal:	P501 - Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Other hazards Not available.

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	Weight %*
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with fatty acids, C16-18 and C18-unsatd., branched and linear and tri	157707-72-7	30 - 60
Reaction mass of trientine and trientine, mono- and di-propoxylated		10 - 30
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	5 - 10
Silica, amorphous, fumed, cryst.-free	112945-52-5	5 - 10
N-Aminoethylpiperazine	140-31-8	5 - 10
4,4'-Isopropylidenediphenol	80-05-7	5 - 10
Glycerylpoly(oxypropylene)triamine	64852-22-8	5 - 10
Aluminum	7429-90-5	5 - 10
4-nonylphenol, branched	84852-15-3	1 - 5
Benzyltrimethylamine	103-83-3	1 - 5

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

First Aid Measures by likely routes of exposure

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. 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:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Most important symptoms and effects (acute and delayed):	The most important known symptoms and effects, both acute and delayed, are described in Section 11: Toxicological Information.
Indication of any immediate medical attention / special treatment needed:	Not available.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Improper extinguishing agents:	Not available.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Personnel in vicinity and downwind should be evacuated. Burning produces obnoxious and toxic fumes. Do not allow run-off from fire fighting to enter drains or water courses. Use of water may result in the formation of very toxic aqueous solutions.

Hazardous combustion products:

Oxides of carbon. Oxides of nitrogen. Aldehydes. Ammonia. Nitric acid.
Ketones. 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:

Ensure adequate ventilation. Wear appropriate personal protective equipment. 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. Do not taste or swallow. Use only with adequate ventilation. Keep container closed.

Storage:

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.

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, amorphous, fumed, cryst.-free	3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	20 MPPCF TWA 0.8 mg/m3 TWA 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust. 15 MPPCF TWA Respirable fraction.	None	None
Aluminum	1 mg/m3 TWA Respirable fraction.	15 mg/m3 PEL (as Al) Total dust. 5 mg/m3 PEL (as Al) Respirable fraction. 15 MPPCF TWA Respirable fraction. 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust.	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:	Liquid, Paste
Color:	Gray / Grey
Odor:	Mild
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Density/Relative density:	1.1
Relative vapor density:	Not available.
Flash point:	> 96.11 °C (> 205°F) ASTM D3278 Setaflash Closed Cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility:	Not available.
Partition coefficient n-octanol/water (logarithmic value):	Not available.
VOC content:	0 %; 0 g/l California SCAQMD Method 316B
Dynamic viscosity:	Not available.
Kinematic viscosity:	Not available.
Particle characteristics:	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. Aldehydes. Ammonia. Nitric acid. Ketones. Toxic fumes. Irritating vapors.
Incompatible materials:	Acids. Bases. Nitrous acid and other nitrosating agents. Oxidizing agents. Peroxides. Sodium hypochlorite. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces. 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

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

Inhalation:	Mists, vapors or liquid may cause severe irritation or burns.
Skin contact:	Causes skin burns. May cause allergic skin reaction.
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.

Hazardous Component(s)	LD50s and LC50s
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with fatty acids, C16-18 and C18-unsatd., branched and linear and tri	None
Reaction mass of trientine and trientine, mono- and di-propoxylated	None
Amines, polyethylenepoly-, triethylenetetramine fraction	None
Silica, amorphous, fumed, cryst.-free	None
N-Aminoethylpiperazine	None
4,4'-Isopropylidenediphenol	Oral LD50 (Rat) = 4,100 mg/kg Oral LD50 (Rat) = 3,300 mg/kg
Glycerylpoly(oxypropylene)triamine	None
Aluminum	Inhalation LC50 (Rat, 4 h) = > 0.888 mg/l Inhalation LC50 (Rat, 4 h) = > 2.3 mg/l
4-nonylphenol, branched	None
Benzyltrimethylamine	Inhalation LC50 (Mouse, 4 h) = 2,052 mg/m3 Inhalation LC50 (Rat, 4 h) = 2,052 mg/m3

Hazardous Component(s)	Immediate Health Effects	Delayed Health Effects	Chronic Health Effects
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with fatty acids, C16-18 and C18-unsatd., branched and linear and tri			
Reaction mass of trientine and trientine, mono- and di-propoxylated			
Amines, polyethylenepoly-, triethylenetetramine fraction			
Silica, amorphous, fumed, cryst.-free			
N-Aminoethylpiperazine	Irritant Corrosive	Allergen	
4,4'-Isopropylidenediphenol	Irritant	Allergen	Blood Kidney Reproductive Spleen
Glycerylpoly(oxypropylene)triamine			
Aluminum	Irritant		Central nervous system Lung
4-nonylphenol, branched	Irritant Corrosive		
Benzyltrimethylamine	Irritant Corrosive	Allergen	Respiratory

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with fatty acids, C16-18 and C18-unsatd., branched and linear and tri	No	No	No
Reaction mass of trientine and trientine, mono- and di-propoxylated	No	No	No
Amines, polyethylenepoly-, triethylenetetramine fraction	No	No	No
Silica, amorphous, fumed, cryst.-free	No	No	No
N-Aminoethylpiperazine	No	No	No
4,4'-Isopropylidenediphenol	No	No	No
Glycerylpoly(oxypropylene)triamine	No	No	No
Aluminum	No	No	No
4-nonylphenol, branched	No	No	No
Benzyltrimethylamine	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any packaging.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Corrosive liquids, n.o.s. (Aminoethylpiperazine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 1760
Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Corrosive liquid, n.o.s. (Aminoethylpiperazine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 1760
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: CORROSIVE LIQUID, N.O.S. (Aminoethylpiperazine, Nonylphenol)
Hazard class or division: 8
Identification number: UN 1760
Packing group: III
Marine pollutant: Nonylphenol
Additional information: IMDG-Code: Segregation group 18- Alkalis

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: Please refer to the GHS classification in Section 2

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). 4,4'-Isopropylidenediphenol (CAS# 80-05-7). Aluminum (CAS# 7429-90-5). 4-nonylphenol, branched (CAS# 84852-15-3).

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: 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: 3,8,9,11

Prepared by: Product Safety and Regulatory Affairs

Issue date: 05/06/2025

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