



Revision Number: 007.0

Issue date: 04/14/2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE AA 331 MAGNET BONDER ADHESIVE known as LOCTITE® 331™ ADHESIVE/ADHESIV	IDH number:	1057674
Product type/use:	Acrylics	Item number:	1057674
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		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: COMBUSTIBLE LIQUID.
CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
HARMFUL IF INHALED.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	4
ACUTE TOXICITY INHALATION	4
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention:	Keep away from heat, sparks, open flames, hot surfaces - no smoking. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.
Response:	IF ON SKIN: Wash with plenty of water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.
Storage:	Store in a well-ventilated place. Keep cool.
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.

IDH number: 1057674

Product name: LOCTITE AA 331 MAGNET BONDER ADHESIVE known as LOCTITE® 331™ ADHESIVE/ADHESIV

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Cyclohexyl methacrylate	101-43-9	10 - 30
Polyurethane Methacrylate Resin	Unknown	10 - 30
1,1'-(methylenedi-p-phenylene)bismaleimide	13676-54-5	10 - 30
Hydroxyalkyl methacrylate	27813-02-1	10 - 30
Silica, amorphous, treated	68909-20-6	5 - 10
Isobornyl methacrylate	7534-94-3	1 - 5
Ethylene/methyl acrylate copolymer~		1 - 5
Tert-butyl perbenzoate	614-45-9	1 - 5
maleic acid	110-16-7	1 - 5
methacrylic acid	79-41-4	0.1 - 1
Polypropylene glycol monomethacrylate	39420-45-6	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

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. Wash clothing before reuse. Get medical attention.
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.
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. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Hydrocarbons. Irritating organic vapours.

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:	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. Store in a partly filled, closed container until 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. Do not taste or swallow. Refer to Section 8.

Storage:

For safe storage, store at or below 38 °C (100.4 °F)
Keep in a cool, well ventilated area away from heat, sparks and open flame.
Keep container tightly closed until ready for use.

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
Cyclohexyl methacrylate	None	None	None	None
Polyurethane Methacrylate Resin	None	None	None	None
1,1'-(methylenedi-p-phenylene)bismaleimide	None	None	None	None
Hydroxyalkyl methacrylate	None	None	None	1 ppm TWA 3 ppm STEL
Silica, amorphous, treated	10 mg/m3 TWA Inhalable dust.	6 mg/m3 TWA	None	None
Isobornyl methacrylate	None	None	None	None
Ethylene/methyl acrylate copolymer~	None	None	None	None
Tert-butyl perbenzoate	None	None	None	None
maleic acid	None	None	None	None
methacrylic acid	20 ppm TWA	None	None	None
Polypropylene glycol monomethacrylate	None	None	None	None

Engineering controls:

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection:

Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. If this material is handled at elevated temperatures or under mist forming conditions, without engineering controls, a NIOSH approved respirator must be used.

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. Neoprene gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Pale yellow
Odor:	Slight
Odor threshold:	Not available.
pH:	Not applicable, Product is non-soluble (in water).
Vapor pressure:	< 700 mbar (50 °C (122°F)) < 500 mbar (20 °C (68°F))
Boiling point/range:	> 149 °C (> 300.2 °F)
Melting point/ range:	Not applicable, Product is a liquid
Specific gravity:	1.1
Vapor density:	> 1 20 °C
Flash point:	80 °C (176°F) Pensky Martens closed cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	The product is not flammable.
Evaporation rate:	Not available.
Solubility in water:	Not soluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	0.85 %; 9.35 g/l
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. Polymerization may occur at elevated temperature or in the presence of incompatible materials.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Hydrocarbons. Irritating organic vapours.
Incompatible materials:	Strong oxidizing agents. Free radical initiators. Reducing agents. Heavy metals. Acids. Alkalies.
Reactivity:	Not available.
Conditions to avoid:	Elevated temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials. Protect from direct sunlight. Freezing conditions.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation:	Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Skin contact:	Causes skin irritation. May cause allergic skin reaction.
Eye contact:	Causes serious eye irritation.
Ingestion:	May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Cyclohexyl methacrylate	Inhalation LC50 (Rat, 4 h) = 29.8 mg/l	Irritant, Allergen
Polyurethane Methacrylate Resin	None	Irritant, Allergen
1,1'-(methylenedi-p-phenylene)bismaleimide	Inhalation LC50 (Rat, 4 h) = > 0.515 - < 1 mg/l	No Target Organs
Hydroxyalkyl methacrylate	None	Irritant, Allergen
Silica, amorphous, treated	None	No Target Organs
Isobornyl methacrylate	None	Irritant, Allergen
Ethylene/methyl acrylate copolymer~	None	No Data
Tert-butyl perbenzoate	Inhalation LC50 (Rat, 4 h) = > 0.26 mg/l	Central nervous system, Irritant, Mutagen
maleic acid	Oral LD50 (Mouse) = 2,400 mg/kg Oral LD50 (Rat) = 708 mg/kg Dermal LD50 (Rabbit) = 1,560 mg/kg	Irritant, Kidney
methacrylic acid	Oral LD50 (Mouse) = 1,332 mg/kg Oral LD50 (Mouse) = 1,600 mg/kg Oral LD50 (Mouse) = 1,250 mg/kg Oral LD50 (Rabbit) = 1,200 mg/kg Oral LD50 (Rat) = 1,060 mg/kg Oral LD50 (Rat) = 2,224 mg/kg Dermal LD50 (Rabbit) = 500 mg/kg	Corrosive, Irritant, Allergen
Polypropylene glycol monomethacrylate	None	Irritant, Allergen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Cyclohexyl methacrylate	No	No	No
Polyurethane Methacrylate Resin	No	No	No
1,1'-(methylenedi-p-phenylene)bismaleimide	No	No	No
Hydroxyalkyl methacrylate	No	No	No
Silica, amorphous, treated	No	No	No
Isobornyl methacrylate	No	No	No
Ethylene/methyl acrylate copolymer~	No	No	No
Tert-butyl perbenzoate	No	No	No
maleic acid	No	No	No
methacrylic acid	No	No	No
Polypropylene glycol monomethacrylate	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 packaging.

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

Proper shipping name: Combustible liquid, n.o.s. (Cyclohexyl methacrylate)
Hazard class or division: Combustible Liquid
Identification number: NA 1993
Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (1,1'-(Methylenedi-p-phenylene)bismaleimide)
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. (1,1'-(Methylenedi-p-phenylene)bismaleimide)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: 1,1'-(Methylenedi-p-phenylene)bismaleimide

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: Immediate Health, Delayed Health, Fire
CERCLA/SARA Section 313: None above reporting de minimis.
CERCLA Reportable quantity: Tert-butyl perbenzoate (CAS# 614-45-9) 100 lbs. (45.4 kg)

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, 8, 9, 11, 14

Prepared by: Product Safety and Regulatory Affairs

Issue date: 04/14/2023

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