



Revision Number: 010.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE AA 3321 UV CURING ADHESIVE Loctite(R) 3321 Light Cure Med	IDH number:	135300
Product type/use:	Ultraviolet adhesive	Item number:	19740
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	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.
SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.

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
REPRODUCTIVE TOXICITY	2

PICTOGRAM(S)



Precautionary Statements

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, hot surfaces - no smoking. Avoid breathing vapors, mist, or spray. Wash affected area 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, clothing, eye and face protection.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. 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.

Storage:

Store in a well-ventilated place. Keep cool. Store locked up.

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
N,N-Dimethylacrylamide	2680-03-7	10 - 30
Photoinitiator	24650-42-8	1 - 5
Gamma-glycidoxypopyl trimethoxysilane	2530-83-8	1 - 5
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	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

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, 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.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
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. Toxic and irritating vapors. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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:	Remove all sources of ignition. 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.

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
N,N-Dimethylacrylamide	None	None	None	0.1 mg/m3 TWA (Skin) 0.025 ppm TWA (Skin)
Photoinitiator	None	None	None	None
Gamma-glycidioxypropyl trimethoxysilane	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction. 3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	20 MPPCF TWA 0.8 mg/m3 TWA 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust. 15 MPPCF TWA Respirable fraction.	None	None
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	None	None	None	None
2-Hydroxyethyl acrylate	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. Full face protection should be used if the potential for splashing or spraying of product exists.

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, Slightly Hazy

Odor:

Mild

Odor threshold:

Not available.

pH:

Not applicable

Vapor pressure:

< 5 mm hg (20 °C (68°F))

Boiling point/range:

Not available.

Melting point/ range:

Not available.

Specific gravity:

1.078

Vapor density:

> 1

Flash point:

77.8 °C (172.04 °F)

Flammable/Explosive limits - lower:

Not available.

Flammable/Explosive limits - upper:

Not available.

Autoignition temperature:

Not available.

Flammability:

Not applicable

Evaporation rate:

Not available.

IDH number: 135300

Product name: LOCTITE AA 3321 UV CURING ADHESIVE Loctite(R) 3321 Light Cure Med

Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available.
VOC content: 2.16 %; 23.28 g/l (process)
 1.05 %; 11.32 g/l (potential)
 3.21 %; 34.60 g/l (total)
 (ASTM D5403)
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. Irritating organic vapours. Isocyanates. Hydrogen cyanide. Amines.
Incompatible materials: Strong oxidizing agents. Strong acids. Strong bases. Amines. Alkalis. Peroxides. Free radical initiators.
Reactivity: Not available.
Conditions to avoid: Keep away from heat, spark and flame. Avoid temperatures above 26°C (80°F). Store away from incompatible materials. Direct sunlight. Ultraviolet radiation. Freezing conditions.

11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects/Symptoms

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: Causes skin irritation. May cause allergic skin reaction. 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
Isobornyl acrylate	None	Irritant, Allergen
N,N-Dimethylacrylamide	None	Irritant, Eyes, Mutagen, Kidney, Less weight gain and food intake.
Photoinitiator	None	No Target Organs
Gamma-glycidoxypropyl trimethoxysilane	Inhalation LC50 (Rat, 4 h) = > 5.3 mg/l	Allergen, Irritant
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	None	No Records
2-Hydroxyethyl acrylate	Dermal 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)
Isobornyl acrylate	No	No	No
N,N-Dimethylacrylamide	No	No	No
Photoinitiator	No	No	No
Gamma-glycidoxypropyl trimethoxysilane	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	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: 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 package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Combustible liquid, n.o.s. (Modified Acrylamide)
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. (2,2-Dimethoxy-1,2-diphenylethan-1-one, 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. (2,2-Dimethoxy-1,2-diphenylethan-1-one, Isobornyl acrylate)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: 2,2-Dimethoxy-1,2-diphenylethan-1-one, 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, Fire
CERCLA/SARA Section 313: None above reporting de minimis.
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/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 8, 11, 13, 15

Prepared by: Product Safety and Regulatory Affairs

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