



Revision Number: 003.1

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## 1. PRODUCT AND COMPANY IDENTIFICATION

|                                                                                                                                                                                    |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product name:</b><br><b>Product type/use:</b><br><b>Restriction of Use:</b><br><b>Company address:</b><br>Henkel Corporation<br>One Henkel Way<br>Rocky Hill, Connecticut 06067 | <b>LOCTITE 499 THER. CYCLING RESIST. ADH. known as 499(TM) Super Bonder® Thermal</b><br>Cyanoacrylate<br>None identified | <b>IDH number:</b><br><b>Item number:</b><br><b>Region:</b><br><b>Contact information:</b><br>Telephone: +1 (860) 571-5100<br>MEDICAL EMERGENCY Phone: Poison Control Center<br>1-877-671-4608 (toll free) or 1-303-592-1711<br>TRANSPORT EMERGENCY Phone: CHEMTREC<br>1-800-424-9300 (toll free) or 1-703-527-3887<br>Internet: www.henkelna.com |
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## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**WARNING:** BONDS SKIN IN SECONDS.  
 COMBUSTIBLE LIQUID.  
 CAUSES EYE IRRITATION.  
 MAY CAUSE RESPIRATORY IRRITATION.

| HAZARD CLASS                                     | HAZARD CATEGORY |
|--------------------------------------------------|-----------------|
| FLAMMABLE LIQUID                                 | 4               |
| EYE IRRITATION                                   | 2B              |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE | 3               |

### PICTOGRAM(S)



### Precautionary Statements

#### Prevention:

Keep away from heat, sparks, open flames, hot surfaces - no smoking. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

#### Response:

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 eye irritation persists: Get medical attention. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

#### Storage:

Store in a well-ventilated place. Keep container tightly closed. 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.**

IDH number: 135471

Product name: LOCTITE 499 THER. CYCLING RESIST. ADH. known as 499(TM) Super Bonder® Thermal

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s)                                        | CAS Number | Percentage* |
|---------------------------------------------------------------|------------|-------------|
| Ethyl 2-cyanoacrylate                                         | 7085-85-0  | 80 - 100    |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 | 5 - 10      |

\* Exact percentages may vary or are 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. If symptoms develop and persist, get medical attention.                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Skin contact:</b>       | 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.                                                                                                                                                      |
| <b>Eye contact:</b>        | 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. |
| <b>Ingestion:</b>          | 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.                                                                                                                                                                                                                                                                          |
| <b>Symptoms:</b>           | See Section 11.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Notes to physician:</b> | 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

|                                           |                                                                                                                               |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Extinguishing media:</b>               | Water spray (fog), foam, dry chemical or carbon dioxide.                                                                      |
| <b>Special firefighting procedures:</b>   | Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. |
| <b>Unusual fire or explosion hazards:</b> | None                                                                                                                          |
| <b>Hazardous combustion products:</b>     | 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.

|                                   |                                                                                                                                                                                                                                                   |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental precautions:</b> | Do not allow product to enter sewer or waterways. Ventilate area.                                                                                                                                                                                 |
| <b>Clean-up methods:</b>          | 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. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. |

## 7. HANDLING AND STORAGE

|                  |                                                                                                                                                                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling:</b> | Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after 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. |
| <b>Storage:</b>  | 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 |
|---------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------|-------|
| Ethyl 2-cyanoacrylate                                         | 1 ppm STEL<br>0.2 ppm TWA<br>(Respiratory sensitization)<br>(Dermal sensitization) | None                                                            | None      | None  |
| Siloxanes and Silicones, di-Me, reaction products with silica | 10 mg/m3 TWA<br>Inhalable dust.<br>3 mg/m3 TWA<br>Respirable fraction.             | 15 mg/m3 TWA Total dust.<br>5 mg/m3 TWA<br>Respirable fraction. | None      | None  |

|                                |                                                                                                                                                       |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering controls:</b>   | Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits. |
| <b>Respiratory protection:</b> | Use NIOSH approved respirator if there is potential to exceed exposure limit(s).                                                                      |
| <b>Eye/face protection:</b>    | Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. |
| <b>Skin protection:</b>        | Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.                                                       |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                                 |                                                                              |
|-------------------------------------------------|------------------------------------------------------------------------------|
| <b>Physical state:</b>                          | Gel, Liquid                                                                  |
| <b>Color:</b>                                   | Colorless, Straw                                                             |
| <b>Odor:</b>                                    | Sharp, Irritating                                                            |
| <b>Odor threshold:</b>                          | 1 - 2 ppm                                                                    |
| <b>pH:</b>                                      | Not applicable, Product reacts with water.                                   |
| <b>Vapor pressure:</b>                          | < 0.2 mm hg < 0.3 mbar < 700 mbar (50 °C (122°F)) no method / method unknown |
| <b>Boiling point/range:</b>                     | > 149 °C (> 300.2 °F)None                                                    |
| <b>Melting point/ range:</b>                    | Not applicable, Product is a liquid                                          |
| <b>Specific gravity:</b>                        | 1.1 at 75 °F (23.89 °C)                                                      |
| <b>Vapor density:</b>                           | 3 20 °C                                                                      |
| <b>Flash point:</b>                             | 80 - 93 °C (176°F - 199.4 °F) Tagliabue closed cup                           |
| <b>Flammable/Explosive limits - lower:</b>      | Not available.                                                               |
| <b>Flammable/Explosive limits - upper:</b>      | Not available.                                                               |
| <b>Autoignition temperature:</b>                | 485 °C (905°F)                                                               |
| <b>Flammability:</b>                            | The product is not flammable.                                                |
| <b>Evaporation rate:</b>                        | Not available.                                                               |
| <b>Solubility in water:</b>                     | Polymerises in presence of water.                                            |
| <b>Solubility in water:</b>                     | Soluble                                                                      |
| <b>Partition coefficient (n-octanol/water):</b> | Not available.                                                               |
| <b>VOC content:</b>                             | < 2 %; < 20 g/l (California SCAQMD Method 316B) (Estimated)                  |
| <b>Viscosity:</b>                               | 100,000 - 300,000 mPa.s                                                      |
| <b>Decomposition temperature:</b>               | Not available.                                                               |

## 10. STABILITY AND REACTIVITY

|                                          |                                                                                                                                                                                                                                                                                                          |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Stability:</b>                        | Stable under recommended storage conditions.                                                                                                                                                                                                                                                             |
| <b>Hazardous reactions:</b>              | Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols. Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols. Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols. |
| <b>Hazardous decomposition products:</b> | None                                                                                                                                                                                                                                                                                                     |
| <b>Incompatible materials:</b>           | Water, amines, alkalis and alcohols.                                                                                                                                                                                                                                                                     |
| <b>Reactivity:</b>                       | Not available.                                                                                                                                                                                                                                                                                           |
| <b>Conditions to avoid:</b>              | Spontaneous polymerization.                                                                                                                                                                                                                                                                              |

## 11. TOXICOLOGICAL INFORMATION

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

### Potential Health Effects/Symptoms

|                      |                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation:</b>   | May cause respiratory tract irritation. Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.                                                                                                                                                                             |
| <b>Skin contact:</b> | May cause skin irritation. Bonds skin in seconds. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. 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. |
| <b>Eye contact:</b>  | Irritating to eyes. Causes excessive tearing. Eyelids may bond.                                                                                                                                                                                                                                                                                                                      |
| <b>Ingestion:</b>    | Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.                                                                                                                                                                                                                                                    |

| Hazardous Component(s)                                        | LD50s and LC50s | Immediate and Delayed Health Effects |
|---------------------------------------------------------------|-----------------|--------------------------------------|
| Ethyl 2-cyanoacrylate                                         | None            | Irritant, Allergen, Respiratory      |
| Siloxanes and Silicones, di-Me, reaction products with silica | None            | No Data                              |

| Hazardous Component(s)                                        | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|---------------------------------------------------------------|----------------|-----------------|------------------------------------------|
| Ethyl 2-cyanoacrylate                                         | No             | No              | No                                       |
| Siloxanes and Silicones, di-Me, reaction products with silica | No             | No              | No                                       |

## 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.

### 14. TRANSPORT INFORMATION

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

#### 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

#### 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:** III  
**Exceptions:** Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

#### 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 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, Reactive  
**CERCLA/SARA Section 313:** None above reporting de minimis.

**California Proposition 65:** 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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