



Revision Number: 006.1

Issue date: 05/07/2025

1. IDENTIFICATION

Product name:	LOCTITE EA 3471 A known as Fixmaster Steel Putty RESIN	IDH number:	702303
Product type/ Recommended use:	Epoxy resin	Item number:	99913_10345000
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		
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	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: H315 - CAUSES SKIN IRRITATION.
H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.
H319 - CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention:	P261 - Avoid breathing mist/vapours. P264 - Wash affected area thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace.
Response:	P280 - Wear protective gloves, eye protection, and face protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 - If skin irritation or rash occurs: Get medical attention. P337+P313 - If eye irritation persists: Get medical attention. P362+P364 - Take off contaminated clothing and wash it before reuse.
Storage:	Not prescribed
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 %*
Epichlorohydrin-4,4'-isopropylidene diphenol resin	25068-38-6	10 - 30
Diiron trioxide	1309-37-1	1 - 5
Neopentyl glycol diglycidyl ether	17557-23-2	1 - 5
Calcium carbonate	471-34-1	1 - 5
Carbon black - Nano	1333-86-4	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

First Aid Measures by likely routes of exposure

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing 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. 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:	In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Oxides of carbon. Phenolics. Aldehydes. Halogenated compounds. Irritating organic fragments.

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:

Remove all sources of ignition. 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. Clean residue with soap and water. Store in a closed container until ready for disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

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. Keep container closed. Refer to Section 8.

Storage:

Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Store away from heat, sparks, flames, or other sources of ignition.

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
Diiron trioxide	5 mg/m3 TWA Respirable fraction.	10 mg/m3 PEL Fume. 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust. 15 MPPCF TWA Respirable fraction.	None	None
Calcium carbonate	10 mg/m3 TWA Total dust. 3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	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. 15 mg/m3 PEL Total dust. 5 mg/m3 PEL Respirable fraction.	None	None
Carbon black - Nano	3 mg/m3 TWA Inhalable fraction.	3.5 mg/m3 PEL 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust.	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 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, White
Odor:	Slight, musty
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Density/Relative density:	2.6
Relative vapor density:	Not available.
Flash point:	> 93 °C (> 199.4 °F) 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:	Insoluble
Solubility:	Insoluble
Partition coefficient n-octanol/water (logarithmic value):	Not available.
VOC content:	< 1.0 %; < 10 g/l (value for resin and hardener together) (estimated)
Dynamic viscosity:	Not available.
Kinematic viscosity:	Not available.
Particle characteristics:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Not available.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Phenolics. Aldehydes. Halogenated compounds. Irritating organic vapours.
Incompatible materials:	Strong acids and strong bases. Strong oxidizing agents. Amines.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Excessive heat. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

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

Inhalation:	Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Skin contact:	May cause allergic skin reaction. Causes skin irritation.
Eye contact:	Causes serious eye irritation.
Ingestion:	Not expected under normal conditions of use. May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s
Epichlorohydrin-4,4'-isopropylidene diphenol resin	None
Diiron trioxide	None
Neopentyl glycol diglycidyl ether	None
Calcium carbonate	Oral LD50 (Rat) = 6,450 mg/kg Oral LD50 (Mouse) = 6,450 mg/kg Inhalation LC50 (Rat, 4 h) = > 3 mg/l
Carbon black - Nano	Oral LD50 (Rat) = > 8,000 mg/kg

Hazardous Component(s)	Immediate Health Effects	Delayed Health Effects	Chronic Health Effects
Epichlorohydrin-4,4'-isopropylidene diphenol resin	Irritant	Allergen	
Diiron trioxide	Irritant	Allergen	Cardiac Central nervous system Kidney Liver Lung
Neopentyl glycol diglycidyl ether	Irritant	Allergen	Blood Bone Marrow Immune system Reproductive
Calcium carbonate	Nuisance dust		
Carbon black - Nano			

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Epichlorohydrin-4,4'-isopropylidene diphenol resin	No	No	No
Diiron trioxide	No	No	No
Neopentyl glycol diglycidyl ether	No	No	No
Calcium carbonate	No	No	No
Carbon black - Nano	Known To Be Human Carcinogen.	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.

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:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Bisphenol-A Epichlorhydrin resin

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: None above reporting de minimis
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: None above reporting de minimis.
CERCLA Reportable quantity: Phosphorous (CAS# 7723-14-0) 1 lbs. (0.454 kg)
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: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 7,8,9,11

Prepared by: Product Safety and Regulatory Affairs

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