



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

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LOCTITE 480 known as Loctite 480

SDS No. : 153522  
V004.5

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

#### 1.1. Product identifier

LOCTITE 480 known as Loctite 480

#### 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 AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

### 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              |            |
| Chronic hazards to the aquatic environment              | Category 3 |
| H412 Harmful to aquatic life with long lasting effects. |            |

#### 2.2. Label elements

##### Label elements (CLP):

**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.  
 H412 Harmful to aquatic life with long lasting effects.

**Supplemental information**

Contains: phthalic anhydride; Hydroquinone; maleic anhydride May produce an allergic reaction.  
 Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

**Precautionary statement:  
Prevention**

P261 Avoid breathing vapors.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/eye protection.

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

**Precautionary statement:  
Disposal**

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

**2.3. Other hazards**

None if used properly.  
 Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration  $\geq$  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  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

|  |
|--|
| <b>SECTION 3: Composition/information on ingredients</b> |
|--|

**3.2. Mixtures**

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

| <b>Hazardous components<br/>CAS-No.<br/>EC Number<br/>REACH-Reg No.</b> | <b>Concentration</b>                    | <b>Classification</b>  | <b>Specific Conc. Limits, M-factors and ATEs</b> | <b>Add. Information</b> |
|---|---|--|--|-------------------------|
| Ethyl 2-cyanoacrylate<br>7085-85-0<br>230-391-5<br>01-2119527766-29     | 50- 100 %                               | Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Skin Irrit. 2, H315   | STOT SE 3; H335; C >= 10 %                       |                         |
| Hydroquinone<br>123-31-9<br>204-617-8<br>01-2119524016-51               | 0,1- < 1 %                              | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Carc. 2, H351<br>Muta. 2, H341<br>Acute Tox. 4, Oral, H302<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317 | M acute = 10<br>M chronic = 1                    |                         |
| phthalic anhydride<br>85-44-9<br>201-607-5<br>01-2119457017-41          | 0,1- < 1 %                              | Eye Dam. 1, H318<br>Skin Irrit. 2, H315<br>STOT SE 3, H335<br>Acute Tox. 4, Oral, H302<br>Skin Sens. 1, H317<br>Resp. Sens. 1, H334                      |  |                         |
| maleic anhydride<br>108-31-6<br>203-571-6<br>01-2119472428-31           | 0,0001- < 0,001 %<br>( 1 ppm- < 10 ppm) | STOT RE 1, Inhalation, H372<br>Acute Tox. 4, Oral, H302<br>Skin Sens. 1A, H317<br>Resp. Sens. 1, H334<br>Eye Dam. 1, H318<br>Skin Corr. 1B, H314         | Skin Sens. 1A; H317; C >= 0,001 %                |                         |

**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. 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 (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) 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****6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Wear protective equipment.

Avoid contact with skin and eyes.

**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**

Refer to Technical Data Sheet

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

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational Exposure Limits**

Valid for  
Germany

| Ingredient [Regulated substance] | ppm  | mg/m <sup>3</sup> | Value type                               | Short term exposure limit category / Remarks   | Regulatory list |
|----------------------------------|------|-------------------|--|--|-----------------|
| Maleic anhydride<br>108-31-6     |      |                   | Short Term Exposure Classification:      | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900        |
| Maleic anhydride<br>108-31-6     |      |                   | STEL (Short Term Exposure Limit) factor: | 1<br>Substance listed with both Peak factor and STEL factor. The Peak factor is supplied with the AGW values.                                  | TRGS 900        |
| Maleic anhydride<br>108-31-6     | 0,02 | 0,081             | Exposure limit(s):                       | 2.5<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).                           | TRGS 900        |

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

| Name on list                  | Environmental<br>Compartment       | Exposure<br>period | Value            |     |                  |        | Remarks |
|-------------------------------|------------------------------------|--------------------|------------------|-----|------------------|--------|---------|
|                               |                                    |                    | mg/l             | ppm | mg/kg            | others |         |
| Hydroquinone<br>123-31-9      | aqua<br>(freshwater)               |                    | 0,00057<br>mg/l  |     |                  |        |         |
| Hydroquinone<br>123-31-9      | aqua (marine<br>water)             |                    | 0,000057<br>mg/l |     |                  |        |         |
| Hydroquinone<br>123-31-9      | sediment<br>(freshwater)           |                    |                  |     | 0,0049<br>mg/kg  |        |         |
| Hydroquinone<br>123-31-9      | sediment<br>(marine water)         |                    |                  |     | 0,00049<br>mg/kg |        |         |
| Hydroquinone<br>123-31-9      | aqua<br>(intermittent<br>releases) |                    | 0,00134<br>mg/l  |     |                  |        |         |
| Hydroquinone<br>123-31-9      | Soil                               |                    |                  |     | 0,00064<br>mg/kg |        |         |
| Hydroquinone<br>123-31-9      | sewage<br>treatment plant<br>(STP) |                    | 0,71 mg/l        |     |                  |        |         |
| phthalic anhydride<br>85-44-9 | Soil                               |                    |                  |     | 0,173<br>mg/kg   |        |         |
| phthalic anhydride<br>85-44-9 | sewage<br>treatment plant<br>(STP) |                    | 10 mg/l          |     |                  |        |         |
| phthalic anhydride<br>85-44-9 | sediment<br>(freshwater)           |                    |                  |     | 3,8 mg/kg        |        |         |
| phthalic anhydride<br>85-44-9 | sediment<br>(marine water)         |                    |                  |     | 0,38 mg/kg       |        |         |
| phthalic anhydride<br>85-44-9 | aqua (marine<br>water)             |                    | 0,1 mg/l         |     |                  |        |         |
| phthalic anhydride<br>85-44-9 | aqua<br>(intermittent<br>releases) |                    | 5,6 mg/l         |     |                  |        |         |
| phthalic anhydride<br>85-44-9 | aqua<br>(freshwater)               |                    | 1 mg/l           |     |                  |        |         |
| maleic anhydride<br>108-31-6  | aqua<br>(freshwater)               |                    | 0,038 mg/l       |     |                  |        |         |
| maleic anhydride<br>108-31-6  | aqua (marine<br>water)             |                    | 0,004 mg/l       |     |                  |        |         |
| maleic anhydride<br>108-31-6  | Soil                               |                    |                  |     | 0,037<br>mg/kg   |        |         |
| maleic anhydride<br>108-31-6  | sediment<br>(freshwater)           |                    |                  |     | 0,296<br>mg/kg   |        |         |
| maleic anhydride<br>108-31-6  | sediment<br>(marine water)         |                    |                  |     | 0,03 mg/kg       |        |         |
| maleic anhydride<br>108-31-6  | sewage<br>treatment plant<br>(STP) |                    | 44,6 mg/l        |     |                  |        |         |
| maleic anhydride<br>108-31-6  | Freshwater -<br>intermittent       |                    | 0,379 mg/l       |     |                  |        |         |
| maleic anhydride<br>108-31-6  | Marine water -<br>intermittent     |                    | 0,038 mg/l       |     |                  |        |         |

**Derived No-Effect Level (DNEL):**

| Name on list                       | Application Area   | Route of Exposure | Health Effect                                | Exposure Time | Value                   | Remarks |
|------------------------------------|--------------------|-------------------|--|---------------|-------------------------|---------|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | Workers            | Inhalation        | Long term exposure - local effects           |               | 9,25 mg/m <sup>3</sup>  |         |
| Ethyl 2-cyanoacrylate<br>7085-85-0 | Workers            | Inhalation        | Long term exposure - systemic effects        |               | 9,25 mg/m <sup>3</sup>  |         |
| Ethyl 2-cyanoacrylate<br>7085-85-0 | General population | Inhalation        | Long term exposure - local effects           |               | 9,25 mg/m <sup>3</sup>  |         |
| Ethyl 2-cyanoacrylate<br>7085-85-0 | General population | Inhalation        | Long term exposure - systemic effects        |               | 9,25 mg/m <sup>3</sup>  |         |
| Hydroquinone<br>123-31-9           | Workers            | dermal            | Long term exposure - systemic effects        |               | 3,33 mg/kg              |         |
| Hydroquinone<br>123-31-9           | Workers            | inhalation        | Long term exposure - systemic effects        |               | 2,1 mg/m <sup>3</sup>   |         |
| Hydroquinone<br>123-31-9           | General population | dermal            | Long term exposure - systemic effects        |               | 1,66 mg/kg              |         |
| Hydroquinone<br>123-31-9           | General population | inhalation        | Long term exposure - systemic effects        |               | 1,05 mg/m <sup>3</sup>  |         |
| Hydroquinone<br>123-31-9           | General population | oral              | Long term exposure - systemic effects        |               | 0,6 mg/kg               |         |
| phthalic anhydride<br>85-44-9      | Workers            | inhalation        | Long term exposure - systemic effects        |               | 32,2 mg/m <sup>3</sup>  |         |
| phthalic anhydride<br>85-44-9      | Workers            | dermal            | Long term exposure - systemic effects        |               | 10 mg/kg                |         |
| phthalic anhydride<br>85-44-9      | General population | inhalation        | Long term exposure - systemic effects        |               | 8,6 mg/m <sup>3</sup>   |         |
| phthalic anhydride<br>85-44-9      | General population | dermal            | Long term exposure - systemic effects        |               | 5 mg/kg                 |         |
| phthalic anhydride<br>85-44-9      | General population | oral              | Long term exposure - systemic effects        |               | 5 mg/kg                 |         |
| maleic anhydride<br>108-31-6       | Workers            | inhalation        | Acute/short term exposure - systemic effects |               | 0,2 mg/m <sup>3</sup>   |         |
| maleic anhydride<br>108-31-6       | Workers            | inhalation        | Acute/short term exposure - local effects    |               | 0,2 mg/m <sup>3</sup>   |         |
| maleic anhydride<br>108-31-6       | Workers            | inhalation        | Long term exposure - systemic effects        |               | 0,081 mg/m <sup>3</sup> |         |
| maleic anhydride<br>108-31-6       | Workers            | inhalation        | Long term exposure - local effects           |               | 0,081 mg/m <sup>3</sup> |         |

**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)

**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.

**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:**

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**

|   |   |
|---|---|
| Physical state  | liquid  |
| Delivery form   | liquid  |
| Colour  | black   |
| Odor  | irritating  |
| Melting point   | Not applicable, Product is a liquid   |
| Solidification temperature                                    | < -25 °C (< -13 °F)   |
| Initial boiling point   | > 149 °C (> 300.2 °F)no method  |
| Flammability  | The product is not flammable.   |
| Explosive limits  | Not applicable, The product is not flammable.   |
| Flash point   | 80 - 93 °C (176 - 199.4 °F); Tagliabue closed cup   |
| Auto-ignition temperature                                     | 485 °C (905 °F)   |
| Decomposition temperature                                     | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH  | Not applicable, Product reacts with water.  |
| Viscosity (kinematic)<br>(40 °C (104 °F); )                   | > 20,5 mm <sup>2</sup> /s   |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water)   | Polymerises in presence of water.   |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Acetone) | Miscible  |
| Partition coefficient: n-octanol/water                        | Not applicable<br>Mixture   |



|                                     |                                       |
|-------------------------------------|---------------------------------------|
| Vapour pressure<br>(25 °C (77 °F))  | < 0,5 mm hg                           |
| Vapour pressure<br>(50 °C (122 °F)) | < 700 hPa;no method                   |
| Density<br>(20 °C (68 °F))          | 1,05 g/cm3 None                       |
| Relative vapour density:<br>(20 °C) | 3                                     |
| Particle characteristics            | Not applicable<br>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

### 1.1 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<br>CAS-No.    | Value<br>type | Value         | Species | Method  |
|------------------------------------|---------------|---------------|---------|---|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | LD50          | > 5.000 mg/kg | rat     | equivalent or similar to OECD Guideline 423 (Acute Oral toxicity) |
| Hydroquinone<br>123-31-9           | LD50          | 367 mg/kg     | rat     | OECD Guideline 401 (Acute Oral Toxicity)                          |
| phthalic anhydride<br>85-44-9      | LD50          | 1.530 mg/kg   | rat     | not specified   |
| maleic anhydride<br>108-31-6       | LD50          | 1.090 mg/kg   | rat     | OECD Guideline 401 (Acute Oral Toxicity)                          |

**Acute dermal toxicity:**

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

| Hazardous substances<br>CAS-No.    | Value<br>type | Value         | Species | Method  |
|------------------------------------|---------------|---------------|---------|---|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | LD50          | > 2.000 mg/kg | rabbit  | equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity) |
| Hydroquinone<br>123-31-9           | LD50          | > 2.000 mg/kg | rabbit  | OECD Guideline 402 (Acute Dermal Toxicity)                          |
| phthalic anhydride<br>85-44-9      | LD50          | > 3.160 mg/kg | rabbit  | not specified   |
| maleic anhydride<br>108-31-6       | LD50          | 2.620 mg/kg   | rabbit  | not specified   |

**Acute inhalative toxicity:**

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value       | Test atmosphere | Exposure<br>time | Species | Method   |
|---------------------------------|---------------|-------------|-----------------|------------------|---------|--|
| phthalic anhydride<br>85-44-9   | LC50          | > 2,14 mg/l | dust/mist       | 4 h              | rat     | OECD Guideline 403 (Acute Inhalation Toxicity) |

**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<br>CAS-No.    | Result                   | Exposure<br>time | Species | Method  |
|------------------------------------|--------------------------|------------------|---------|---|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | slightly<br>irritating   | 24 h             | rabbit  | equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Hydroquinone<br>123-31-9           | not irritating           | 24 h             | rabbit  | Weight of evidence  |
| phthalic anhydride<br>85-44-9      | moderately<br>irritating | 24 h             | rabbit  | not specified   |
| maleic anhydride<br>108-31-6       | highly<br>irritating     |                  | rabbit  | OECD Guideline 404 (Acute 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<br>CAS-No.    | Result  | Exposure<br>time | Species | Method   |
|------------------------------------|---|------------------|---------|--|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | irritating  |                  | rabbit  | equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| phthalic anhydride<br>85-44-9      | Category 1<br>(irreversible<br>effects on the<br>eye) |                  | rabbit  | not specified  |
| maleic anhydride<br>108-31-6       | corrosive   |                  | rabbit  | 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.

| <b>Hazardous substances<br/>CAS-No.</b> | <b>Result</b>   | <b>Test type</b>                      | <b>Species</b> | <b>Method</b>  |
|---|-----------------|---------------------------------------|----------------|--|
| Ethyl 2-cyanoacrylate<br>7085-85-0      | not sensitising | Skin sensitisation                    | guinea pig     | not specified  |
| Hydroquinone<br>123-31-9                | sensitising     | Guinea pig maximisation<br>test       | guinea pig     | equivalent or similar to OECD Guideline<br>406 (Skin Sensitisation)                            |
| Hydroquinone<br>123-31-9                | sensitising     | Mouse local lymphnode<br>assay (LLNA) | mouse          | equivalent or similar to OECD Guideline<br>429 (Skin Sensitisation: Local Lymph<br>Node Assay) |
| phthalic anhydride<br>85-44-9           | sensitising     | Guinea pig maximisation<br>test       | guinea pig     | equivalent or similar to OECD Guideline<br>406 (Skin Sensitisation)                            |
| phthalic anhydride<br>85-44-9           | sensitising     | Mouse local lymphnode<br>assay (LLNA) | mouse          | equivalent or similar to OECD Guideline<br>429 (Skin Sensitisation: Local Lymph<br>Node Assay) |
| maleic anhydride<br>108-31-6            | sensitising     | Guinea pig maximisation<br>test       | guinea pig     | OECD Guideline 406 (Skin Sensitisation)  |

**Germ cell mutagenicity:**

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

| <b>Hazardous substances<br/>CAS-No.</b> | <b>Result</b> | <b>Type of study /<br/>Route of<br/>administration</b>   | <b>Metabolic<br/>activation /<br/>Exposure time</b> | <b>Species</b> | <b>Method</b>  |
|---|---------------|--|---|----------------|--|
| Ethyl 2-cyanoacrylate<br>7085-85-0      | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)   | with and without                                    |                | equivalent or similar to OECD<br>Guideline 471 (Bacterial<br>Reverse Mutation Assay)                       |
| Ethyl 2-cyanoacrylate<br>7085-85-0      | negative      | in vitro mammalian<br>chromosome<br>aberration test      | with and without                                    |                | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                                   |
| Ethyl 2-cyanoacrylate<br>7085-85-0      | negative      | mammalian cell<br>gene mutation assay                    | with and without                                    |                | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                                      |
| Hydroquinone<br>123-31-9                | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)   | with and without                                    |                | equivalent or similar to OECD<br>Guideline 471 (Bacterial<br>Reverse Mutation Assay)                       |
| Hydroquinone<br>123-31-9                | negative      | in vitro mammalian<br>chromosome<br>aberration test      | with and without                                    |                | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                                   |
| Hydroquinone<br>123-31-9                | positive      | mammalian cell<br>gene mutation assay                    | with and without                                    |                | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                                      |
| phthalic anhydride<br>85-44-9           | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)   | with and without                                    |                | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)  |
| phthalic anhydride<br>85-44-9           | negative      | in vitro mammalian<br>chromosome<br>aberration test      | with and without                                    |                | Chromosome Aberration Test   |
| phthalic anhydride<br>85-44-9           | negative      | mammalian cell<br>gene mutation assay                    | with and without                                    |                | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                                      |
| phthalic anhydride<br>85-44-9           | negative      | sister chromatid<br>exchange assay in<br>mammalian cells | with and without                                    |                | DNA damage and repair<br>assay, UDS in mammalian<br>cells  |
| maleic anhydride<br>108-31-6            | negative      | bacterial reverse<br>mutation assay (e.g<br>Ames test)   | with and without                                    |                | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)  |
| Hydroquinone<br>123-31-9                | positive      | intraperitoneal  |   | mouse          | equivalent or similar to OECD<br>Guideline 474 (Mammalian<br>Erythrocyte Micronucleus<br>Test)             |
| Hydroquinone<br>123-31-9                | negative      | oral: gavage   |   | rat            | equivalent or similar to OECD<br>Guideline 478 (Genetic<br>Toxicology: Rodent Dominant<br>Lethal Test)     |
| Hydroquinone<br>123-31-9                | positive      | intraperitoneal  |   | mouse          | equivalent or similar to OECD<br>Guideline 483 (Mammalian<br>Spermatogonial Chromosome<br>Aberration Test) |
| phthalic anhydride<br>85-44-9           | negative      | intraperitoneal  |   | mouse          | equivalent or similar to OECD<br>Guideline 474 (Mammalian<br>Erythrocyte Micronucleus<br>Test)             |
| maleic anhydride<br>108-31-6            | negative      | inhalation   |   | rat            | OECD Guideline 475<br>(Mammalian Bone Marrow<br>Chromosome Aberration Test)                                |

**Carcinogenicity**

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

| Hazardous components CAS-No. | Result           | Route of application | Exposure time / Frequency of treatment | Species | Sex         | Method   |
|------------------------------|------------------|----------------------|--|---------|-------------|--|
| Hydroquinone 123-31-9        | carcinogenic     | oral: gavage         | 103 w<br>5 d/w                         | rat     | male/female | equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| Hydroquinone 123-31-9        | carcinogenic     | oral: gavage         | 103 w<br>5 d/w                         | mouse   | female      | equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| phthalic anhydride 85-44-9   | not carcinogenic | oral: feed           | 105 w<br>daily                         | rat     | male/female | not specified  |

**Reproductive toxicity:**

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

| Hazardous substances CAS-No. | Result / Value   | Test type            | Route of application | Species | Method  |
|------------------------------|--|----------------------|----------------------|---------|---|
| Hydroquinone 123-31-9        | NOAEL P 15 mg/kg<br>NOAEL F1 150 mg/kg<br>NOAEL F2 150 mg/kg | Two generation study | oral: gavage         | rat     | EPA OTS 798.4700 (Reproduction and Fertility Effects)           |
| maleic anhydride 108-31-6    | NOAEL P 55 mg/kg<br>NOAEL F1 55 mg/kg                        | Two generation study | oral: gavage         | rat     | OECD Guideline 416 (Two-Generation Reproduction Toxicity Study) |

**STOT-single exposure:**

No data available.

**STOT-repeated exposure::**

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

| Hazardous substances CAS-No. | Result / Value   | Route of application | Exposure time / Frequency of treatment | Species | Method   |
|------------------------------|------------------|----------------------|--|---------|--|
| Hydroquinone 123-31-9        | NOAEL 50 mg/kg   | oral: gavage         | 13 w<br>5 d/w                          | rat     | not specified  |
| Hydroquinone 123-31-9        | NOAEL 73,9 mg/kg | dermal               | 13 w<br>6 h/d, 5 d/w                   | rat     | equivalent or similar to OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study) |
| phthalic anhydride 85-44-9   | NOAEL 500 mg/kg  | oral: feed           | 105 w<br>daily                         | rat     | not specified  |
| maleic anhydride 108-31-6    | NOAEL 40 mg/kg   | oral: feed           | 90 d<br>daily                          | rat     | not specified  |

**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.

### 12.1. Toxicity

#### Toxicity (Fish):

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value      | Exposure time | Species             | Method   |
|---------------------------------|---------------|------------|---------------|---------------------|--|
| Hydroquinone<br>123-31-9        | LC50          | 0,638 mg/l | 96 h          | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test)           |
| phthalic anhydride<br>85-44-9   | LC50          | 313 mg/l   | 48 h          | Leuciscus idus      | DIN 38412-15   |
| phthalic anhydride<br>85-44-9   | NOEC          | 10 mg/l    | 60 d          | no data             | OECD Guideline 210 (fish early lite stage toxicity test) |
| maleic anhydride<br>108-31-6    | LC50          | 115 mg/l   |               |                     | OECD Guideline 203 (Fish, Acute Toxicity Test)           |

#### Toxicity (Daphnia):

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value      | Exposure time | Species       | Method   |
|---------------------------------|---------------|------------|---------------|---------------|--|
| Hydroquinone<br>123-31-9        | EC50          | 0,134 mg/l | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| phthalic anhydride<br>85-44-9   | EC50          | > 640 mg/l | 48 h          | Daphnia magna | other guideline:   |
| maleic anhydride<br>108-31-6    | EC50          | 42,81 mg/l | 48 h          | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

#### Chronic toxicity to aquatic invertebrates

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value       | Exposure time | Species       | Method                                      |
|---------------------------------|---------------|-------------|---------------|---------------|---|
| Hydroquinone<br>123-31-9        | NOEC          | 0,0057 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| phthalic anhydride<br>85-44-9   | NOEC          | 16 mg/l     | 21 d          | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |

#### Toxicity (Algae):

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value      | Exposure time | Species   | Method   |
|---------------------------------|---------------|------------|---------------|---|--|
| Hydroquinone<br>123-31-9        | EC50          | 0,335 mg/l | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| phthalic anhydride<br>85-44-9   | EC50          | > 100 mg/l | 72 h          | not specified   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| phthalic anhydride<br>85-44-9   | NOEC          | 100 mg/l   | 72 h          | not specified   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| maleic anhydride<br>108-31-6    | EC50          | 29 mg/l    | 72 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| maleic anhydride<br>108-31-6    | EC10          | 23 mg/l    | 72 h          | Scenedesmus subspicatus (new<br>name: Desmodesmus<br>subspicatus)           | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |

### Toxicity to microorganisms

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

| Hazardous substances<br>CAS-No. | Value<br>type | Value         | Exposure time | Species          | Method  |
|---------------------------------|---------------|---------------|---------------|------------------|---|
| Hydroquinone<br>123-31-9        | EC 50         | 0,038 mg/l    | 30 min        |                  | not specified   |
| phthalic anhydride<br>85-44-9   | EC50          | > 1.000 mg/l  | 3 h           | activated sludge | ISO 8192 (Test for<br>Inhibition of Oxygen<br>Consumption by Activated<br>Sludge) |
| maleic anhydride<br>108-31-6    | EC0           | > 10.000 mg/l | 30 min        |                  | not specified   |

### 12.2. Persistence and degradability

| Hazardous substances<br>CAS-No.    | Result                     | Test type | Degradability | Exposure<br>time | Method  |
|------------------------------------|----------------------------|-----------|---------------|------------------|---|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | not readily biodegradable. | aerobic   | 57 %          | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)                     |
| Hydroquinone<br>123-31-9           | readily biodegradable      | aerobic   | 75 - 81 %     | 30 d             | EU Method C.4-E (Determination<br>of the "Ready"<br>Biodegradability Closed Bottle<br>Test) |
| phthalic anhydride<br>85-44-9      | readily biodegradable      | aerobic   | 85,2 %        | 14 d             | OECD Guideline 301 C (Ready<br>Biodegradability: Modified MITI<br>Test (I))                 |
| maleic anhydride<br>108-31-6       | readily biodegradable      | aerobic   | 98 %          | 7 d              | OECD Guideline 301 E (Ready<br>biodegradability: Modified OECD<br>Screening Test)           |

### 12.3. Bioaccumulative potential

No data available.

### 12.4. Mobility in soil

| Hazardous substances<br>CAS-No.    | LogPow | Temperature | Method                                |
|------------------------------------|--------|-------------|---------------------------------------|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | 0,776  | 22 °C       | EU Method A.8 (Partition Coefficient) |
| Hydroquinone<br>123-31-9           | 0,59   |             | EU Method A.8 (Partition Coefficient) |
| phthalic anhydride<br>85-44-9      | 1,6    |             | EU Method A.8 (Partition Coefficient) |
| maleic anhydride<br>108-31-6       | 1,62   |             | not specified                         |

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

| Hazardous substances<br>CAS-No.    | PBT / vPvB  |
|------------------------------------|---|
| Ethyl 2-cyanoacrylate<br>7085-85-0 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Hydroquinone<br>123-31-9           | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| phthalic anhydride<br>85-44-9      | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| maleic anhydride<br>108-31-6       | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very 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:

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

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

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.



## 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): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):     | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021):      | Not applicable |
| VOC content (2010/75/EC)  | < 3 %          |

**15.2. Chemical safety assessment**

A chemical safety assessment has been carried out.

**National regulations/information (Germany):**

WGK: WGK 3: highly hazardous to water (Ordinance on facilities for handling substances that are hazardous to water (AwSV) )  
Classification according to AwSV, Annex 1 (5.2)

Storage class according to TRGS 510: 10

**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:

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
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.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

|             |   |
|-------------|---|
| 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  |

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**Annex - Exposure Scenarios:**

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