

LOCTITE 406

Safety Data Sheet according to (EC) No 1907/2006 as amended

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SDS No.: 671387 V001.9

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

LOCTITE 406

UFI: GTJ2-6WM9-N203-G0KS

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use:

Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website www.mysds.henkel.com or www.henkel-adhesives.com.

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation Category 2

H315 Causes skin irritation.

Serious eye irritation Category 2

H319 Causes serious eye irritation.

Specific target organ toxicity - single exposure Category 3

H335 May cause respiratory irritation. Target organ: respiratory tract irritation

2.2. Label elements

Label elements (CLP):

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Hazard pictogram:



Contains Ethyl 2-cyanoacrylate

Signal word: Warning

Hazard statement: H315 Causes skin irritation.

H319 Causes serious eye irritation. H335 May cause respiratory irritation.

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

children.

Precautionary statement: P261 Avoid breathing vapors.

Prevention P280 Wear protective gloves/eye protection.

P337+P313 If eye irritation persists: Get medical advice/attention. **Precautionary statement:**

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

Precautionary statement:

Disposal

P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

None if used properly.

Following substances are present in a concentration ≥ the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration ≥ the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M- factors and ATEs	Add. Information
Ethyl 2-cyanoacrylate 7085-85-0 230-391-5 01-2119527766-29	50- 100 %	Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315	STOT SE 3; H335; C >= 10 %	

If no ATE values are displayed, please refer to LD/LC50 values in Section 11. For full text of the H - statements and other abbreviations see section 16 "Other information". LOCTITE 406 Page 3 of 12

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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

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.

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.

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.

Eye contact:

If the eye is bonded closed, release eyelashes with warm water by covering with wet pad.

Keep eye covered until debonding is complete, usually within 1-3 days.

Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive.

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).

4.2. Most important symptoms and effects, both acute and delayed

EYE: Irritation, conjunctivitis.

SKIN: Redness, inflammation.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Foam, extinguishing powder, carbon dioxide.

Fine water spray

Extinguishing media which must not be used for safety reasons:

None known

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Avoid contact with skin and eyes.

Wear protective equipment.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

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.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe 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

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Refer to Technical Data Sheet.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

Adhesive

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	V 1	Short term exposure limit category / Remarks	Regulatory list
Ethyl 2-cyanoacrylate	0,3	1,5	Short Term Exposure	15 minutes	EH40 WEL
7085-85-0			Limit (STEL):		
[ETHYL CYANOACRYLATE]					

Occupational Exposure Limits

Valid for

Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL 2-CYANOACRYLATE; ETHYL CYANOACRYLATE]	1		Short Term Exposure Limit (STEL):	15 minutes	IR_OEL
Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL 2-CYANOACRYLATE; ETHYL CYANOACRYLATE]	0,2		Time Weighted Average (TWA):		IR_OEL

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Ethyl 2-cyanoacrylate 7085-85-0	Workers	Inhalation	Long term exposure - local effects		9,25 mg/m3	
Ethyl 2-cyanoacrylate 7085-85-0	Workers	Inhalation	Long term exposure - systemic effects		9,25 mg/m3	
Ethyl 2-cyanoacrylate 7085-85-0	General population	Inhalation	-		9,25 mg/m3	
Ethyl 2-cyanoacrylate 7085-85-0	General population	Inhalation	Long term exposure - systemic effects		9,25 mg/m3	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

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Hand protection:

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; >= 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; >= 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.

Polyethylene or polypropylene gloves are recommended when using large volumes.

Do not use PVC, rubber or nylon gloves.

Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

Eve protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing. Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Delivery form liquid
Colour Clear, colourless
Odor irritating
Physical state liquid

Melting point Not applicable, Product is a liquid

Solidification temperature < -25 °C (< -13 °F) Initial boiling point > 149 °C (> 300.2 °F)

Flammability The product is not flammable.
Explosive limits Not applicable, The product is not flammable.

Flash point 80 - 93 °C (176 - 199.4 °F)

Auto-ignition temperature Not applicable, The product is not flammable.

Decomposition temperature

Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use

Not applicable, Product reacts with water.

Viscosity (kinematic) 15 - 20 mm2/s

(40 °C (104 °F);)

Viscosity, dynamic 12,0 - 22,0 mPa.s LCT STM 740; cone & plate viscosity

(Cone and plate; 25 °C (77 °F); Shear gradient:

3.000 s-1)

pΗ

Viscosity, dynamic 15,0 - 25,0 mPa.s LCT STM 10; Viscosity Brookfield

(Brookfield; Instrument: LVF; 25 °C (77 °F); speed of rotation: 30 min-1; Spindle No: 1)

Viscosity, dynamic 15 - 25 cp LCT STM 10; Viscosity Brookfield

(Brookfield; Instrument: LVT; speed of rotation:

60 min-1; Spindle No: 1)

Solubility (qualitative) Polymerises in presence of water.

(20 °C (68 °F); Solvent: Water)

Solubility (qualitative) Insoluble

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(20 °C (68 °F); Solvent: Water)

Soluble Solubility (qualitative)

(Solvent: Acetone)

Partition coefficient: n-octanol/water Not applicable Mixture

Vapour pressure < 700 mbar

(50 °C (122 °F))

Density 1,1 g/cm3 no method / method unknown (20 °C (68 °F))

Relative vapour density:

(20 °C)

Particle characteristics Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

None if used for intended purpose.

SECTION 11: Toxicological information

General toxicological information:

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.

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

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Ethyl 2-cyanoacrylate	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 423 (Acute Oral
7085-85-0				toxicity)

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Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Ethyl 2-cyanoacrylate	LD50	> 2.000 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute
7085-85-0				Dermal Toxicity)

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

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

Hazardous substances	Result	Exposure	Species	Method
CAS-No.		time		
Ethyl 2-cyanoacrylate	slightly	24 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute
7085-85-0	irritating			Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Liquid product will bond eyelids. In a dry atmosphere (RH<50%) vapours may cause irritation and lachrymatory effect

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	not sensitising	Skin sensitisation	guinea pig	not specified

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of	Metabolic activation /	Species	Method
		administration	Exposure time		
Ethyl 2-cyanoacrylate	negative	bacterial reverse	with and without		equivalent or similar to OECD
7085-85-0		mutation assay (e.g			Guideline 471 (Bacterial
		Ames test)			Reverse Mutation Assay)
Ethyl 2-cyanoacrylate	negative	in vitro mammalian	with and without		OECD Guideline 473 (In vitro
7085-85-0		chromosome			Mammalian Chromosome
		aberration test			Aberration Test)
Ethyl 2-cyanoacrylate	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
7085-85-0		gene mutation assay			Mammalian Cell Gene
					Mutation Test)

Carcinogenicity

No data available.

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Reproductive toxicity:
No data available.
STOT-single exposure:
No data available.
STOT-repeated exposure:
No data available.
Aspiration hazard:
No data available.
11.2 Information on other hazards
not applicable
SECTION 12: Ecological information
General ecological information: Biological and Chemical Oxygen Demands (BOD and COD) are insignificant. Do not empty into drains / surface water / ground water.
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Biological and Chemical Oxygen Demands (BOD and COD) are insignificant. Do not empty into drains / surface water / ground water. 12.1. Toxicity Toxicity (Fish): No data available.
Biological and Chemical Oxygen Demands (BOD and COD) are insignificant. Do not empty into drains / surface water / ground water. 12.1. Toxicity Toxicity (Fish): No data available. Toxicity (aquatic invertebrates):
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Biological and Chemical Oxygen Demands (BOD and COD) are insignificant. Do not empty into drains / surface water / ground water. 12.1. Toxicity Toxicity (Fish): No data available. Toxicity (aquatic invertebrates): No data available. Chronic toxicity (aquatic invertebrates): No data available. Toxicity (Algae):

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12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Ethyl 2-cyanoacrylate	not readily biodegradable.	aerobic	57 %	28 d	OECD Guideline 301 D (Ready
7085-85-0					Biodegradability: Closed Bottle
					Test)

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	LogPow	Temperature	Method
CAS-No.			
Ethyl 2-cyanoacrylate	0,776	22 °C	EU Method A.8 (Partition Coefficient)
7085-85-0			

12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	PBT / vPvB
Ethyl 2-cyanoacrylate Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very	
7085-85-0	Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Cured adhesive: Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions.

Contribution of this product to waste is very insignificant in comparison to article in which it is used Do not empty into drains / surface water / ground water.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances. The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

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SECTION 14: Transport information

14.1. UN number or ID number

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA 3334

14.2. UN proper shipping name

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)

14.3. Transport hazard class(es)

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA 9

14.4. Packing group

ADR Not dangerous goods
RID Not dangerous goods
ADN Not dangerous goods
IMDG Not dangerous goods

IATA III

14.5. Environmental hazards

ADR not applicable
RID not applicable
ADN not applicable
IMDG not applicable
IATA not applicable

14.6. Special precautions for user

ADR not applicable RID not applicable ADN not applicable IMDG not applicable

IATA Primary packs containing less than 500ml are unregulated by this mode of transport

and may be shipped unrestricted.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): Persistent organic pollutants (Regulation (EU) 2019/1021):

Not applicable Not applicable Not applicable

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VOC content < 3 % (2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

ED: Substance identified as having endocrine disrupting properties

EU OEL: Substance with a Union workplace exposure limit
EU EXPLD 1: Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2 Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC: Substance of very high concern (REACH Candidate List)
PBT: Substance fulfilling persistent, bioaccumulative and toxic criteria

PBT/vPvB: Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very

bioaccumulative criteria

vPvB: Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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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.

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Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.

Annex - Exposure Scenarios:

Exposure Scenarios for ethyl 2-cyanoacrylate can be downloaded under the following link: https://mysds.henkel.com/index.html#/appSelection