



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

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LOCTITE HY 4070

SDS No. : 572854
V004.0

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

1.1. Product identifier

LOCTITE HY 4070

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

Intended use:
Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd
Adhesives
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000
Fax-no.: +44 (1442) 278071

ua-productsafety.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:



Contains

Ethyl 2-cyanoacrylate

| | |
|--|--|
| Signal word: | Warning |
| Hazard statement: | H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. |
| Supplemental information | Contains: Methyl acrylate 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. 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.

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 |
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | 204-327-1 01-2119496065-33 | 0,1- < 1 % | Repr. 2 H361 |
| 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 (CO₂) 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**

Ensure adequate ventilation.

Avoid contact with skin and eyes.

Wear protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ventilation (low level) is recommended when using large volumes
Use of dispensing equipment is recommended to minimise the risk of skin or eye contact
See advice in section 8
Avoid skin and eye contact.

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.
Store in a cool, dry place.
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
Great Britain

| Ingredient [Regulated substance] | ppm | mg/m ³ | 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): | 15 minutes | EH40 WEL |
| Methyl acrylate 96-33-3 [METHYL ACRYLATE] | 5 | 18 | Time Weighted Average (TWA): | | EH40 WEL |
| Methyl acrylate 96-33-3 [METHYLACRYLATE] | 5 | 18 | Time Weighted Average (TWA): | Indicative | ECLTV |
| Methyl acrylate 96-33-3 [METHYLACRYLATE] | 10 | 36 | Short Term Exposure Limit (STEL): | Indicative | ECLTV |
| Methyl acrylate 96-33-3 [METHYL ACRYLATE] | 10 | 36 | Short Term Exposure Limit (STEL): | 15 minutes | EH40 WEL |
| 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 ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|--|-----|-------------------|-----------------------------------|--|-----------------|
| Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL 2-CYANOACRYLATE; ETHYL CYANOACRYLATE] | 1 | | Short Term Exposure Limit (STEL): | 15 minutes | IR_OEL |
| Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL 2-CYANOACRYLATE; ETHYL CYANOACRYLATE] | 0,2 | | Time Weighted Average (TWA): | | IR_OEL |
| Methyl acrylate 96-33-3 [METHYLACRYLATE] | 5 | 18 | Time Weighted Average (TWA): | Indicative | ECLTV |
| Methyl acrylate 96-33-3 [METHYLACRYLATE] | 10 | 36 | Short Term Exposure Limit (STEL): | Indicative | ECLTV |
| Methyl acrylate 96-33-3 [METHYL ACRYLATE] | 5 | 18 | Time Weighted Average (TWA): | Indicative OELV | IR_OEL |
| Methyl acrylate 96-33-3 [METHYL ACRYLATE] | | | Skin designation: | Can be absorbed through the skin. | IR_OEL |
| Methyl acrylate 96-33-3 [METHYL ACRYLATE] | 10 | 36 | Short Term Exposure Limit (STEL): | 15 minutes Indicative OELV | IR_OEL |
| 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 | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | aqua (freshwater) | | 0,0068 mg/l | | | | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | aqua (marine water) | | 0,00068 mg/l | | | | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | aqua (intermittent releases) | | 0,048 mg/l | | | | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | sewage treatment plant (STP) | | 100 mg/l | | | | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | sediment (freshwater) | | | | 102 mg/kg | | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | sediment (marine water) | | | | 10,2 mg/kg | | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | Soil | | | | 20,4 mg/kg | | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | oral | | | | 10 mg/kg | | |
| Methyl acrylate 96-33-3 | aqua (freshwater) | | 0,003 mg/l | | | | |
| Methyl acrylate 96-33-3 | aqua (marine water) | | 0 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) | | | | 0,011 mg/kg | | |
| Methyl acrylate 96-33-3 | sediment (marine water) | | | | 0,011 mg/kg | | |
| Methyl acrylate 96-33-3 | Soil | | | | 1 mg/kg | | |
| Methyl acrylate 96-33-3 | oral | | | | 0,001 mg/kg | | |
| Hydroquinone 123-31-9 | aqua (freshwater) | | 0,00057 mg/l | | | | |
| Hydroquinone 123-31-9 | aqua (marine water) | | 0,000057 mg/l | | | | |
| Hydroquinone 123-31-9 | sediment (freshwater) | | | | 0,0049 mg/kg | | |
| Hydroquinone 123-31-9 | sediment (marine water) | | | | 0,00049 mg/kg | | |
| Hydroquinone 123-31-9 | aqua (intermittent releases) | | 0,00134 mg/l | | | | |
| Hydroquinone 123-31-9 | Soil | | | | 0,00064 mg/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 ³ | |
| Ethyl 2-cyanoacrylate 7085-85-0 | Workers | Inhalation | Long term exposure - systemic effects | | 9,25 mg/m ³ | |
| Ethyl 2-cyanoacrylate 7085-85-0 | General population | Inhalation | Long term exposure - local effects | | 9,25 mg/m ³ | |
| Ethyl 2-cyanoacrylate 7085-85-0 | General population | Inhalation | Long term exposure - systemic effects | | 9,25 mg/m ³ | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | Workers | dermal | Acute/short term exposure - systemic effects | | 3,175 mg/kg | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | Workers | inhalation | Acute/short term exposure - systemic effects | | 22,4 mg/m ³ | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | Workers | dermal | Long term exposure - systemic effects | | 0,635 mg/kg | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | Workers | inhalation | Long term exposure - systemic effects | | 4,48 mg/m ³ | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | General population | dermal | Acute/short term exposure - systemic effects | | 1,59 mg/kg | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | General population | inhalation | Acute/short term exposure - systemic effects | | 5,5 mg/m ³ | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | General population | oral | Acute/short term exposure - systemic effects | | 1,59 mg/kg | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | General population | dermal | Long term exposure - systemic effects | | 0,318 mg/kg | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | General population | inhalation | Long term exposure - systemic effects | | 1,1 mg/m ³ | |
| 6,6'-di-tert-Butyl-2,2'-methylenedi-p-cresol 119-47-1 | General population | oral | Long term exposure - systemic effects | | 0,318 mg/kg | |
| Methyl acrylate 96-33-3 | Workers | inhalation | Long term exposure - local effects | | 18 mg/m ³ | |
| Methyl acrylate 96-33-3 | Workers | dermal | Acute/short term exposure - local effects | | 0,49 mg/cm ² | |
| Methyl acrylate 96-33-3 | General population | inhalation | Acute/short term exposure - local effects | | 2,1 mg/m ³ | |
| Hydroquinone 123-31-9 | Workers | dermal | Long term exposure - systemic effects | | 3,33 mg/kg | |
| Hydroquinone 123-31-9 | Workers | inhalation | Long term exposure - systemic effects | | 2,1 mg/m ³ | |
| Hydroquinone 123-31-9 | General population | dermal | Long term exposure - systemic effects | | 1,66 mg/kg | |
| Hydroquinone 123-31-9 | General population | inhalation | Long term exposure - systemic effects | | 1,05 mg/m ³ | |
| Hydroquinone 123-31-9 | General population | oral | Long term exposure - systemic effects | | 0,6 mg/kg | |

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:
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.
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**

| | |
|--|------------------------------------|
| Appearance | gel gel Clear, colourless |
| Odor | irritating |
| Odour threshold | No data available / Not applicable |
| pH | Not available. |
| Melting point | No data available / Not applicable |
| Solidification temperature | No data available / Not applicable |
| Initial boiling point | 149 °C (300.2 °F) |
| Flash point | 80 - 93 °C (176 - 199.4 °F) |
| Evaporation rate | No data available / Not applicable |
| Flammability | No data available / Not applicable |
| Explosive limits | No data available / Not applicable |
| Vapour pressure | No data available / Not applicable |
| Relative vapour density: | No data available / Not applicable |
| Density | No data available / Not applicable |
| Bulk density | No data available / Not applicable |
| Solubility | No data available / Not applicable |
| Solubility (qualitative) | No data available / Not applicable |
| Partition coefficient: n-octanol/water | No data available / Not applicable |
| Auto-ignition temperature | No data available / Not applicable |
| Decomposition temperature | 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 |
| 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

carbon oxides.

SECTION 11: Toxicological information**General toxicological information:**

Cyanoacrylates are considered to have relatively low toxicity. Acute oral LD50 is >5000mg/kg (rat). It is almost impossible to swallow as it rapidly polymerises in the mouth.

Prolonged exposure to high concentrations of vapours may lead to chronic effects in sensitive individuals

In dry atmosphere with < 50% humidity, vapours may irritate the eyes and respiratory system

11.1. Information on toxicological effects**Acute oral toxicity:**

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

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|---|---------------|----------------|---------|--|
| Ethyl 2-cyanoacrylate 7085-85-0 | LD50 | > 5.000 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | LD50 | > 10.000 mg/kg | rat | not specified |
| Methyl acrylate 96-33-3 | LD50 | 768 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Hydroquinone 123-31-9 | LD50 | 367 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 CAS-No. | Value type | Value | Species | Method |
|--|------------|----------------|---------|--|
| Ethyl 2-cyanoacrylate 7085-85-0 | LD50 | > 2.000 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | LD50 | > 10.000 mg/kg | rat | not specified |
| Methyl acrylate 96-33-3 | LD50 | 1.250 mg/kg | rabbit | Draize Test |
| Hydroquinone 123-31-9 | LD50 | > 2.000 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |

Acute inhalative toxicity:

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

| Hazardous substances CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|------------------------------|------------|----------|-----------------|---------------|---------|---|
| Methyl acrylate 96-33-3 | LC50 | 6,5 mg/l | vapour | 4 h | rat | equivalent or similar to 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 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) |
| Hydroquinone 123-31-9 | not irritating | 24 h | rabbit | Weight of evidence |

Serious eye damage/irritation:

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

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|---------------------------------|------------|---------------|---------|---|
| Ethyl 2-cyanoacrylate 7085-85-0 | irritating | 72 h | 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.

| Hazardous substances CAS-No. | Result | Test type | Species | Method |
|---------------------------------|-----------------|------------------------------------|------------|--|
| Ethyl 2-cyanoacrylate 7085-85-0 | not sensitising | | guinea pig | not specified |
| 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 | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |
| Hydroquinone 123-31-9 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |

Germ cell mutagenicity:

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

| Hazardous substances CAS-No. | Result | Type of study / Route of 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) |
| Ethyl 2-cyanoacrylate 7085-85-0 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Ethyl 2-cyanoacrylate 7085-85-0 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| 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 | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hydroquinone 123-31-9 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Hydroquinone 123-31-9 | positive | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Methyl acrylate 96-33-3 | negative | inhalation: vapour | | mouse | not specified |
| Hydroquinone 123-31-9 | positive | intraperitoneal | | mouse | equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Hydroquinone 123-31-9 | negative | oral: gavage | | rat | equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test) |
| Hydroquinone 123-31-9 | positive | intraperitoneal | | mouse | equivalent or similar to OECD Guideline 483 (Mammalian Spermatogonial 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 |
|------------------------------|------------------|----------------------|--|---------|-------------|--|
| Methyl acrylate 96-33-3 | not carcinogenic | inhalation: vapour | 24 m 6 h/d, 5 d/w | rat | male/female | OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| Hydroquinone 123-31-9 | carcinogenic | oral: gavage | 103 w 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 5 d/w | mouse | female | equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

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 |
|---|--|----------------------------|-------------------------|---------|--|
| 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) |
| Hydroquinone 123-31-9 | NOAEL P 15 mg/kg NOAEL F1 150 mg/kg NOAEL F2 150 mg/kg | Two generation study | oral: gavage | rat | EPA OTS 798.4700 (Reproduction and Fertility Effects) |

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 |
|---------------------------------|------------------|----------------------------|--|---------|---|
| 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 | NOAEL 5 mg/kg | oral: drinking water | 13 w continuous | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Hydroquinone 123-31-9 | NOAEL 50 mg/kg | oral: gavage | 13 w 5 d/w | rat | not specified |
| Hydroquinone 123-31-9 | NOAEL 73,9 mg/kg | dermal | 13 w 6 h/d, 5 d/w | rat | equivalent or similar to OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study) |

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

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

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

12.1. Toxicity

Toxicity (Fish):

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

| Hazardous substances CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|------------|-----------------------------|---------------|---------------------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | LC50 | Toxicity > Water solubility | | Oryzias latipes | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Methyl acrylate 96-33-3 | LC50 | 3,4 mg/l | 96 h | Oncorhynchus mykiss | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Hydroquinone 123-31-9 | LC50 | 0,638 mg/l | 96 h | Oncorhynchus mykiss | 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|------------|-----------------------------|---------------|---------------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | EC50 | Toxicity > Water solubility | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Methyl acrylate 96-33-3 | EC50 | 2,6 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Hydroquinone 123-31-9 | EC50 | 0,134 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|------------|-----------------------------|---------------|---------------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | NOEC | Toxicity > Water solubility | | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Methyl acrylate 96-33-3 | NOEC | 0,19 mg/l | 21 d | Daphnia magna | EPA OTS 797.1330 (Daphnid Chronic Toxicity Test) |
| Hydroquinone 123-31-9 | NOEC | 0,0057 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|--------------------------------|---------------|---|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | EC50 | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata (reported as Selenastrum capricornutum) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | NOEC | Toxicity > Water solubility | 72 h | Pseudokirchneriella subcapitata (reported as Selenastrum capricornutum) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Methyl acrylate 96-33-3 | EC50 | 3,55 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Hydroquinone 123-31-9 | EC50 | 0,335 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---------------|---------------|---------------|---------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | EC 50 | > 10.000 mg/l | 3 h | | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| Methyl acrylate 96-33-3 | EC10 | > 100 mg/l | 72 h | | not specified |
| Hydroquinone 123-31-9 | EC 50 | 0,038 mg/l | 30 min | | not specified |

12.2. Persistence and degradability

The product is not biodegradable.

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|---|-----------|---------------|------------------|--|
| Ethyl 2-cyanoacrylate 7085-85-0 | not readily biodegradable. | aerobic | 57 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | under test conditions no biodegradation observed | aerobic | 0 % | 28 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| Methyl acrylate 96-33-3 | readily biodegradable | aerobic | 90 - 100 % | 28 d | OECD Guideline 310 (Ready BiodegradabilityCO2 in Sealed Vessels (Headspace Test)) |
| Hydroquinone 123-31-9 | readily biodegradable | aerobic | 75 - 81 % | 30 d | EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test) |

12.3. Bioaccumulative potential

| Hazardous substances CAS-No. | Bioconcentratio n factor (BCF) | Exposure time | Temperature | Species | Method |
|---|-----------------------------------|---------------|-------------|-----------------|--|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | 320 - 780 | 60 d | | Cyprinus carpio | OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test) |
| Methyl acrylate 96-33-3 | 3,16 | | | | not specified |

12.4. Mobility in soil

Cured adhesives are immobile.

| Hazardous substances CAS-No. | LogPow | Temperature | Method |
|---|--------|-------------|--|
| Ethyl 2-cyanoacrylate 7085-85-0 | 0,776 | 22 °C | EU Method A.8 (Partition Coefficient) |
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1 | 6,25 | 20 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Methyl acrylate 96-33-3 | 0,739 | 25 °C | 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 substances CAS-No. | PBT / vPvB |
|---|---|
| Ethyl 2-cyanoacrylate 7085-85-0 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 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. |
| 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.

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 | Not more than 500 ml (each inner package) - 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

| | |
|--|----------------|
| Ozone Depleting Substance (ODS) (Regulation 1005/2009/EC): | Not applicable |
| Prior Informed Consent (PIC) (Regulation 649/2012/EC): | Not applicable |
| Persistent Organic Pollutants (POPs) (Regulation 2019/1021/EC) : | Not applicable |

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): Not applicable

VOC content < 3 %
(2010/75/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:

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.
H335 May cause respiratory irritation.
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.
H412 Harmful to aquatic life with long lasting effects.

Further information:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

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.

Dear Customer,

Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your_company.com).

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://mysds.henkel.com/mysds/.470833.en.ANNEX_DE.15743123.0.DE.pdf

Alternatively they can be accessed on the internet site www.mysds.henkel.com by entering number 470833.



Safety Data Sheet according to (EC) No 1907/2006 as amended Page 1 of 14

LOCTITE HY 4070

SDS No. : 562801
V004.0
Revision: 20.01.2021
printing date: 02.02.2021
Replaces version from: 20.08.2020

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

1.1. Product identifier

LOCTITE HY 4070

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

Intended use:
Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd
Adhesives
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000
Fax-no.: +44 (1442) 278071

ua-productsafety.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 | |

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 Hexanediol dimethacrylate

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: 3,4,5,6-tetrahydrophthalic anhydride May produce an allergic reaction.

Precautionary statement: "***" ***For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P501 Dispose of contents/container in accordance with national regulation.***

Precautionary statement: P261 Avoid breathing vapors.
Prevention P273 Avoid release to the environment.

Precautionary statement: P302+P352 IF ON SKIN: Wash with plenty of soap and water.
Response P337+P313 If eye irritation persists: Get medical advice/attention.

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

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

| Hazardous components CAS-No. | EC Number REACH-Reg No. | content | Classification |
|---|-------------------------------|---------------|--|
| Hexanediol dimethacrylate 6606-59-3 | 229-551-7 01-2120760621-59 | 50- 100 % | STOT SE 3 H335 Aquatic Chronic 3 H412 Skin Irrit. 2 H315 Eye Irrit. 2 H319 |
| 3,4,5,6-tetrahydrophthalic anhydride 2426-02-0 | 219-374-3 | 0,1- < 1 % | Eye Dam. 1 H318 Resp. Sens. 1 H334 Aquatic Chronic 3 H412 Skin Sens. 1 H317 |
| 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. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.
Seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.
Seek medical advice.

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

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

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:**

Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

None known

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) 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**

Avoid contact with skin and eyes.

Ensure adequate ventilation.

Wear protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

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**

Use only in well-ventilated areas.

Avoid skin and eye contact.

Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

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
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 |

Occupational Exposure Limits

Valid for
Ireland

| 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): | | IR_OEL |

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|------------------------------------|-----------------|------------------|-----|------------------|--------|---------|
| | | | mg/l | ppm | mg/kg | others | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | aqua (freshwater) | | 0,00488 mg/l | | | | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | aqua (marine water) | | 0,000488 mg/l | | | | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | aqua (intermittent releases) | | 0,045 mg/l | | | | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | sediment (freshwater) | | | | 0,262 mg/kg | | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | aqua (marine water) | | | | 0,026 mg/kg | | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | Soil | | | | 0,05 mg/kg | | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | Sewage treatment plant | | 800 mg/l | | | | |
| Hydroquinone 123-31-9 | aqua (freshwater) | | 0,00057 mg/l | | | | |
| Hydroquinone 123-31-9 | aqua (marine water) | | 0,000057 mg/l | | | | |
| Hydroquinone 123-31-9 | sediment (freshwater) | | | | 0,0049 mg/kg | | |
| Hydroquinone 123-31-9 | sediment (marine water) | | | | 0,00049 mg/kg | | |
| Hydroquinone 123-31-9 | aqua (intermittent releases) | | 0,00134 mg/l | | | | |
| Hydroquinone 123-31-9 | Soil | | | | 0,00064 mg/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 |
|---|--------------------|-------------------|---------------------------------------|---------------|------------------------|---------|
| 1,6-hexanediyl bismethacrylate 6606-59-3 | Workers | inhalation | Long term exposure - systemic effects | | 14,5 mg/m ³ | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | Workers | dermal | Long term exposure - systemic effects | | 4,2 mg/kg | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | General population | inhalation | Long term exposure - systemic effects | | 4,3 mg/m ³ | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | General population | oral | Long term exposure - systemic effects | | 2,5 mg/kg | |
| 1,6-hexanediyl bismethacrylate 6606-59-3 | General population | dermal | Long term exposure - systemic effects | | 2,5 mg/kg | |
| Hydroquinone 123-31-9 | Workers | dermal | Long term exposure - systemic effects | | 3,33 mg/kg | |
| Hydroquinone 123-31-9 | Workers | inhalation | Long term exposure - systemic effects | | 2,1 mg/m ³ | |
| Hydroquinone 123-31-9 | General population | dermal | Long term exposure - systemic effects | | 1,66 mg/kg | |
| Hydroquinone 123-31-9 | General population | inhalation | Long term exposure - systemic effects | | 1,05 mg/m ³ | |
| Hydroquinone 123-31-9 | General population | oral | Long term exposure - systemic effects | | 0,6 mg/kg | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Use only in well-ventilated areas.

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.

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

| | |
|--|--|
| Appearance | liquid liquid colourless to yellowish |
| Odor | characteristic |
| Odour threshold | No data available / Not applicable |
| pH () | 7 |
| Melting point | No data available / Not applicable |
| Solidification temperature | No data available / Not applicable |
| Initial boiling point | No data available / Not applicable |
| Flash point | 110 °C (230 °F); no method |
| Evaporation rate | No data available / Not applicable |
| Flammability | No data available / Not applicable |
| Explosive limits | No data available / Not applicable |
| Vapour pressure | No data available / Not applicable |
| Relative vapour density: | No data available / Not applicable |
| Density () | 0,98 - 1,1 g/cm3 |
| Bulk density | No data available / Not applicable |
| Solubility | No data available / Not applicable |
| Solubility (qualitative) | No data available / Not applicable |
| Partition coefficient: n-octanol/water | No data available / Not applicable |
| Auto-ignition temperature | No data available / Not applicable |
| Decomposition temperature | 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 |
| Oxidising properties | No data available / Not applicable |

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong acids.
Reacts with strong oxidants.

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

carbon oxides.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity:**

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

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|---|---------------|---------------|---------|--|
| Hexanediol dimethacrylate 6606-59-3 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 423 (Acute Oral toxicity) |
| Hydroquinone 123-31-9 | LD50 | 367 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 CAS-No. | Value type | Value | Species | Method |
|---------------------------------|---------------|---------------|---------|--|
| Hydroquinone 123-31-9 | LD50 | > 2.000 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

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

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|---------------------------------|----------------|------------------|---------|--------------------|
| Hydroquinone 123-31-9 | not irritating | 24 h | rabbit | Weight of evidence |

Serious eye damage/irritation:

No data available.

Respiratory or skin sensitization:

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

| Hazardous substances CAS-No. | Result | Test type | Species | Method |
|--|-----------------|------------------------------------|------------|--|
| Hexanediol dimethacrylate 6606-59-3 | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Hexanediol dimethacrylate 6606-59-3 | not sensitising | Guinea pig maximisation test | guinea pig | Magnusson and Kligman Method |
| Hydroquinone 123-31-9 | sensitising | Guinea pig maximisation test | guinea pig | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |
| Hydroquinone 123-31-9 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |

Germ cell mutagenicity:

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

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|--|----------|--|--|---------|---|
| Hexanediol dimethacrylate 6606-59-3 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hexanediol dimethacrylate 6606-59-3 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Hydroquinone 123-31-9 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Hydroquinone 123-31-9 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Hydroquinone 123-31-9 | positive | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| Hexanediol dimethacrylate 6606-59-3 | negative | oral: gavage | | mouse | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Hydroquinone 123-31-9 | positive | intraperitoneal | | mouse | equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Hydroquinone 123-31-9 | negative | oral: gavage | | rat | equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test) |
| Hydroquinone 123-31-9 | positive | intraperitoneal | | mouse | equivalent or similar to OECD Guideline 483 (Mammalian Spermatogonial 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 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 5 d/w | mouse | female | equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

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 NOAEL F1 150 mg/kg NOAEL F2 150 mg/kg | Two generation study | oral: gavage | rat | EPA OTS 798.4700 (Reproduction and Fertility Effects) |

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 |
|---|------------------|-------------------------|--|---------|---|
| Hexanediol dimethacrylate 6606-59-3 | NOAEL 300 mg/kg | oral: gavage | 5 weeks (male), 8 weeks (fem.) daily | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| Hydroquinone 123-31-9 | NOAEL 50 mg/kg | oral: gavage | 13 w 5 d/w | rat | not specified |
| Hydroquinone 123-31-9 | NOAEL 73,9 mg/kg | dermal | 13 w 6 h/d, 5 d/w | rat | equivalent or similar to OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study) |

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|------------|---------------|---------------------|--|
| Hexanediol dimethacrylate 6606-59-3 | LC50 | 4,5 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Hexanediol dimethacrylate 6606-59-3 | NOEC | 0,138 mg/l | 32 d | Pimephales promelas | OECD Guideline 210 (fish early lite stage toxicity test) |
| Hydroquinone 123-31-9 | LC50 | 0,638 mg/l | 96 h | Oncorhynchus mykiss | 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|------------|---------------|---------------|--|
| Hexanediol dimethacrylate 6606-59-3 | EC50 | 11,2 mg/l | 48 h | Daphnia magna | QSAR (Quantitative Structure Activity Relationship) |
| Hydroquinone 123-31-9 | EC50 | 0,134 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|-------------|---------------|---------------|---|
| Hexanediol dimethacrylate 6606-59-3 | NOEC | 0,488 mg/l | 21 d | Daphnia magna | QSAR (Quantitative Structure Activity Relationship) |
| Hydroquinone 123-31-9 | NOEC | 0,0057 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|------------|---------------|--|---|
| Hexanediol dimethacrylate 6606-59-3 | EC50 | 5,33 mg/l | 72 h | Algae | QSAR (Quantitative Structure Activity Relationship) |
| Hexanediol dimethacrylate 6606-59-3 | NOEC | 1,11 mg/l | 72 h | Algae | QSAR (Quantitative Structure Activity Relationship) |
| Hydroquinone 123-31-9 | EC50 | 0,335 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, 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 CAS-No. | Value type | Value | Exposure time | Species | Method |
|--|---------------|------------|---------------|--------------------|--|
| Hexanediol dimethacrylate 6606-59-3 | EC0 | 800 mg/l | 16 h | Pseudomonas putida | ISO 10712: Determination of the inhibitory effect of water constituents on bacteria (Pseudomonas cell inhibition test) |
| Hydroquinone 123-31-9 | EC 50 | 0,038 mg/l | 30 min | | not specified |

12.2. Persistence and degradability

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|--|-----------------------|-----------|---------------|---------------|--|
| Hexanediol dimethacrylate 6606-59-3 | readily biodegradable | aerobic | 91,1 % | 28 d | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Hydroquinone 123-31-9 | readily biodegradable | aerobic | 75 - 81 % | 30 d | EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test) |

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

| Hazardous substances CAS-No. | LogPow | Temperature | Method |
|--|--------|-------------|---|
| Hexanediol dimethacrylate 6606-59-3 | 4,08 | | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Hydroquinone 123-31-9 | 0,59 | | EU Method A.8 (Partition Coefficient) |

12.5. Results of PBT and vPvB assessment

| Hazardous substances CAS-No. | PBT / vPvB |
|--|---|
| Hexanediol dimethacrylate 6606-59-3 | 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:

Dispose of in accordance with local and national regulations.

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

Disposal of uncleaned packages:

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

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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

| | |
|--|----------------|
| Ozone Depleting Substance (ODS) (Regulation 1005/2009/EC): | Not applicable |
| Prior Informed Consent (PIC) (Regulation 649/2012/EC): | Not applicable |
| Persistent Organic Pollutants (POPs) (Regulation 2019/1021/EC) : | Not applicable |

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): Not applicable

VOC content < 3,00 %
(2010/75/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.
- 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.
- 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:

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