



Revision Number: 008.0

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**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product name:** LOCTITE AA 3971 LIGHT CURE MED. DEV. ADH. known as 3971 Light Cure Medical Device  
**IDH number:** 444350  
**Product type:** Ultraviolet adhesive  
**Item number:** 36792  
**Restriction of Use:** None identified  
**Region:** United States  
**Company address:**  
 Henkel Corporation  
 One Henkel Way  
 Rocky Hill, Connecticut 06067  
**Contact information:**  
 Telephone: (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:** DO NOT SPRAY. DO NOT HEAT.  
 COMBUSTIBLE LIQUID.  
 HARMFUL IF SWALLOWED OR IN CONTACT WITH SKIN.  
 CAUSES SKIN IRRITATION.  
 MAY CAUSE AN ALLERGIC SKIN REACTION.  
 CAUSES SERIOUS EYE DAMAGE.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	4
ACUTE TOXICITY ORAL	4
ACUTE TOXICITY DERMAL	4
SKIN IRRITATION	2
SERIOUS EYE DAMAGE	1
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 thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.

**Response:**

If SWALLOWED: Immediately call poison control or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Immediately call a poison control center or physician. Rinse mouth. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

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Product name: LOCTITE AA 3971 LIGHT CURE MED. DEV. ADH. known as 3971 Light Cure Medical Device

**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.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Urethane acrylate oligomer	Unknown	10 - 30
N,N-Dimethylacrylamide	2680-03-7	10 - 30
Acrylate monomer	Proprietary	10 - 30
Acrylate ester	Proprietary	5 - 10
Urethane Acrylate	Proprietary	5 - 10
Substituted acrylic acid	Proprietary	1 - 5
Acrylic acid oligomers	Unknown	1 - 5
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	75980-60-8	1 - 5
Acrylate ester	7328-17-8	1 - 5
Substituted silane	Proprietary	1 - 5
Acrylic acid	79-10-7	1 - 5
Diacrylate ester	Proprietary	1 - 5
Acrylate	Proprietary	0.1 - 1

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin contact:</b>	Immediately wash skin thoroughly with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.
<b>Eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
<b>Unusual fire or explosion hazards:</b>	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.

## 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
Urethane acrylate oligomer	None	None	None	None
N,N-Dimethylacrylamide	None	None	None	0.1 mg/m <sup>3</sup> TWA (Skin) 0.025 ppm TWA (Skin)
Acrylate monomer	None	None	None	None
Acrylate ester	None	None	None	None
Urethane Acrylate	None	None	None	None
Substituted acrylic acid	None	None	None	None
Acrylic acid oligomers	None	None	None	None
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	None	None	None	None
Acrylate ester	None	None	None	None
Substituted silane	None	None	None	None
Acrylic acid	2 ppm TWA (SKIN)	None	None	1 ppm TWA 3 ppm STEL (SKIN)
Diacylate ester	None	None	None	None
Acrylate	None	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). 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

<b>Physical state:</b>	Liquid
<b>Color:</b>	Transparent, light yellow
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not applicable
<b>Vapor pressure:</b>	< 5 mm hg (20 °C (68°F))
<b>Boiling point/range:</b>	> 149 °C (> 300.2 °F)
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	1.0994
<b>Vapor density:</b>	> 1
<b>Flash point:</b>	73.9 °C (165.02 °F) Pensky Martens closed cup
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Slight
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	0.40 %; 4.40 g/l (process) 0.32 %; 3.52 g/l (potential) 0.72 %; 7.92 g/l (total) (ASTM D5403)
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.
<b>Hazardous decomposition products:</b>	Oxides of carbon. Oxides of nitrogen. Oxides of silicon. Formaldehyde. Irritating organic vapours.
<b>Incompatible materials:</b>	Strong oxidizing agents. Strong reducing agents. Strong bases. copper Amines. Acids. Alkalis. Peroxides. Free radical initiators. Other polymerization initiators.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Heat, flames, sparks and other sources of ignition. Avoid temperatures above 26°C (80°F). Store away from incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

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

**Potential Health Effects/Symptoms**

**Inhalation:** Modified acrylamide is harmful if inhaled. Vapors may cause headaches, nausea, dizziness and respiratory tract irritation. Vapors and mists will irritate nose and throat and possibly eyes. DO NOT heat or spray as this increases the inhalation hazard.

**Skin contact:** Causes skin irritation. 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:** Modified acrylamide is harmful if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Urethane acrylate oligomer	None	Irritant, Allergen
N,N-Dimethylacrylamide	None	Irritant, Eyes, Mutagen, Kidney, Less weight gain and food intake.
Acrylate monomer	None	Irritant, Allergen
Acrylate ester	None	Allergen, Irritant
Urethane Acrylate	None	Irritant, Allergen
Substituted acrylic acid	None	Irritant
Acrylic acid oligomers	None	Irritant, Allergen
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	None	No Records
Acrylate ester	None	Irritant, Allergen
Substituted silane	None	Allergen, Irritant
Acrylic acid	Oral LD50 (RAT) = 33.5 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) = 1,200 mg/l	Allergen, Corrosive, Irritant, Kidney, Liver
Diacrylate ester	None	Irritant, Allergen, Eyes
Acrylate	Derma LD50 (RABBIT) = 1,010 mg/kg	Allergen, Central nervous system, Heart, Irritant, 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
Acrylate monomer	No	No	No
Acrylate ester	No	No	No
Urethane Acrylate	No	No	No
Substituted acrylic acid	No	No	No
Acrylic acid oligomers	No	No	No
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	No	No	No
Acrylate ester	No	No	No
Substituted silane	No	No	No
Acrylic acid	No	No	No
Diacrylate ester	No	No	No
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.  
**Hazardous waste number:** Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

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

### 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 or are exempt from listing on the Toxic Substances Control Act 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:** 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: New Safety Data Sheet format.

**Prepared by:** Catherine Bimler, Regulatory Affairs Specialist

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