



Revision Number: 004.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	3971 Light Cure Medical Device	IDH number:	444350
	Adhesive Visible/UV Cure Fluorescent		
Product type:	Ultraviolet adhesive	Item number:	36792
		Region:	United States
Company address:		Contact information:	
Henkel Corporation		Telephone: 860.571.5100	
1001 Trout Brook Crossing		Emergency telephone: 860.571.5100	
Rocky Hill, Connecticut 06067		Internet: www.henkelna.com	

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Liquid	HMIS:	
Color:	Transparent, Light yellow	HEALTH:	*2
Odor:	Mild	FLAMMABILITY:	2
		PHYSICAL HAZARD:	1
		Personal Protection:	See MSDS Section 8

WARNING: COMBUSTIBLE LIQUID AND VAPOR.
HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN OR INHALED.
DO NOT SPRAY. DO NOT HEAT.
MAY CAUSE ALLERGIC SKIN REACTION.
CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	Modified acrylamide is harmful if inhaled. Causes respiratory tract irritation. Vapors and mists will irritate nose and throat and possibly eyes. Headache. Nausea. DO NOT heat or spray as this increases the inhalation hazard.
Skin contact:	Modified acrylamide may be absorbed through skin in harmful amounts. Toxic. May cause allergic skin reaction. Causes skin irritation.
Eye contact:	Contact with eyes will cause irritation.
Ingestion:	Modified acrylamide is harmful if swallowed. Toxic.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders. Acrylic acid: Respiratory disorders. Lung disease.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Urethane acrylate oligomer	Unknown	10 - 30
Modified acrylamide	2680-03-7	10 - 30
Isobornyl acrylate	5888-33-5	10 - 30
Acrylate ester	2399-48-6	5 - 10
Urethane Acrylate	Unknown	5 - 10
Photoinitiator	Proprietary	1 - 5
Acrylate ester	7328-17-8	1 - 5
Gamma-glycidoxypentyl trimethoxysilane	2530-83-8	1 - 5
Acrylic acid	79-10-7	1 - 5
Diacrylate ester	42978-66-5	1 - 5
Photoinitiator	947-19-3	1 - 5

4. FIRST AID MEASURES

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. If symptoms develop and persist, 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. Keep individual calm. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	73.9 °C (165.02 °F) Pensky Martens closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits - lower:	Not available
Flammable/Explosive limits - upper:	Not available
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.
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. 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:	Ensure adequate ventilation. 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. 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.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

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 components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Urethane acrylate oligomer	None	None	None	None
Modified acrylamide	None	None	None	0.1 mg/m3 TWA (Skin) 0.025 ppm TWA (Skin)
Isobornyl acrylate	None	None	None	None
Acrylate ester	None	None	None	None
Urethane Acrylate	None	None	None	None
Photoinitiator	None	None	None	None
Acrylate ester	None	None	None	None
Gamma-glycidoxypopyl trimethoxysilane	None	None	None	None
Acrylic acid	2 ppm TWA (SKIN)	None	None	1 ppm TWA 3 ppm STEL (SKIN)
Diacrylate ester	None	None	None	None
Photoinitiator	None	None	None	None

Engineering controls:

Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational 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. Wear chemical goggles; face shield (if splashing is possible).

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:

Transparent, Light yellow

Odor:

Mild

Odor threshold:

Not available

pH:

Not applicable

Vapor pressure:

< 5 mm hg (20 °C (68°F))

Boiling point/range:

> 149 °C (> 300.2 °F)

Melting point/ range:

Not available

Specific gravity:

1.0994

Vapor density:

> 1

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
Evaporation rate: Not available
Solubility in water: Slight
Partition coefficient (n-octanol/water): 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)

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. Formaldehyde.
Incompatible materials: Strong oxidizing agents. Strong reducing agents. Strong bases. Copper Amines. Acids. Alkalis. Peroxides. Free radical initiators. Other polymerization initiators.
Conditions to avoid: Keep away from heat, spark and flame. Avoid temperatures above 26°C (80°F). Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: Modified acrylamide LD50 (rat) 316 mg/kg
Acute dermal product toxicity: Modified acrylamide LD50 (rabbit) 518 mg/kg
Acute inhalation product toxicity: Modified acrylamide LC50 (rat) 1 h > 776 ppm (vapor)

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Urethane acrylate oligomer	No	No	No
Modified acrylamide	No	No	No
Isobornyl acrylate	No	No	No
Acrylate ester	No	No	No
Urethane Acrylate	No	No	No
Photoinitiator	No	No	No
Acrylate ester	No	No	No
Gamma-glycidioxypropyl trimethoxysilane	No	No	No
Acrylic acid	No	No	No
Diacrylate ester	No	No	No
Photoinitiator	No	No	No

Hazardous components	Health Effects/Target Organs
Urethane acrylate oligomer	Irritant, Allergen
Modified acrylamide	Irritant, Eyes, Mutagen, Kidney, Less weight gain and food intake.
Isobornyl acrylate	Irritant, Allergen
Acrylate ester	Allergen, Irritant
Urethane Acrylate	Irritant, Allergen
Photoinitiator	No Records
Acrylate ester	Irritant, Allergen
Gamma-glycidioxypropyl trimethoxysilane	Irritant, Allergen
Acrylic acid	Allergen, Corrosive, Irritant, Kidney, Liver
Diacrylate ester	Irritant, Allergen, Eyes
Photoinitiator	No Records

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.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classification in this section are for bulk packaging only. Shipping classification may be different for non-bulk packaging as exceptions may apply. Refer to shipping documents for package specific transportation classification.

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

Water Transportation (IMO/IMDG)

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

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 minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
CERCLA/SARA 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.
WHMIS hazard class: B.3, D.1.B, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format. 2-5, 8-11, 14-15

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