

This safety data sheet has been prepared in accordance with the requirements of EC Directives 1999/45/EC and 2001/58/EC and provides information relating to the safe handling and use of the product.

1. PRODUCT AND COMPANY INFORMATION

Product Code	0158805
Trade Name	431
Manufacturer/Supplier	Henkel Loctite Adhesives Ltd.
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Nature Cyanoacrylate adhesive.

Hazardous Components in Product for EC

Component Name	CAS / EINEC	Concentration	R Phrases	Classification
Ethyl Cyanoacrylate	7085-85-0 230-391-5	60.00 - 90.00	R36/37/38	Xi

3. HAZARD IDENTIFICATION

Irritating to eyes, respiratory system and skin. Bonds skin and eyes in seconds. Highly reactive to water. (See Section 4 on first aid).

4. FIRST AID MEASURES

First Aid - Inhalation

Remove affected person to fresh air, and if still feeling unwell seek medical attention.

First Aid - Skin

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.

First Aid - Eyes

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.

First Aid - 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).

5. FIRE FIGHTING MEASURES

Non flammable product (flash point is greater than 80°C (CC)). If product is involved in fire extinguish with dry powder, foam or carbon dioxide. Trace amounts of toxic fumes may be released on incineration and the use of breathing apparatus is recommended.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area. Do not use cloths for mopping up. Polymerise with water and scrape off floor.

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

Storage area should be: cool. dry.

For optimum shelf life store in original containers under refrigerated conditions at 2°C to 8°C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits**Ethyl Cyanoacrylate**

ACGIH: TLV 0.2ppm 8h TWA.

HSA (1999) C.O.P : OEL 2ppm (8mg/m³) 8h TWA.

HSA (1999) C.O.P : OEL 4ppm (16mg/m³) 15 min exposure limit.

Polyethylene or polypropylene gloves are recommended when using large volumes. Do not use PVC, rubber, nylon or cotton gloves. Eye protection should be used where there is any risk of splashing.

The TLV for ethyl cyanoacrylate is 0.2ppm(ACGIH, TWA).

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid.
Colour	Clear Colourless.
Odour	Sharp. Characteristic.
pH	Not applicable.
Boiling Range/Point (°C)	Boils above 100.
Flash Point (CC) (°C)	Exceeds 80.
Specific Gravity	1.1 g/ccm at 20 °C.
Solubility in Water (kg/m³)	Immiscible. Reacts with water.
Solubility in Acetone	Soluble
Vapour Pressure (mmHg @25°C)	Less than 0.5 at 25 °C.
Explosion Limits (%)	Not applicable.

10. STABILITY AND REACTIVITY

Polymerisation will occur in the presence of moisture.

May polymerise if exposed to alkalis. acids. catalysts. peroxides. free radical initiators. heat.

11. TOXICOLOGICAL INFORMATION

Inhalation

Irritating to respiratory system. In dry atmosphere with < 50% humidity, vapours may irritate the eyes and respiratory system. Prolonged exposure to high concentrations of vapours may lead to chronic effects in sensitive individuals.

Skin

This product is classified as a skin irritant. 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 not considered possible.

Eyes

This product is an irritant to the eyes. Liquid product will bond eyelids. In a dry atmosphere (RH<50%) vapours may cause irritation and lachrymatory effect.

Ingestion

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.

12. ECOLOGICAL INFORMATION

Biodegradable product of low ecotoxicity. Does not contain and is not manufactured with any of the substances listed on the Montreal protocol.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local and national regulations. Polymerise by adding slowly to water (10:1). Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions.

14. TRANSPORT INFORMATION

UN Number	None
Air (IATA)	Not classified.
Sea (IMO)	Not classified.
Road (ADR)/Rail (RID)	Not classified.

15. REGULATORY INFORMATION

Contains

Cyanoacrylate.
Danger.
Bonds skin and eyes in seconds.
Keep out of the reach of children.

**Labelling
Information**

Irritant

R phrases

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

S phrases

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.

15. REGULATORY INFORMATION

Voluntary Labelling -

16. OTHER INFORMATION

MSDS data revised

21 November 2002

Hazardous Components in Product for EC**Component Name**

Ethyl Cyanoacrylate

R36/37/38

R Phrases

R36/37/38

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

Further Information may be obtained from:-

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The information in this safety data sheet was obtained from reputable sources and to the best of our knowledge is accurate and current at the mentioned date.

Neither Loctite nor its subsidiary companies accept any liability arising out of the use of the information provided here or the use, application or processing of the product(s) described herein.

Attention of users is drawn to the possible hazards from improper use of the product(s).

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This safety data sheet was prepared in accordance with Commission Directive 2001/59/EC adapting to technical progress for the 28th time Council Directive 67/548/EEC and Commission Directive 1999/45/EC.