



Revision Number: 001.2

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**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product name:</b> LOCTITE 4601	<b>IDH number:</b> 229811
<b>Product type/use:</b> Cyanoacrylate	<b>Item number:</b> 18693
<b>Restriction of Use:</b> None identified	<b>Region:</b> United States
<b>Company address:</b> Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	<b>Contact information:</b> Telephone: +1 (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 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.henkeln.com

**2. HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW	
WARNING:	BONDS SKIN IN SECONDS. COMBUSTIBLE LIQUID. CAUSES EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	4
EYE IRRITATION	2B

PICTOGRAM(S)
None

**Precautionary Statements**

<b>Prevention:</b>	Keep away from heat, sparks, open flames, hot surfaces - no smoking. Wash affected area thoroughly after handling. Wear protective gloves, eye protection, and face protection.
<b>Response:</b>	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.
<b>Storage:</b>	Store in a well-ventilated place. Keep cool.
<b>Disposal:</b>	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*
Beta-Methoxyethyl Cyanoacrylate	27816-23-5	80 - 100

\* 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 symptoms persist, seek medical advice. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel.
<b>Skin contact:</b>	Rinse with running water and soap. Do not pull bonded skin apart. It may be gently peeled apart using a blunt object such as a spoon, preferably after soaking in warm soapy water. If lips are accidentally stuck together apply warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action. If symptoms develop and persist, get medical attention.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention immediately. Do not force eye open. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause any abrasive damage.
<b>Ingestion:</b>	Seek immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person. 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>	Use extinguishing measures appropriate to local circumstances and the surrounding environment. Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Keep unnecessary personnel away. In case of fire, keep containers cool with water spray.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Toxic fumes. Irritating vapors. Oxides of carbon.

## 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. Prevent further leakage or spillage if safe to do so.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Wear appropriate personal protective equipment. 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. Cured material can be disposed of as non-hazardous waste.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed. See Section 8 of the SDS for Personal Protective Equipment. 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. When using, do not eat, drink or smoke.
<b>Storage:</b>	Not available.

## 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
Beta-Methoxyethyl Cyanoacrylate	None	None	None	0.2 ppm TWA

<b>Engineering controls:</b>	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
<b>Respiratory protection:</b>	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
<b>Eye/face protection:</b>	Wear 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 chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton. The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	None
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not applicable
<b>Vapor pressure:</b>	< 0.2 mm hg < 3 mbar < 700 mbar (50 °C (122°F))
<b>Boiling point/range:</b>	> 149 °C (> 300.2 °F)
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	> 0.1 Freq 365
<b>Vapor density:</b>	Not available.
<b>Flash point:</b>	80 - 93 °C (176°F - 199.4 °F)
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Flammability:</b>	Not applicable
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Polymerises in presence of water.
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	< 2 %
<b>Viscosity:</b>	30 - 60 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.
<b>Hazardous decomposition products:</b>	None
<b>Incompatible materials:</b>	Water. Alcohols. Amines. Bases.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight. Store away from incompatible materials.

## 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>	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. 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 under normal conditions of use. 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
Beta-Methoxyethyl Cyanoacrylate	None	Irritant, Allergen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Beta-Methoxyethyl Cyanoacrylate	No	No	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

## 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 package/configuration.

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

<b>Proper shipping name:</b>	Combustible liquid, n.o.s. (Cyanoacrylate ester)
<b>Hazard class or division:</b>	Combustible Liquid
<b>Identification number:</b>	NA 1993
<b>Packing group:</b>	III

### International Air Transportation (ICAO/IATA)

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None

#### Water Transportation (IMO/IMDG)

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None

## 15. REGULATORY INFORMATION

### United States Regulatory Information

<b>TSCA 8 (b) Inventory Status:</b>	All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.
<b>TSCA 12 (b) Export Notification:</b>	None above reporting de minimis
<b>CERCLA/SARA Section 302 EHS:</b>	None above reporting de minimis.
<b>CERCLA/SARA Section 311/312:</b>	Reactive, Fire, Immediate Health, Delayed Health
<b>CERCLA/SARA Section 313:</b>	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). Beta-Methoxyethyl Cyanoacrylate (CAS# 27816-23-5).
<b>California Proposition 65:</b>	No California Proposition 65 listed chemicals are known to be present.

### Canada Regulatory Information

<b>CEPA DSL/NDL Status:</b>	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
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## 16. OTHER INFORMATION

**This safety data sheet contains changes from the previous version in sections: 9**

**Prepared by:** Product Safety and Regulatory Affairs

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