



## Safety Data Sheet in compliance with Indian Manufacture, Storage and Import of Hazardous Chemicals Rules 1989, Rule 17, Schedule 9

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LOCTITE 401

MSDS-No. : 153529

V001.1

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### Section 1. Identification of the substance/preparation and of the company/undertaking

**Product name:** LOCTITE 401

**Material:** 220634

**Product category:** Cyanoacrylate

#### Identification of manufacturer, importer or distributor

**Manufacturer:** Henkel Adhesives Technologies India Pvt. Ltd. D3/D4, MIDC, Jejuri - 412303 India. TEL : +91 2115 300017 / 18 FAX : + 91 2115 253448, Website : www.henkel.com

**Emergency information:** +91 2115 300017-18

### Section 2. Composition / information on ingredients

#### General chemical description:

Cyanoacrylate Adhesive

#### Possible risks of product:

R36/37/38 Irritating to eyes, respiratory system and skin.

#### Declaration of ingredients according to (EC) No 1907/2006:

Hazardous components CAS-No.	EINECS	content	Classification
Ethyl 2-cyanoacrylate 7085-85-0	230-391-5	> 80 - <= 100 %	Xi - Irritant; R36/37/38

### Section 3. Hazards identification

**Hazard classification:** Xi - Irritant

**Routes of entry:** Skin, Inhalation, Eyes

#### Health Effects:

##### Skin:

R36/37/38 Irritating to eyes, respiratory system and 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.

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. Irritating to eyes. Causes excessive tearing. Eyelids may bond.

##### Eye:

##### 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.

##### Ingestion:

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

**Section 4. First aid measures**

- Inhalation:** Move to fresh air, consult doctor if complaint persists.
- Skin contact:** 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.  
Cyanoacrylates give off heat on solidification. In rare cases a large drop will generate enough heat to cause a burn.  
Burns should be treated normally after the adhesive has been removed from the skin.  
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.
- Eye contact:** If the eye is bonded closed, release eyelashes with warm water by covering with wet pad. Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive.  
Keep eye covered until debonding is complete, usually within 1-3 days.  
Do not force eye open. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause any abrasive damage.
- Ingestion:** Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth (several hours).

**Section 5. Fire fighting measures**

- Suitable extinguishing media:** Foam, extinguishing powder, carbon dioxide.  
Fine water spray
- Special protection equipment for firefighters:** Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).
- Hazardous combustion products:** Oxides of carbon, oxides of nitrogen, irritating organic vapors.

**Section 6. Accidental release measures**

- Personal precautions:** Ensure adequate ventilation.
- Environmental precautions:** Do not let product enter 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.

**Section 7. Handling and storage**

- Handling:** Ventilation (low level) is recommended when using large volumes  
Use of dispensing equipment is recommended to minimise the risk of skin or eye contact
- Storage:** For optimum shelf life store in original containers under refrigerated conditions at 2 - 8°C (35.6 - 46.4 °F)

**Section 8. Exposure controls / personal protection**

Ingredient	Type	ppm	mg/m <sup>3</sup>	Remarks
ETHYL CYANOACRYLATE 7085-85-0	Time Weighted Average (TWA):	0,2		ACGIH

<b>Respiratory protection:</b>	Ensure adequate ventilation.
<b>Hand protection:</b>	Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): nitrile rubber (NBR; $\geq 0.4$ mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): nitrile rubber (NBR; $\geq 0.4$ mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.
<b>Eye protection:</b>	Wear protective glasses.
<b>Engineering controls:</b>	Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
<b>General protection measures:</b>	Good industrial hygiene practices should be observed.

### Section 9. Physical and chemical properties

Appearance:	Colorless, Transparent Liquid
Odor:	Sharp, Irritating
Melting point:	Not determined
Relative vapour density:	3 Approximately
Specific gravity:	1,05
Auto ignition:	485 °C
pH:	Not available
Boiling point:	> 149 °C (> 300.2 °F)
Flash point:	80 - 93,4 °C (176 - 200.12 °F)
Vapor pressure:	< 0,2 mm hg
Density:	1,05 g/cm <sup>3</sup>
Solubility:	Solvent: Water, Polymerises in presence of water.

### Section 10. Stability and reactivity

<b>Conditions to avoid:</b>	Stable under normal conditions of storage and use.
<b>Materials to avoid:</b>	Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
<b>Hazardous polymerization:</b>	Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

### Section 11. Toxicological information

<b>Acute oral product toxicity:</b>	Cyanoacrylates are considered to have relatively low toxicity. Acute oral LD50 is >5000mg/kg (rat). It is almost impossible to swallow as it rapidly polymerises in the mouth. LD50 (rat) > 5.000 mg/kg (Estimated)
<b>Acute inhalation product toxicity:</b>	Irritating to respiratory system, Prolonged exposure to high concentrations of vapours may lead to chronic effects in sensitive individuals, In dry atmosphere with < 50% humidity, vapours may irritate the eyes and respiratory system
<b>Acute dermal product toxicity:</b>	LD50 (rabbit) > 2.000 mg/kg (Estimated)

<b>Skin irritation:</b>	Irritating to the skin., Bonds skin in seconds. Considered to be of low toxicity: acute dermal LD50 (rabbit)>2000mg/kg, Due to polymerisation at the skin surface allergic reaction is unlikely to occur
<b>Eye irritation:</b>	Irritating to eyes., Liquid product will bond eyelids. In a dry atmosphere (RH<50%) vapours may cause irritation and lachrymatory effect
<b>Sensitizing:</b>	May cause sensitization by inhalation.

### Section 12. Ecological information

<b>General ecological information:</b>	Biological and Chemical Oxygen Demands (BOD and COD) are insignificant. Do not empty into drains / surface water / ground water.
<b>Mobility:</b>	Cured adhesives are immobile.

### Section 13. Disposal considerations

#### Product

**Method of disposal:** Dispose of according to regulations.

#### Packaging

**Disposal for uncleaned package:** Disposal must be made according to official regulations.

### Section 14. Transport information

#### **Road transport ADR:**

Not dangerous goods

#### **Railroad transport RID:**

Not dangerous goods

#### **Inland water transport ADN:**

Not dangerous goods

#### **Marine transport IMDG:**

Not dangerous goods

#### **Air transport IATA:**

Class:	9
Packaging group:	
Packaging instructions (passenger)	906
Packaging instructions (cargo)	906
UN no.:	3334
Label:	9
Proper shipping name:	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
Additional Information:	Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

### Section 15. Regulations - classification and identification

<b>Indication of danger:</b>	Xi - Irritant
<b>Risk phrases:</b>	R36/37/38 Irritating to eyes, respiratory system and skin.

<b>Safety phrases:</b>	S23 Do not breathe vapour. S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ethyl 2-cyanoacrylate	OECD. Program to investigate the potential hazards of high production volume chemicals (HPV), including decisions on the need for further work.

#### Section 16. Other information

<b>Issue date:</b>	31.03.2018
<b>Prepared by:</b>	Sampada Bhat, Manager, Product Safety & Regulatory Affairs.
<b>Disclaimer:</b>	This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.