



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

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Loctite 460

SDS No. : 153538
V002.5

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

1.1. Product identifier

Loctite 460

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

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):

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

2.2. Label elements

Label elements (CLP):

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

Supplemental information

EUH210 Safety data sheet available on request.

EUH202 Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

2.3. Other hazards

Not classified as hazardous.

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 |
|---|-------------------------------|------------------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | 204-327-1 01-2119496065-33 | >= 0,1- < 1 % | Repr. 2 H361 Aquatic Chronic 4 H413 |
| 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: 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

Prolonged or repeated contact may cause skin irritation.

Prolonged or repeated contact may cause eye irritation.

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

5.2. Special hazards arising from the substance or mixture

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

Oxides of carbon, oxides of nitrogen, irritating organic vapors.

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

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

Hygiene measures:

Good industrial hygiene practices should be observed.

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

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 ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|--|-----|-------------------|------------------------------|--|-----------------|
| Hydroquinone 123-31-9 [HYDROQUINONE] | | 0,5 | Time Weighted Average (TWA): | | EH40 WEL |

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|--------------------------|------------------------------------|-----------------|-------|-----|-------|--------------|---------|
| | | | mg/l | ppm | mg/kg | others | |
| 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 | STP | | | | | 0,71 mg/L | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|--------------------------|--------------------|-------------------|---------------------------------------|---------------|------------------------|---------|
| 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 ³ | |
| Hydroquinone 123-31-9 | Workers | Inhalation | Long term exposure - local effects | | 1 mg/m ³ | |
| 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 ³ | |
| Hydroquinone 123-31-9 | general population | Inhalation | Long term exposure - local effects | | 0,5 mg/m ³ | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Respiratory protection:
Ensure adequate ventilation.

Hand protection:

The use of chemical resistant gloves such as Nitrile is recommended.

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:

Wear protective glasses.

Skin protection:

Wear suitable protective clothing.

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 - 93,3 °C (176 - 199.94 °F); Tagliabue closed cup |
| Decomposition temperature | No data available / Not applicable |
| Vapour pressure | 0,3 mbar |
| Density (20 °C (68 °F)) | 1,1 g/cm ³ |
| 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: Water) | Polymerises in presence of water. |
| 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

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**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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

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:

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:

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

Acute oral toxicity:

| Hazardous components CAS-No. | Value type | Value | Route of application | Exposure time | Species | Method |
|---|---------------|----------------|-------------------------|------------------|---------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | LD50 | > 10.000 mg/kg | oral | | rat | |
| Hydroquinone 123-31-9 | LD50 | 367 mg/kg | oral | | rat | OECD Guideline 401 (Acute Oral Toxicity) |

Respiratory or skin sensitization:

| Hazardous components CAS-No. | Result | Test type | Species | Method |
|---------------------------------|-------------|---------------------------------|------------|--------|
| Hydroquinone 123-31-9 | sensitising | Guinea pig maximisation test | guinea pig | |

Germ cell mutagenicity:

| Hazardous components CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|---|----------|--|--|---------|---|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hydroquinone 123-31-9 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | EU Method B.13/14 (Mutagenicity) |

Reproductive toxicity:

| Hazardous substances CAS-No. | Result / Classification | Species | Exposure time | Species | Method |
|---|-------------------------|---------------------------|------------------|---------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | NOAEL P = 12,5 mg/kg | screening oral: gavage | | rat | OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test) |

Repeated dose toxicity

| Hazardous components CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---------------------------------|-----------------------|-------------------------|--|---------|--|
| Hydroquinone 123-31-9 | NOAEL=>= 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=<= 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:**

Biological and Chemical Oxygen Demands (BOD and COD) are insignificant.

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 1272/2008/EC. 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 |
|---------------------------------|---------------|-------------|----------------------------|------------------|--|--|
| 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) |
| 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:**

No data available.

| Hazardous components CAS-No. | Result | Route of application | Degradability | Method |
|---------------------------------|--------|-------------------------|---------------|--------|
|---------------------------------|--------|-------------------------|---------------|--------|

| | | | | |
|---|--|---------|-----------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | under test conditions no biodegradation observ | | 0 % | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Hydroquinone 123-31-9 | readily biodegradable | aerobic | 75 - 81 % | EU Method C.4-E (Determination of the "Ready" Biodegradability Closed 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. | LogKow | Bioconcentration factor (BCF) | Exposure time | Species | Temperature | Method |
|---|--------|----------------------------------|------------------|---------|-------------|---------------------------------------|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | 6,24 | | | | | |
| 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 |
|---|---|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Hydroquinone 123-31-9 | Not fulfilling PBT (persistent/bioaccumulative/toxic) 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

Disposal of uncleaned packages:

Disposal must be made according to official regulations.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

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. Packaging 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 73/78 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 %
(1999/13/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not 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:

- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.

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.

Label elements (DPD):

The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.

Additional labeling:

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

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.