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



SDS No. : 434271
V002.0

LOCTITE 460

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Replaces version from: 13.01.2014

## 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

**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):**
Chronic hazards to the aquatic environment — Category 3
H412 Harmful to aquatic life with long lasting effects.

**Classification (DPD):**
Dangerous for the environment
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2. Label elements**

**Label elements (CLP):**

**Hazard statement:** H412 Harmful to aquatic life with long lasting effects.

| | |
|---|---|
| **Supplemental information** | EUH202 Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. |
| **Precautionary statement: Prevention** | P273 Avoid release to the environment. |
| **Precautionary statement: Disposal** | P501 Dispose of waste and residues in accordance with local authority requirements. |

**Label elements (DPD):**

Risk phrases:

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

Additional labeling:

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

**2.3. Other hazards**

None if used properly.

## 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<br>CAS-No. | EC Number<br>REACH-Reg No. | content | Classification |
|---|---|---|---|
| 2-Methoxyethyl a-cyanoacrylate<br>27816-23-5 | 248-670-5<br>01-2120070891-53 | 50- 100 % | |
| Bismaleimide<br>105391-33-1 | 424-600-0 | 0,25- < 0,5 % | Aquatic Acute 1<br>H400<br>Aquatic Chronic 1<br>H410 |
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane<br>119-47-1 | 204-327-1<br>01-2119496065-33 | 0,1- < 1 % | Repr. 2<br>H361<br>Aquatic Chronic 4<br>H413 |
| Hydroquinone<br>123-31-9 | 204-617-8<br>01-2119524016-51 | 0,01- < 0,1 % | Aquatic Acute 1<br>H400<br>Aquatic Chronic 1<br>H410<br>Carc. 2<br>H351<br>Muta. 2<br>H341<br>Acute Tox. 4; Oral<br>H302<br>Eye Dam. 1<br>H318<br>Skin Sens. 1<br>H317<br>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.**

**Declaration of ingredients according to DPD (EC) No 1999/45:**

| Hazardous components<br>CAS-No. | EC Number<br>REACH-Reg No. | content | Classification |
|---|---|---|---|
| 2-Methoxyethyl a-cyanoacrylate<br>27816-23-5 | 248-670-5<br>01-2120070891-53 | 50 - 100 % | |
| Bismaleimide<br>105391-33-1 | 424-600-0 | 0,25 - < 2,5 % | N - Dangerous for the environment; R50/53 |
| Hydroquinone<br>123-31-9 | 204-617-8<br>01-2119524016-51 | 0,01 - < 0,1 % | carcinogenic, category 3; R40<br>Mutagen category 3.; R68<br>Xn - Harmful; R22<br>Xi - Irritant; R41<br>R43<br>N - Dangerous for the environment; R50 |

**For full text of the R-Phrases indicated by codes 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

**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.
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 | ppm | mg/m$^3$ | Type | Category | Regulatory list |
|---|---|---|---|---|---|
| Hydroquinone<br>123-31-9<br>[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/m3 | |
| Hydroquinone 123-31-9 | Workers | Inhalation | Long term exposure - local effects | | 1 mg/m3 | |
| 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/m3 | |
| Hydroquinone 123-31-9 | general population | Inhalation | Long term exposure - local effects | | 0,5 mg/m3 | |

**Biological Exposure Indices:**
None

**8.2. Exposure controls:**

Engineering controls:
Ensure good ventilation/extraction.

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Filter type: A

Hand protection:

Polyethylene or polypropylene gloves are recommended when using large volumes.
Do not use PVC, rubber or nylon gloves.
Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.
The use of chemical resistant gloves such as Neoprene or Natural Rubber is recommended
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Skin protection:

Wear suitable protective clothing.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| Appearance | Liquid<br>Clear, Colorless,<br>Straw |
| Odour threshold | No data available / Not applicable |
| pH | No data available / Not applicable |
| Initial boiling point | No data available / Not applicable |
| Flash point | 80 °C (176 °F) |
| Decomposition temperature | No data available / Not applicable |
| Vapour pressure<br>(50 °C (122 °F)) | < 700 mbar |
| Density<br>(20 °C (68 °F)) | 1,1 g/cm3 |
| 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) | 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**
None if used properly.

**10.6. Hazardous decomposition products**
carbon oxides.

## SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

**General toxicological information:**
The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 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 |
|---|---|---|---|---|---|---|
| 2-Methoxyethyl a-cyanoacrylate 27816-23-5 | LD50 | > 5.000 mg/kg | oral | | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Bismaleimide 105391-33-1 | LD50 | > 5.000 mg/kg | oral | | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 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) |

**Acute inhalative toxicity:**

| Hazardous components CAS-No. | Value type | Value | Route of application | Exposure time | Species | Method |
|---|---|---|---|---|---|---|

**Acute dermal toxicity:**

| Hazardous components CAS-No. | Value type | Value | Route of application | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| 2-Methoxyethyl a-cyanoacrylate 27816-23-5 | LD50 | > 2.000 mg/kg | dermal | | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |

**Skin corrosion/irritation:**

| Hazardous components CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| 2-Methoxyethyl a-cyanoacrylate 27816-23-5 | not irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Bismaleimide 105391-33-1 | not irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

| Hazardous components CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| Bismaleimide 105391-33-1 | not irritating | 24 h | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

**Respiratory or skin sensitization:**

| Hazardous components CAS-No. | Result | Test type | Species | Method |
|---|---|---|---|---|
| Bismaleimide 105391-33-1 | not sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| 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 |
|---|---|---|---|---|---|
| 2-Methoxyethyl a-cyanoacrylate 27816-23-5 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Bismaleimide 105391-33-1 | negative | bacterial gene mutation assay | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 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 | LOAEL=<= 500 mg/kg | oral: gavage | 14 days5 days/week. 12 doses | rat | OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents) |
| Hydroquinone 123-31-9 | NOAEL=>= 250 mg/kg | oral: gavage | 14 days5 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.
Do not empty into drains / surface water / ground water.
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:**

Harmful to aquatic life with long lasting effects.

| Hazardous components CAS-No. | Value type | Value | Acute Toxicity Study | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| Bismaleimide 105391-33-1 | LC50 | 0,5 mg/l | Fish | 48 h | Oryzias latipes | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Hydroquinone 123-31-9 | LC50 | 0,17 mg/l | Fish | 96 h | Brachydanio rerio (new name: Danio rerio) | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Hydroquinone 123-31-9 | EC50 | 0,29 mg/l | Daphnia | 48 h | Daphnia magna | |
| Hydroquinone 123-31-9 | EC50 | 0,335 mg/l | Algae | 3 d | 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 for the product.

| Hazardous components CAS-No. | Result | Route of application | Degradability | Method |
|---|---|---|---|---|
| 2-Methoxyethyl a-cyanoacrylate 27816-23-5 | readily biodegradable | aerobic | 86 % | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| 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" BiodegradabilityClosed Bottle Test) |

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

**Mobility:**

Cured adhesives are immobile.

**Bioaccumulative potential:**

No data available for the product.

| 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 | 1,03 | | | | | |

### 12.5. Results of PBT and vPvB assessment

| Hazardous components CAS-No. | PBT/vPvB |
|---|---|

| | |
|---|---|
| Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane<br>119-47-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Hydroquinone<br>123-31-9 | Not fulfilling PBT (persistent/bioaccummulative/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 (1999/13/EC) < 3,00 %

**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:

R22 Harmful if swallowed.
R40 Limited evidence of a carcinogenic effect.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R50 Very toxic to aquatic organisms.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68 Possible risk of irreversible effects.
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.

**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.**