

Safety Data Sheet



Revision Number: 005.0

Issue date: 06/19/2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE AA 3491 known as 3491
Light Cure Adhesive
Product type/use: Ultraviolet adhesive
Restriction of Use: None identified
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

IDH number: 142886
Item number: 17944
Region: United States
Contact information:
Telephone: +1 (860) 571-5100
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: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE DAMAGE.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention: Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. 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 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. Take off contaminated clothing.

Storage: Not prescribed

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*
Isobornyl acrylate	5888-33-5	30 - 60
Polyurethane Methacrylate Resin	Unknown	10 - 30
2-Hydroxyethyl methacrylate	868-77-9	5 - 10
Isobornyl methacrylate	7534-94-3	5 - 10
Acrylic acid	79-10-7	1 - 5
Hydroxyalkyl methacrylate	27813-02-1	1 - 5

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Gamma-glycidoxypyril trimethoxysilane	2530-83-8	1 - 5
Ethylene glycol	107-21-1	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 breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get immediate medical attention.
Skin contact:	Immediately wash skin thoroughly with soap and water. Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
Eye contact:	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Keep individual calm. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Water may be unsuitable as an extinguishing media, but may be helpful in keeping adjacent containers cool.
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. Oxides of silicon. Isocyanates. Hydrogen cyanide. Amines. Formaldehyde. 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:	Ensure adequate ventilation. Remove all sources of ignition. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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
Isobornyl acrylate	None	None	None	None
Polyurethane Methacrylate Resin	None	None	None	None
2-Hydroxyethyl methacrylate	None	None	None	None
Isobornyl methacrylate	None	None	None	None
Acrylic acid	2 ppm TWA (SKIN)	None	None	1 ppm TWA 3 ppm STEL (SKIN)
Hydroxyalkyl methacrylate	None	None	None	1 ppm TWA 3 ppm STEL
Gamma-glycidioxypropyl trimethoxysilane	None	None	None	None
Ethylene glycol	25 ppm TWA Vapor fraction 50 ppm STEL Vapor fraction 10 mg/m3 STEL Aerosol, inhalable.	None	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 impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Clear
Odor:	Sharp
Odor threshold:	Not available.
pH:	Not applicable, Product reacts with water.
Vapor pressure:	< 10 mm hg (24 °C (75.2 °F))
Boiling point/range:	> 148.0 °C (> 298.4 °F)
Melting point/ range:	Not applicable, Product is a liquid
Specific gravity:	1.02
Vapor density:	1 20 °C
Flash point:	> 93 °C (> 199.4 °F)
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:	Slight
Partition coefficient (n-octanol/water):	Not available.
VOC content:	1.65 %; 16.83 g/l ASTM D5403 Process volatiles 0.36 %; 3.67 g/l (potential) 2.01 %; 20.50 g/l (total)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	May occur.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Oxides of silicon. Isocyanates. Hydrogen cyanide. Amines. Formaldehyde. Irritating organic vapours.
Incompatible materials:	Strong oxidizing agents. Strong reducing agents. Water. Humid air.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Direct sunlight. Ultraviolet radiation. Freezing conditions. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation:	May cause respiratory tract irritation.
Skin contact:	Causes skin burns. May cause allergic skin reaction.
Eye contact:	Causes serious eye damage.
Ingestion:	May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Isobornyl acrylate	None	Irritant, Allergen
Polyurethane Methacrylate Resin	None	Irritant, Allergen
2-Hydroxyethyl methacrylate	Oral LD50 (Rat) = 11.2 g/kg Oral LD50 (Rat) = 5,050 mg/kg	Irritant, Allergen
Isobornyl methacrylate	None	Irritant, Allergen
Acrylic acid	Oral LD50 (Rat) = 33.5 mg/kg Oral LD50 (Mouse) = 2,400 mg/kg Oral LD50 (Rat) = 2.5 g/kg Oral LD50 (Rat) = 193 mg/kg Oral LD50 (Rat) = 1,250 mg/kg Inhalation LC50 (Rat, 4 h) = 3.6 mg/l Inhalation LC50 (Rat, 4 h) = > 3.9 - < 4.8 mg/l Inhalation LC50 (Rat, 4 h) = > 5.1 mg/l	Allergen, Corrosive, Irritant, Kidney, Liver
Hydroxyalkyl methacrylate	None	Irritant, Allergen
Gamma-glycidoxypentyl trimethoxysilane	Inhalation LC50 (Rat, 4 h) = > 5.3 mg/l	Allergen, Irritant
Ethylene glycol	Oral LD50 (Rat) = 5.89 g/kg Oral LD50 (Mouse) = 14.6 g/kg Dermal LD50 (Rabbit) = 9,530 mg/kg	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Isobornyl acrylate	No	No	No
Polyurethane Methacrylate Resin	No	No	No
2-Hydroxyethyl methacrylate	No	No	No
Isobornyl methacrylate	No	No	No
Acrylic acid	No	No	No
Hydroxyalkyl methacrylate	No	No	No
Gamma-glycidoxypentyl trimethoxysilane	No	No	No
Ethylene glycol	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:	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. (Isobornyl acrylate)
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. (Isobornyl acrylate)
Hazard class or division:	9
Identification number:	UN 3082
Packing group:	III
Marine pollutant:	Isobornyl acrylate

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
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). Acrylic acid (CAS# 79-10-7).
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/NDSL 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.
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16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 2, 3, 7, 8, 9, 11

Prepared by: Product Safety and Regulatory Affairs

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