



Revision Number: 010.0

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1. IDENTIFICATION

Product name: LOCTITE AA 3971 LIGHT CURE MED. DEV. ADH. known as 3971 Light Cure Medical Device
Product type/Recommended use: Ultraviolet adhesive
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 444350
Item number: 36792
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
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 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: DO NOT SPRAY. DO NOT HEAT.
 H227 - COMBUSTIBLE LIQUID.
 H302+H312 - HARMFUL IF SWALLOWED OR IN CONTACT WITH SKIN.
 H314 - CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
 H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.
 H360 - MAY DAMAGE FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	4
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY DERMAL	4
SKIN CORROSION	1
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1
REPRODUCTIVE TOXICITY	1B

PICTOGRAM(S)



Precautionary Statements

Prevention: P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P210 - Keep away from heat, sparks, open flames, hot surfaces - no smoking.
 P261 - Avoid breathing mist/vapours.
 P264 - Wash affected area thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P272 - Contaminated work clothing should not be allowed out of the workplace.
 P280 - Wear protective gloves, clothing, eye and face protection.

Response: P301+P312+P330 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
 P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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Storage: 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.
 P370+P378 - In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.
Disposal: P403 - Store in a well-ventilated place.
 P405 - Store locked up.
 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 %*
Urethane acrylate oligomer		10 - 30
N,N-Dimethylacrylamide	2680-03-7	10 - 30
Isobornyl acrylate	5888-33-5	10 - 30
Acrylate ester	2399-48-6	5 - 10
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] and a,a',a"-1,2,3-propanetriyltris[	73324-00-2	5 - 10
2-Propenoic acid, homopolymer (oligomers)	9003-01-4	5 - 10
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	1 - 5
Acrylate ester	7328-17-8	1 - 5
2-Propenoic acid, 2-carboxyethyl ester	24615-84-7	1 - 5
Diacrylate ester	42978-66-5	1 - 5
Gamma-glycidoxypropyl trimethoxysilane	2530-83-8	1 - 5
Acrylic acid	79-10-7	1 - 5
2-Hydroxyethyl acrylate	818-61-1	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

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:	Immediately wash skin thoroughly with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get immediate 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:	Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers. In case of fire, keep containers cool with water spray.
Hazardous combustion products:	Oxides of carbon, oxides of nitrogen, irritating organic vapors. Oxides of silicon. Formaldehyde.

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. DO NOT heat or spray. Use only in area provided with appropriate exhaust ventilation. Refer to Section 8.
Storage:	For safe storage, store at or below 26 °C (78.8 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Protect from direct sunlight. Maintain head space in storage containers to support oxygen requirements of the inhibitor(s).

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
N,N-Dimethylacrylamide	None	None	None	0.1 mg/m ³ TWA (Skin) 0.025 ppm TWA (Skin)
Acrylic acid	2 ppm TWA (SKIN)	None	None	1 ppm TWA 3 ppm STEL (SKIN)

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). 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Transparent, Light yellow
Odor:	Mild
Odor threshold:	Not available.
pH:	5.1 - 5.5
Vapor pressure:	< 7 hPa (20 °C (68°F))
Boiling point/range:	> 149 °C (> 300.2 °F) Decomposes > 140°C (284°F).
Melting point/ range:	Not applicable, Product is a liquid
Density/Relative density:	1.0994
Relative vapor density:	> 1 20 °C
Flash point:	73.9 °C (165.02 °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:	Slight Water
Partition coefficient n-octanol/water (logarithmic value):	Not available.
VOC content:	0.40 %; 4.40 g/l (process) 0.32 %; 3.52 g/l (potential) 0.72 %; 7.92 g/l (total) (ASTM D5403)
Dynamic viscosity:	Not available.
Kinematic viscosity:	200 - 425 mm ² /s
Particle characteristics:	Not applicable, Product is a liquid
Decomposition temperature:	> 100 °C

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	May occur with excessive aging, excessive heat, polymerization catalyst, inhibitor depletion, direct sunlight and under oxygen-free atmospheres.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Oxides of silicon. Formaldehyde. Irritating organic vapours.
Incompatible materials:	Strong oxidizing agents. Strong reducing agents. Acids and bases. Amines. Peroxides. Free radical initiators. Other polymerization initiators. Inert gases. Oxygen scavengers. Reactive metals.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Avoid temperatures above 26°C (80°F). Store away from incompatible materials. Loss of polymerization inhibitor. Loss of dissolved air.

11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects/Symptoms

Inhalation:	May cause respiratory tract irritation. Modified acrylamide is harmful if inhaled. DO NOT heat or spray as this increases the inhalation hazard.
Skin contact:	Causes skin burns. May cause allergic skin reaction. Harmful in contact with skin. Modified acrylamide may be absorbed through skin in harmful amounts.
Eye contact:	Causes serious eye damage.
Ingestion:	Not expected under normal conditions of use. May cause gastrointestinal tract irritation if swallowed. Modified acrylamide is harmful if swallowed.

Hazardous Component(s)	LD50s and LC50s
Urethane acrylate oligomer	None
N,N-Dimethylacrylamide	None
Isobornyl acrylate	None
Acrylate ester	None
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] and a,a',a''-1,2,3-propanetriyltris[	None
2-Propenoic acid, homopolymer (oligomers)	None
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	None
Acrylate ester	None
2-Propenoic acid, 2-carboxyethyl ester	None
Diacrylate ester	None
Gamma-glycidoxypropyl trimethoxysilane	Inhalation LC50 (Rat, 4 h) = > 5.3 mg/l
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
2-Hydroxyethyl acrylate	None

Hazardous Component(s)	Immediate Health Effects	Delayed Health Effects	Chronic Health Effects
Urethane acrylate oligomer	Irritant	Allergen	
N,N-Dimethylacrylamide	Irritant		Eyes Mutagen Kidney
Isobornyl acrylate	Irritant	Allergen	
Acrylate ester	Irritant	Allergen	
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] and a,a',a''-1,2,3-propanetriyltris[			
2-Propenoic acid, homopolymer (oligomers)			
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
Acrylate ester	Irritant	Allergen	
2-Propenoic acid, 2-carboxyethyl ester	Irritant		
Diacrylate ester	Irritant	Allergen	Eyes
Gamma-glycidoxypropyl trimethoxysilane	Irritant	Allergen	
Acrylic acid	Corrosive Irritant	Allergen	Kidney Liver
2-Hydroxyethyl acrylate	Irritant	Allergen	Central nervous system Heart Kidney Liver Lung Some evidence of carcinogenicity Spleen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Urethane acrylate oligomer	No	No	No
N,N-Dimethylacrylamide	No	No	No

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Isobornyl acrylate	No	No	No
Acrylate ester	No	No	No
2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane] and a,a',a"-1,2,3-propanetriyltris[	No	No	No
2-Propenoic acid, homopolymer (oligomers)	No	No	No
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	No	No	No
Acrylate ester	No	No	No
2-Propenoic acid, 2-carboxyethyl ester	No	No	No
Diacrylate ester	No	No	No
Gamma-glycidoxypolypropyl trimethoxysilane	No	No	No
Acrylic acid	No	No	No
2-Hydroxyethyl acrylate	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. (Modified Acrylamide, Acrylic acid)
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. (Isobornyl acrylate, 2-Carboxyethyl 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, 2-Carboxyethyl acrylate)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Isobornyl acrylate, 2-Carboxyethyl 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: 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). Acrylate ester (CAS# 7328-17-8). Acrylic acid (CAS# 79-10-7).

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: 2,3,7,8,9,10,11,13,15

Prepared by: Product Safety and Regulatory Affairs

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