



## Safety Data Sheet according to Regulation (EC) No 1907/2006

Page 1 of 16

LOCTITE 435

SDS No. : 204082  
V006.0

Revision: 27.10.2016

printing date: 18.09.2018

Replaces version from: 23.03.2015

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

#### 1.1. Product identifier

LOCTITE 435

#### Contains:

Ethyl 2-cyanoacrylate

#### 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

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@uk.henkel.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):

Hazard pictogram:



<b>Signal word:</b>	Warning
<b>Hazard statement:</b>	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
<b>Supplemental information</b>	EUH202 Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. Contains Phthalic anhydride; Methyl acrylate. May produce an allergic reaction.
<b>Precautionary statement: Prevention</b>	P261 Avoid breathing vapours. P280 Wear protective gloves/eye protection.
<b>Precautionary statement: Response</b>	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
<b>Precautionary statement: Disposal</b>	P501 Dispose of waste and residues in accordance with local authority requirements.

### 2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General chemical description:

Cyanoacrylate Adhesive

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
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
Phthalic anhydride 85-44-9	201-607-5 01-2119457017-41	0,1- < 1 %	Acute Tox. 4; Oral H302 STOT SE 3 H335 Skin Irrit. 2 H315 Eye Dam. 1 H318 Resp. Sens. 1 H334 Skin Sens. 1 H317
Methyl acrylate 96-33-3	202-500-6 01-2119459302-44	0,1- < 1 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Flam. Liq. 2 H225 STOT SE 3 H335 Eye Irrit. 2 H319 Skin Irrit. 2 H315 Skin Sens. 1 H317 Acute Tox. 3; Inhalation H331 Aquatic Chronic 3 H412
Hydroquinone 123-31-9	204-617-8 01-2119524016-51	0,01- < 0,1 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 Carc. 2 H351 Muta. 2 H341 Acute Tox. 4; Oral H302 Eye Dam. 1 H318 Skin Sens. 1 H317 M factor (Acute Aquat Tox): 10

For full text of the H - statements and other abbreviations see section 16 "Other information".  
Substances without classification may have community workplace exposure limits available.

## SECTION 4: First aid measures

### 4.1. Description of 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).

**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) and carbon dioxide (CO<sub>2</sub>) can be released.

**5.3. Advice for firefighters**

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

**Additional information:**

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

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

Ensure adequate ventilation.

Wear protective equipment.

**6.2. Environmental precautions**

Do not let product enter drains.

**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.

**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:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

**7.2. Conditions for safe storage, including any incompatibilities**

Ensure good ventilation/extraction.

For optimum shelf life store in original containers under refrigerated conditions at 2 - 8°C (35.6 - 46.4 °F)

**7.3. Specific end use(s)**

Adhesive

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL CYANOACRYLATE]	0,3	1,5	Short Term Exposure Limit (STEL):		EH40 WEL
Phthalic anhydride 85-44-9 [PHTHALIC ANHYDRIDE]		12	Short Term Exposure Limit (STEL):		EH40 WEL
Phthalic anhydride 85-44-9 [PHTHALIC ANHYDRIDE]		4	Time Weighted Average (TWA):		EH40 WEL
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	5	18	Time Weighted Average (TWA):		EH40 WEL
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	10	36	Short Term Exposure Limit (STEL):		EH40 WEL
Methyl acrylate 96-33-3 [METHYLACRYLATE]	5	18	Time Weighted Average (TWA):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYLACRYLATE]	10	36	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Hydroquinone 123-31-9 [HYDROQUINONE]		0,5	Time Weighted Average (TWA):		EH40 WEL

#### Occupational Exposure Limits

Valid for  
Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL CYANOACRYLATE]	0,2		Time Weighted Average (TWA):		IR_OEL
Phthalic anhydride 85-44-9 [PHTHALIC ANHYDRIDE]		12	Short Term Exposure Limit (STEL):		IR_OEL
Phthalic anhydride 85-44-9 [PHTHALIC ANHYDRIDE]		4	Time Weighted Average (TWA):		IR_OEL
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	5	18	Time Weighted Average (TWA):		IR_OEL
Methyl acrylate 96-33-3 [METHYL ACRYLATE]	10	36	Short Term Exposure Limit (STEL):		IR_OEL
Methyl acrylate 96-33-3 [METHYLACRYLATE]	5	18	Time Weighted Average (TWA):	Indicative	ECTLV
Methyl acrylate 96-33-3 [METHYLACRYLATE]	10	36	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Hydroquinone 123-31-9 [HYDROQUINONE]		0,5	Time Weighted Average (TWA):		IR_OEL

**Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Phthalic anhydride 85-44-9	soil				0,173 mg/kg		
Phthalic anhydride 85-44-9	sewage treatment plant (STP)					10 mg/L	
Phthalic anhydride 85-44-9	sediment (freshwater)				3,8 mg/kg		
Phthalic anhydride 85-44-9	sediment (marine water)				0,38 mg/kg		
Phthalic anhydride 85-44-9	aqua (marine water)					0,1 mg/L	
Phthalic anhydride 85-44-9	aqua (intermittent releases)					5,6 mg/L	
Phthalic anhydride 85-44-9	aqua (freshwater)					1 mg/L	
Methyl acrylate 96-33-3	aqua (freshwater)					0,00272 mg/L	
Methyl acrylate 96-33-3	aqua (marine water)					0,00027 mg/L	
Methyl acrylate 96-33-3	aqua (intermittent releases)					0,011 mg/L	
Methyl acrylate 96-33-3	sewage treatment plant (STP)					10 mg/L	
Methyl acrylate 96-33-3	sediment (freshwater)				0,0115 mg/kg		
Methyl acrylate 96-33-3	sediment (marine water)				0,0115 mg/kg		
Methyl acrylate 96-33-3	soil				1 mg/kg		
Methyl acrylate 96-33-3	oral				0,0011 mg/kg		
Hydroquinone 123-31-9	aqua (freshwater)					0,114 µg/L	
Hydroquinone 123-31-9	aqua (marine water)					0,0114 µg/L	
Hydroquinone 123-31-9	sediment (freshwater)					0,98 µg/kg	
Hydroquinone 123-31-9	sediment (marine water)					0,097 µg/kg	
Hydroquinone 123-31-9	aqua (intermittent releases)					0,00134 mg/L	
Hydroquinone 123-31-9	soil					0,129 µg/kg	
Hydroquinone 123-31-9	sewage treatment plant (STP)					0,71 mg/L	

**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/m <sup>3</sup>	
Ethyl 2-cyanoacrylate 7085-85-0	Workers	Inhalation	Long term exposure - systemic effects		9,25 mg/m <sup>3</sup>	
Ethyl 2-cyanoacrylate 7085-85-0	General population	Inhalation	Long term exposure - local effects		9,25 mg/m <sup>3</sup>	
Ethyl 2-cyanoacrylate 7085-85-0	General population	Inhalation	Long term exposure - systemic effects		9,25 mg/m <sup>3</sup>	
Phthalic anhydride 85-44-9	Workers	inhalation	Long term exposure - systemic effects		32,2 mg/m <sup>3</sup>	
Phthalic anhydride 85-44-9	Workers	dermal	Long term exposure - systemic effects		10 mg/kg bw/day	
Phthalic anhydride 85-44-9	General population	inhalation	Long term exposure - systemic effects		8,6 mg/m <sup>3</sup>	
Phthalic anhydride 85-44-9	General population	dermal	Long term exposure - systemic effects		5 mg/kg bw/day	
Phthalic anhydride 85-44-9	General population	oral	Long term exposure - systemic effects		5 mg/kg bw/day	
Methyl acrylate 96-33-3	Workers	inhalation	Long term exposure - local effects		18 mg/m <sup>3</sup>	
Methyl acrylate 96-33-3	Workers	dermal	Acute/short term exposure - local effects		0,49 mg/cm <sup>2</sup>	
Methyl acrylate 96-33-3	General population	inhalation	Acute/short term exposure - local effects		2,1 mg/m <sup>3</sup>	
Hydroquinone 123-31-9	Workers	dermal	Long term exposure - systemic effects		128 mg/kg bw/day	
Hydroquinone 123-31-9	Workers	Inhalation	Long term exposure - systemic effects		7 mg/m <sup>3</sup>	
Hydroquinone 123-31-9	Workers	Inhalation	Long term exposure - local effects		1 mg/m <sup>3</sup>	
Hydroquinone 123-31-9	General population	dermal	Long term exposure - systemic effects		64 mg/kg bw/day	
Hydroquinone 123-31-9	General population	Inhalation	Long term exposure - systemic effects		1,74 mg/m <sup>3</sup>	
Hydroquinone 123-31-9	General population	Inhalation	Long term exposure - local effects		0,5 mg/m <sup>3</sup>	

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:

Ensure good ventilation/suction at the workplace.



**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)

**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;  $\geq 0.4$  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.

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.

The use of chemical resistant gloves such as Neoprene or Natural Rubber is recommended

**Eye 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:**

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**

Appearance	liquid colourless
Odor	irritating
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	> 149 °C (> 300.2 °F)
Flash point	80 - 93 °C (176 - 199.4 °F); Tagliabue closed cup
Decomposition temperature	No data available / Not applicable
Vapour pressure	< 0,3000000 mbar
Vapour pressure (50 °C (122 °F))	< 700 mbar
Density ( $\rho$ )	1,1000 g/cm <sup>3</sup>
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Acetone)	Miscible
Solidification temperature	No data available / Not applicable

Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

## 9.2. Other information

No data available / Not applicable

## 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

No decomposition if used according to specifications.

### 10.5. Incompatible materials

See section reactivity.

### 10.6. Hazardous decomposition products

carbon oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

#### STOT-single exposure:

May cause respiratory irritation.

#### Oral toxicity:

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.

#### Inhalative toxicity:

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

#### Skin irritation:

Causes skin 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

#### Eye irritation:

Causes serious eye irritation.

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

#### Sensitizing:

May cause allergic reaction.

**Acute oral toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	LD50	> 5.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Phthalic anhydride 85-44-9	LD50	1.530 mg/kg	oral		rat	not specified
Methyl acrylate 96-33-3	LD50	768 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Hydroquinone 123-31-9	LD50	367 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Methyl acrylate 96-33-3	LC50	6,5 mg/l	Vapor.	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	LD50	> 2.000 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Phthalic anhydride 85-44-9	LD50	> 10.000 mg/kg	dermal		rabbit	not specified
Methyl acrylate 96-33-3	LD50	1.250 mg/kg	dermal		rabbit	Draize Test

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	slightly irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methyl acrylate 96-33-3	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	irritating	72 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Phthalic anhydride 85-44-9	highly irritating		rabbit	not specified

**Respiratory or skin sensitization:**

Hazardous components CAS-No.	Result	Test type	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	not sensitising		guinea pig	not specified
Phthalic anhydride 85-44-9	sensitising	in vivo	guinea pig	not specified
Phthalic anhydride 85-44-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	Mouse local lymphnode assay (LLNA)
Methyl acrylate 96-33-3	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Hydroquinone 123-31-9	sensitising	Guinea pig maximisation test	guinea pig	not specified

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Phthalic anhydride 85-44-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
Methyl acrylate 96-33-3	negative	inhalation: vapour		mouse	not specified
Hydroquinone 123-31-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)

**Carcinogenicity:**

Hazardous components CAS-No.	Result	Species	Sex	Exposure time Frequency of treatment	Route of application	Method
Methyl acrylate 96-33-3	not carcinogenic	rat	male/female	24 m 6 h/d, 5 d/w	inhalation: vapour	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

**Repeated dose toxicity**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Methyl acrylate 96-33-3	NOAEL=23 ppm	inhalation	13 weeks 6 hrs/day, 5 days/wk	rat	BASF Test
Methyl acrylate 96-33-3	LOAEL=20 mg/kg	oral: drinking water	13 wcontinuous	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Methyl acrylate 96-33-3	NOAEL=5 mg/kg	oral: drinking water	13 wcontinuous	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Hydroquinone 123-31-9	NOAEL= $\geq$ 250 mg/kg	oral: gavage	14 days 5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Hydroquinone 123-31-9	LOAEL= $\leq$ 500 mg/kg	oral: gavage	14 days 5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

**SECTION 12: Ecological information****General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**12.1. Toxicity****Ecotoxicity:**

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

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Phthalic anhydride 85-44-9	LC50	313 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
Phthalic anhydride 85-44-9	EC50	68 mg/l	Algae	72 h	Selenastrum sp.	OECD Guideline 201 (Alga, Growth Inhibition Test)
Phthalic anhydride 85-44-9	EC 50	> 1.000 mg/l	Bacteria	3 h		ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
Methyl acrylate 96-33-3	LC50	3,4 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Methyl acrylate 96-33-3	EC50	2,6 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methyl acrylate 96-33-3	EC50	3,55 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test) not specified
Methyl acrylate 96-33-3	EC10	> 100 mg/l	Bacteria	72 h		
Methyl acrylate 96-33-3	NOEC	0,19 mg/l	chronic Daphnia	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)
Hydroquinone 123-31-9	LC50	0,638 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroquinone 123-31-9	EC50	0,134 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroquinone 123-31-9	EC50	0,335 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test) not specified
Hydroquinone 123-31-9	EC 50	0,038 mg/l	Bacteria	30 min		
Hydroquinone 123-31-9	NOEC	0,0057 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

## 12.2. Persistence and degradability

### Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Ethyl 2-cyanoacrylate 7085-85-0		aerobic	57 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Phthalic anhydride 85-44-9		aerobic	90 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Methyl acrylate 96-33-3	readily biodegradable	aerobic	90 - 100 %	OECD Guideline 310 (Ready BiodegradabilityCO <sub>2</sub> in Sealed Vessels (Headspace Test)
Hydroquinone 123-31-9	readily biodegradable	aerobic	75 - 81 %	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)

## 12.3. Bioaccumulative potential / 12.4. Mobility in soil

### Mobility:

Cured adhesives are immobile.

**Bioaccumulative potential:**

No data available.

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Ethyl 2-cyanoacrylate 7085-85-0	0,776				22 °C	EU Method A.8 (Partition Coefficient)
Phthalic anhydride 85-44-9	1,6					not specified
Methyl acrylate 96-33-3 Methyl acrylate 96-33-3	0,739	3,16			25 °C	not specified OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)
Hydroquinone 123-31-9	0,59					EU Method A.8 (Partition Coefficient)

**12.5. Results of PBT and vPvB assessment**

Hazardous components CAS-No.	PBT/vPvB
Phthalic anhydride 85-44-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Methyl acrylate 96-33-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydroquinone 123-31-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

**12.6. Other adverse effects**

No data available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Product disposal:

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

Dispose of in accordance with local and national regulations.

Contribution of this product to waste is very insignificant in comparison to article in which it is used

Ethanol

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.

Disposal must be made according to official regulations.

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.

**SECTION 14: Transport information****14.1. UN 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. Transport in bulk according to Annex II of Marpol and the IBC Code**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**VOC content < 3,00 %  
(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:

- H225 Highly flammable liquid and vapor.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

### Further information:

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.

**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:  
[http://mymds.henkel.com/mymds/.470833..en.ANNEX\\_DE.15743123.0.DE.pdf](http://mymds.henkel.com/mymds/.470833..en.ANNEX_DE.15743123.0.DE.pdf)  
Alternatively they can be accessed on the internet site [www.mymds.henkel.com](http://www.mymds.henkel.com) by entering number 470833.