Material Safety Data Sheet

Revision Date: 05/25/2007 **Issue date:** 05/25/2007

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE 4503 INSTANT ADHESIVE/20G
Product type: Cyanoacrylate
Company address:
Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item No. : 39214 / IDH No. 650493
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components	%	ACGIH TLV	OSHA PEL	OTHER
Ethyl cyanoacrylate 7085-85-0	60-100	0.2 ppm TWA	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Liquid
Color: Clear Colorless
Odor: Sharp, Irritating

HEALTH: 2
FLAMMABILITY: 2
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

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

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: 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.

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.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If discomfort persists seek medical attention.

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: 80ºC (176ºF) to 93.4ºC (200ºF) Tagliabue closed cup

Autoignition temperature: 485°C (905°F)

Flammable/Explosive limits-lower %: Not determined

Flammable/Explosive limits-upper %: Not determined

Extinguishing media: Dry powder. Foam. Carbon dioxide.

Special fire fighting procedures: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

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

Environmental precautions: Ventilate area. Prevent product from entering the drains.

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

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing 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.

Storage: Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Incompatible products: No special restrictions on storage with other products.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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).

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

Eye/face protection: Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Clear Colorless
Odor: Sharp, Irritating
Odor Threshold: 1-2 ppm
Vapor pressure: Less than 0.2 mm Hg
pH: Not applicable
Boiling point/range: Greater than 149ºC (300ºF)
Melting point/range: Not determined
Specific gravity: 1.05
Vapor density: Approximately 3
Evaporation rate: Not available
Solubility in water: Polymerizes in presence of water
Partition coefficient (n-octanol/water): Not applicable
VOC content: Less than 2%; 20 g/L (California SCAQMD Method 316B) (estimated)

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions

Hazardous polymerization: Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

Hazardous decomposition products: None

Incompatability: Water, amines, alkalis and alcohols.

Conditions to avoid: Spontaneous polymerization

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 >5000mg/kg (rat)(estimated). Acute dermal LD50 >2000mg/kg (rabbit)(estimated).

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Ethyl cyanoacrylate 7085-85-0	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Ethyl cyanoacrylate 7085-85-0	Allergen, Irritant, Respiratory

12. ECOLOGICAL INFORMATION

Ecological information: Not known

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

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

Proper shipping name:	Combustible liquids, n.o.s. (Cyanoacrylate ester)
Hazard class or division:	Combustible liquid
Identification number:	NA 1993
Packing group:	None
Exceptions:	(Not more than 450 Liters) Unrestricted
Marine pollutant:	None

International Air Transportation (ICAO/IATA):

Proper shipping name:	Aviation regulated liquids, n.o.s (Cyanoacrylate ester)
Hazard class or division:	9
Identification number:	UN 3334
Packing group:	None
Exceptions:	(Not more than 500ml) Unrestricted

WaterTransportation (IMO/IMDG):

Proper shipping name:	Unrestricted
Hazard class or division:	None
Identification number:	None
Packing group:	None
Marine pollutant:	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.

CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard, Fire, Reactive
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/NDSL Status: Contains one or more components listed on the Non-Domestic Substances list. Those components must be tracked by all Canadian Importers of Record as required by the Canadian Environmental Protection Agency. They may be imported into Canada in limited quantities. Please contact Product Safety and Regulatory Affairs for details.
WHMIS hazard class: B.3, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 15

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