



Revision Number: 002.1

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1. PRODUCT AND COMPANY IDENTIFICATION

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|-------------------------------|--|---------------------|---------------|
| Product name: | LOCTITE® 416™ INSTANT ADHESIVE SUPERBONDER® | IDH number: | 209589 |
| Product type: | Cyanoacrylate | Item number: | 41661 |
| | | Region: | United States |
| Company address: | Contact information: | | |
| Henkel Corporation | Telephone: 860.571.5100 | | |
| One Henkel Way | Emergency telephone: 860.571.5100 | | |
| Rocky Hill, Connecticut 06067 | Internet: www.henkelna.com | | |

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

| | | | |
|------------------------|-----------------|-----------------------------|--------------------|
| Physical state: | Liquid | HMIS: | |
| Color: | Clear colorless | HEALTH: | 2 |
| Odor: | Irritating | FLAMMABILITY: | 2 |
| | | PHYSICAL HAZARD: | 1 |
| | | Personal Protection: | See MSDS Section 8 |

WARNING: COMBUSTIBLE LIQUID AND VAPOR.
BONDS SKIN IN SECONDS.
MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.

Skin contact: Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin. Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare.

Eye contact: Irritating to eyes. Causes excessive tearing. Eyelids may bond.

Ingestion: Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

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 | % |
|-----------------------|-------------|----------|
| Ethyl 2-cyanoacrylate | 7085-85-0 | 60 - 100 |
| Thickener | Proprietary | 10 - 30 |

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

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| Skin contact: | Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force. |
| Eye contact: | Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage. |
| Ingestion: | Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass. |
| Notes to physician: | Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed. |

5. FIRE FIGHTING MEASURES

| | |
|--|---|
| Flash point: | 80 - 93.3 °C (176°F - 199.94 °F) Tagliabue closed cup |
| Autoignition temperature: | 485 °C (905°F) |
| Flammable/Explosive limits - lower: | Not determined |
| Flammable/Explosive limits - upper: | Not determined |
| Extinguishing media: | Water spray (fog), foam, dry chemical or carbon dioxide. |
| Special firefighting procedures: | Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. |
| Unusual fire or explosion hazards: | None |
| Hazardous combustion products: | Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended. |

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

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| Environmental precautions: | Ventilate area. |
| Clean-up methods: | Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste. |

7. HANDLING AND STORAGE

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| Handling: | Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. |
|------------------|--|

Storage:

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 |
|-----------------------|-------------|----------|-----------|-------|
| Ethyl 2-cyanoacrylate | 0.2 ppm TWA | None | None | None |
| Thickener | None | None | None | None |

Engineering controls:

Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Use an organic vapor respirator for concentrations exceeding the Occupational Exposure Limit.

Eye/face protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|---|
| Physical state: | Liquid |
| Color: | Clear colorless |
| Odor: | Irritating |
| Odor threshold: | 1 - 2 ppm |
| pH: | Not applicable |
| Vapor pressure: | < 0.5 mm hg (77 °F (25°C)) |
| Boiling point/range: | > 212 °F (> 100°C) |
| Melting point/ range: | Not determined |
| Specific gravity: | 1.1 at 68 °F (20°C) |
| Vapor density: | 3 Approximately |
| Flash point: | 80 - 93.3 °C (176°F - 199.94 °F) Tagliabue closed cup |
| Flammable/Explosive limits - lower: | Not determined |
| Flammable/Explosive limits - upper: | Not determined |
| Autoignition temperature: | 485 °C (905°F) |
| Evaporation rate: | Not available |
| Solubility in water: | Polymerises in presence of water. |
| Partition coefficient (n-octanol/water): | Not determined |
| VOC content: | < 2 %; < 20 g/l (California SCAQMD Method 316B) (Estimated) |

10. STABILITY AND REACTIVITY

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| Stability: | Stable under recommended storage conditions. |
| Hazardous reactions: | Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols. |
| Hazardous decomposition products: | None |
| Incompatible materials: | Water, amines, alkalis and alcohols. |
| Conditions to avoid: | Spontaneous polymerization. |

11. TOXICOLOGICAL INFORMATION

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| Acute oral product toxicity: | LD50 (rat) > 5,000 mg/kg (Estimated) |
| Acute dermal product toxicity: | LD50 (rabbit) > 2,000 mg/kg (Estimated) |

| Hazardous components | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|-----------------------|----------------|-----------------|---|
| Ethyl 2-cyanoacrylate | No | No | No |
| Thickener | No | No | No |

| Hazardous components | Health Effects/Target Organs |
|-----------------------|---------------------------------|
| Ethyl 2-cyanoacrylate | Irritant, Allergen, Respiratory |
| Thickener | Irritant |

12. ECOLOGICAL INFORMATION

Ecological information: Not known.

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

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

Proper shipping name: Combustible liquid, n.o.s. (Cyanoacrylate ester)
Hazard class or division: Combustible Liquid
Identification number: NA 1993
Packing group: III
Exceptions: Unrestricted, (Not more than 450 Liters)

International Air Transportation (ICAO/IATA)

Proper shipping name: Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
Hazard class or division: 9
Identification number: UN 3334
Packing group: None
Exceptions: Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

Water Transportation (IMO/MDG)

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: Fire, Reactive, Delayed Health, Immediate Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

WHMIS hazard class:

B.3, 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.

Prepared by: Kyra Kozak Woods, Manager, Regulatory Affairs

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