Material Safety Data Sheet

Revision Number: 004.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **3972 Light Cure Medical Device Adhesive Visible/UV Cure Fluorescent**
Product type: Ultraviolet adhesive

IDH number: 423299
Item number: 36295
Region: United States

Company address:
Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state:	Liquid	**HEALTH:**	*2
Color:	Transparent, Light yellow	**FLAMMABILITY:**	2
Odor:	Mild	**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. Vapors and mists will irritate nose and throat and possibly eyes. Causes respiratory tract irritation. 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.

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	30 - 60
Modified acrylamide	2680-03-7	10 - 30
Acrylate monomer	Proprietary	10 - 30
Urethane Acrylate Prepolymer	Unknown	5 - 10
Diacrylate ester	Proprietary	5 - 10
Acrylate ester	7328-17-8	1 - 5
Photoinitiator	Proprietary	1 - 5
Gamma-glycidoxypropyl trimethoxysilane	2530-83-8	1 - 5
Photoinitiator	Proprietary	1 - 5
Acrylic acid	79-10-7	1 - 5
Hydroquinone	123-31-9	0.1 - 1
Ethylene glycol	107-21-1	0.1 - 1

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, 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. If symptoms develop and persist, get medical attention.

Eye contact: Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get immediate medical attention.

Ingestion: Do not induce vomiting. Keep individual calm. Never give anything by mouth to an unconscious person. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash point: 85 °C (185°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. Oxides of phosphorus. 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: Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. 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.

7. HANDLING AND STORAGE

Handling: 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 with adequate ventilation. Refer to Section 8. Use only in area provided with appropriate exhaust ventilation.

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)
Acrylate monomer	None	None	None	None
Urethane Acrylate Prepolymer	None	None	None	None
Diacrylate ester	None	None	None	None
Acrylate ester	None	None	None	None
Photoinitiator	None	None	None	None
Gamma-glycidoxypropyl trimethoxysilane	None	None	None	None
Photoinitiator	None	None	None	None
Acrylic acid	2 ppm TWA (SKIN)	None	None	1 ppm TWA 3 ppm STEL (SKIN)
Hydroquinone	1 mg/m3 TWA (Sensitizer.)	2 mg/m3 TWA	None	None
Ethylene glycol	100 mg/m3 Ceiling Aerosol.	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 (68 °F (20°C))
Boiling point/range:	> 300 °F (> 148.9 °C)
Melting point/ range:	Not available
Specific gravity:	1.0994
Vapor density:	> 1
Flash point:	85 °C (185°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

Hazardous reactions: May occur.

Hazardous decomposition products: Oxides of carbon. Oxides of nitrogen. Oxides of phosphorus. Oxides of silicon. Formaldehyde.

Incompatible materials: Strong oxidizing agents. Reducing agents. Acids. Strong bases. Amines. Alkalis. Copper. Copper alloys. Carbon steel. Rust. Peroxides. Free radical initiators. Other polymerization initiators.

Conditions to avoid: Avoid temperatures above 26°C (80°F). Keep away from heat, ignition sources and 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
Acrylate monomer	No	No	No
Urethane Acrylate Prepolymer	No	No	No
Diacrylate ester	No	No	No
Acrylate ester	No	No	No
Photoinitiator	No	No	No
Gamma-glycidoxypropyl trimethoxysilane	No	No	No
Photoinitiator	No	No	No
Acrylic acid	No	No	No
Hydroquinone	No	No	No
Ethylene glycol	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.
Acrylate monomer	Irritant, Allergen
Urethane Acrylate Prepolymer	Irritant, Allergen
Diacrylate ester	Irritant, Allergen, Eyes
Acrylate ester	Irritant, Allergen
Photoinitiator	No Records
Gamma-glycidoxypropyl trimethoxysilane	Irritant, Allergen
Photoinitiator	No Records
Acrylic acid	Allergen, Corrosive, Irritant, Kidney, Liver
Hydroquinone	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Immune system, Irritant, Liver, Mutagen, Skin, Thyroid
Ethylene glycol	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic

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: Hydroquinone (CAS# 123-31-9).
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.

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.A, 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. 1, 2, 3, 4, 5, 8, 11, 15

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