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# SAFETY DATA SHEET

HARDENER 008 7501

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

### 1.1 Product identifier

**Product name** : HARDENER 008 7501

**Product code** : 0087501

**Product description** : Hardener.

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

Recommended use: Painting work
Only for industrial and professional use. The product is not intended for consumer use.

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer or Distributor**

Tikkurila Oyj
P.O. Box 53
FI-01301 VANTAA
FINLAND
Telephone +358 20 191 2000

**e-mail address of person responsible for this SDS** : Tikkurila Oyj,
Product Safety,
e-mail: productsafety@tikkurila.com

### 1.4 Emergency telephone number

**Telephone number** : 112
(24h)

**Supplier or Manufacturer**

**Telephone number** : Tikkurila Oyj
+358 20 191 2000
(Mon-Fri 8-16 Finnish time)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Flam. Liq. 3, H226
Skin Corr. 1C, H314
Skin Sens. 1, H317

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Classification according to Directive 1999/45/EC [DPD]**

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : R10
Xn; R20
C; R34
R43

**Physical/chemical hazards** : Flammable.

**Human health hazards** : Harmful by inhalation. Causes burns. May cause sensitization by skin contact.

### 2.2 Label elements

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : H226 - Flammable liquid and vapor.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.

**Precautionary statements**

**General** : Not applicable.

**Prevention** : P261 - Avoid breathing mist/vapors/spray.
P280 - Wear protective gloves/clothing and eye/face protection.
P285 - In case of inadequate ventilation wear respiratory protection.
P210 - Keep away from sparks and open flames. - No smoking.

**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.
P302 + P361 + P353 - IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water or shower.
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310 - Immediately call a POISON CENTER or doctor/physician.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Hazardous ingredients** : phenol, methylstyrenated
paraformaldehyde, oligomeric reaction products with 4-tert-butylphenol, 4-nonylphenol, m-phenylenebis(methylamine) and trimethylhexane-1,6-diamine
isophorone diamine
2,4,6-tris(dimethylaminomethyl)phenol
diethylenetriamine
polyethylene polyamines

**Supplemental label elements** : Not applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

: Mixture

| Product/ingredient name | Identifiers | % | Classification 67/548/EEC | Classification Regulation (EC) No. 1272/2008 [CLP] | Notes |
|---|---|---|---|---|---|
| xylene | REACH #: 01-2119488216-32<br>EC: 215-535-7<br>CAS: 1330-20-7<br>Index: 601-022-00-9 | ≥10 - <25 | R10<br>Xn; R20/21<br>Xi; R38 | Flam. Liq. 3, H226<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315 | C |
| phenol, methylstyrenated | REACH #: 01-2119555274-38<br>EC: 270-966-8<br>CAS: 68512-30-1 | ≥5 - <10 | Xi; R38<br>R43<br>R52/53 | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412 | - |
| paraformaldehyde, oligomeric reaction products with 4-tert-butylphenol, 4-nonylphenol, m-phenylenebis(methylamine) and trimethylhexane-1, 6-diamine | EC: 500-618-5<br>CAS: 161278-27-9 | ≥5 - <10 | Xn; R20<br>C; R34<br>R43<br>R52/53 | Acute Tox. 4, H332<br>Skin Corr. 1C, H314<br>Skin Sens. 1B, H317<br>Aquatic Chronic 3, H412 | - |
| polyaminoamide | CAS: 68410-23-1 | ≥5 - <10 | Xi; R36/38 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319 | - |
| iso-butanol | REACH #: 01-2119484609-23 | ≥3 - <5 | R10 | Flam. Liq. 3, H226 | - |

| | | | | | |
|---|---|---|---|---|---|
| | EC: 201-148-0<br>CAS: 78-83-1<br>Index: 603-108-00-1 | | Xi; R41, R37/38<br>R67 | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335<br>STOT SE 3, H336 | |
| benzyl alcohol | EC: 202-859-9<br>CAS: 100-51-6<br>Index: 603-057-00-5 | ≥3 - <5 | Xn; R20/22 | Acute Tox. 4, H302<br>Acute Tox. 4, H332<br>Eye Irrit. 2, H319 | - |
| ethylbenzene | REACH #: 01-2119489370-35<br>EC: 202-849-4<br>CAS: 100-41-4 | ≥1 - <3 | F; R11<br>Xn; R20, R48/20, R65 | Flam. Liq. 2, H225<br>Acute Tox. 4, H332<br>STOT RE 2, H373 (ears)<br>Asp. Tox. 1, H304 | - |
| isophorone diamine | EC: 220-666-8<br>CAS: 2855-13-2<br>Index: 612-067-00-9 | ≥1 - <2 | Xn; R21/22<br>C; R34<br>R43<br>R52/53 | Acute Tox. 4, H302<br>Acute Tox. 4, H312<br>Skin Corr. 1B, H314<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412 | - |
| diethylenetriamine | REACH #: 01-2119473793-27<br>EC: 203-865-4<br>CAS: 111-40-0 | ≥0,3 - <1 | T+; R26<br>Xn; R21/22<br>C; R34<br>Xi; R37<br>R43 | Acute Tox. 4, H302<br>Acute Tox. 4, H312<br>Acute Tox. 2, H330<br>Skin Corr. 1B, H314<br>Skin Sens. 1, H317<br>STOT SE 3, H335 | - |
| | | | **See Section 16 for the full text of the R-phrases declared above.** | **See Section 16 for the full text of the H statements declared above.** | |

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Notes, if applicable, refer to Notes given in Annex VI of 1272/2008/EC.

# SECTION 4: First aid measures

## 4.1 Description of first aid measures

**General** : In all cases of doubt, or when symptoms persist, seek medical attention. Show this safety data sheet or label to the doctor if possible.

**Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of lukewarm water, keeping eyelids open. Continue to rinse for at least 20 minutes. Get medical attention immediately. Continue rinsing until medical attention can be obtained.

**Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

**Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. In case of chemical burns, get medical attention as soon as possible.

**Ingestion** : If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Remove to fresh air and keep at rest in a position comfortable for breathing. Do NOT induce vomiting.

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

Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Inhalation of vapours may cause dizziness, headache and nausea.
See Section 11 for more detailed information on health effects and symptoms.

## 4.3 Indication of any immediate medical attention and special treatment needed

None.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Recommended: Alcohol resistant foam, $CO_2$, powders or water spray/mist.

**Unsuitable extinguishing media** : Do not use a direct water jet that could spread the fire.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : Flammable liquid and vapor. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : When exposed to high temperatures, may produce hazardous decomposition products, such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc.

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Do not release runoff from fire to drains or watercourses.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** : Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not get in eyes or on skin. Do not breathe vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment (see Section 8).

**6.2 Environmental precautions** : Do not allow to enter drains, water courses or soil.

**6.3 Methods and materials for containment and cleaning up** : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Preferably clean with a detergent. Avoid using solvents.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling** : Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. Isolate from sources of heat, sparks and open flame. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. No sparking tools should be used.

Skin contact with the product and exposure to spray mist and vapor should be avoided. Avoid inhalation of dust from sanding. Wear appropriate respirator when ventilation is inadequate. See Section 8 for information on appropriate personal protective equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled and stored. Wash hands before breaks and immediately after handling the product.

**7.2 Conditions for safe storage, including any incompatibilities** : Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). No smoking. Store and use away from heat, sparks, open flame or any other ignition source. Keep container tightly closed. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Recommended storage temperature is +5°C ...+25°C. Store in accordance with local regulations.

**7.3 Specific end use(s)** : None.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational exposure limits**

| Product/ingredient name | Exposure limit values |
|---|---|
| xylene | **EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values**<br>TWA: 50 ppm 8 hours.<br>TWA: 221 mg/m³ 8 hours.<br>STEL: 100 ppm 15 minutes.<br>STEL: 442 mg/m³ 15 minutes. |
| ethylbenzene | **EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values**<br>TWA: 100 ppm 8 hours.<br>TWA: 442 mg/m³ 8 hours.<br>STEL: 200 ppm 15 minutes.<br>STEL: 884 mg/m³ 15 minutes. |

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**DNELs/DMELs**

No DNELs/DMELs available.

**PNECs**

No PNECs available.

### 8.2 Exposure controls

**Appropriate engineering controls**

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Use explosion-proof ventilation equipment. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn (see Personal protection for both components). Provide a readily-accessible eyewash facility. Comply with the health and safety at work laws.

**Individual protection measures**

**Eye/face protection** : Wear eye/face protection (EN166).

**Hand protection** : Always wear approved protective gloves against chemicals. Gloves should be replaced regularly and if there is any sign of damage to the glove material. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Recommended glove material (EN374):
< 1 hour (breakthrough time): nitrile rubber, butyl rubber
> 8 hours (breakthrough time): laminated foil
Not recommended: PVC or natural rubber (latex) gloves

**Skin protection** : Personnel should wear protective clothing. This product is classified as flammable. If necessary, personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.

**Respiratory protection** : If ventilation is inadequate, use respirator that will protect against organic vapor and dust/mist. During spray-application use respirators with combination filter A/P3 (EN405:2001). Wear a half mask or full face respirator with gas and vapor filter A and dust filter P2 during sanding (EN140:1998, EN405:2001). During continuous and long-term work the use of motor-driven or air-fed respirators is recommended (EN12941:1998). Be sure to use an approved/certified respirator or equivalent. Check that mask fits tightly and change filter regularly.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| **Appearance** | | |
| **Physical state** | : | Liquid. |
| **Color** | : | Coloured |
| **Odor** | : | Strong. |
| **Odor threshold** | : | Not relevant for the hazard assessment of the product. |
| **pH** | : | Not relevant for the hazard assessment of the product. |
| **Melting point/freezing point** | : | -94,96°C (xylene) |
| **Initial boiling point and boiling range** | : | 136,16°C (xylene) |
| **Flash point** | : | 25°C (xylene) |
| **Evaporation rate** | : | 0,77 (butyl acetate = 1) (xylene) |
| **Flammability (solid, gas)** | : | Not applicable. Product is a liquid. |
| **Upper/lower flammability or explosive limits** | : | Lower: 0,8% (xylene)<br>Upper: 6,7% (xylene) |
| **Vapor pressure** | : | 0,89 kPa [room temperature] (xylene) |
| **Vapor density** | : | 3,7 (xylene) |
| **Density** | : | 1,42 g/cm³ |
| **Solubility(ies)** | : | insoluble in water. |
| **Partition coefficient: n-octanol/water** | : | Not available. |
| **Auto-ignition temperature** | : | 432°C (xylene) |
| **Decomposition temperature** | : | Not relevant for the hazard assessment of the product. |
| **Viscosity** | : | Not relevant for the hazard assessment of the product. |
| **Explosive properties** | : | No explosive ingredients present. |
| **Oxidizing properties** | : | No oxidizing ingredients present. |

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : See Section 10.5.

**10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).

**10.3 Possibility of hazardous reactions** : May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame.

**10.4 Conditions to avoid** : Avoid extreme heat and freezing. Avoid all possible sources of ignition (spark or flame).

**10.5 Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions:
oxidizing agents
strong acids
strong alkalis

**10.6 Hazardous decomposition products** : When exposed to high temperatures, hazardous decomposition products may be produced, such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc.

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

There is no testdata available on the product itself.
The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Long term exposure by inhalation may cause respiratory tract irritation. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged skin contact may lead to allergic contact dermatitis. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting.

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| xylene | LC50 Inhalation Vapor | Rat | 22 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 1700 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| benzyl alcohol | LC50 Inhalation Dusts and mists | Rat | 4,178 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 2000 mg/kg | - |
| | LD50 Oral | Rat | 1620 mg/kg | - |
| ethylbenzene | LC50 Inhalation Gas. | Rabbit | 4000 ppm | 4 hours |
| diethylenetriamine | LC50 Inhalation Dusts and mists | Rat | 0,07 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 1000 mg/kg | - |
| | LD50 Oral | Rat | 300 mg/kg | - |

Not classified.

**Irritation/Corrosion**

Causes severe skin burns and eye damage.

**Sensitization**

May cause an allergic skin reaction.
Contains small amounts of sensitizing substances:
2,4,6-tris(dimethylaminomethyl)phenol
diethylenetriamine
polyethylene polyamines

**Mutagenicity**

Not classified.

**Carcinogenicity**

Not classified.

**Reproductive toxicity**

Not classified.

**Teratogenicity**

Not classified.

**Specific target organ toxicity (single exposure)**

Not classified.

**Specific target organ toxicity (repeated exposure)**

Not classified.

**Aspiration hazard**

Not classified.

# SECTION 12: Ecological information

Ecological testing has not been conducted on this product.
Do not allow to enter drains, water courses or soil.

The product is not classified as environmentally hazardous according to Regulation (EC) 1272/2008.

## 12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| phenol, methylstyrenated<br>isophorone diamine | LC50 25,8 mg/m³<br>Acute EC50 17,4 mg/l Fresh water | Fish<br>Daphnia - Daphnia magna | 96 hours<br>48 hours |

## 12.2 Persistence and degradability

: No specific data.

## 12.3 Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | Bioconcentration factor [BCF] | Potential |
|---|---|---|---|
| phenol, methylstyrenated<br>isophorone diamine | 3,627<br>0,99 | -<br>- | low<br>low |

## 12.4 Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

**Mobility** : Not available.

## 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

## 12.6 Other adverse effects

: Not available.

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

**Product**

**Methods of disposal** : Gather residues into waste containers. Liquid residue and cleaning liquids are hazardous waste and must not be emptied into drains or sewage system, but handled in accordance with national regulations. Product residues should be left at special companies which have permission for gathering this kind of wastes.

**European waste catalogue (EWC)**

| Waste code | Waste designation |
|---|---|
| 08 01 11* | waste paint and varnish containing organic solvents or other dangerous substances |

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

**Packaging**

**Methods of disposal** : Empty packaging should be recycled or disposed of in accordance with national regulations.

**Special precautions** : None.

## SECTION 14: Transport information

| | ADR/RID | IMDG | IATA |
|---|---|---|---|
| **14.1 UN number** | UN3469 | UN3469 | UN3469 |
| **14.2 UN proper shipping name** | PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE | PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE | Paint related material, flammable, corrosive |
| **14.3 Transport hazard class(es)** | 3 (8) | 3 (8) | 3 (8) |
| **14.4 Packing group** | III | III | III |
| **14.5 Environmental hazards** | No. | No. | No. |
| **Additional information** | **Hazard identification number**<br>38<br><br>**Special provisions**<br>163<br><br>**Tunnel code**<br>(D/E) | **Emergency schedules (EmS)**<br>F-E, S-C<br><br>**Special provisions**<br>163, 223 | The environmentally hazardous substance mark may appear if required by other transportation regulations.<br>**Passenger and Cargo Aircraft**<br>Quantity limitation: 5 L<br>Packaging instructions: 354<br>**Cargo Aircraft Only**<br>Quantity limitation: 60 L<br>Packaging instructions: 365<br>**Limited Quantities - Passenger Aircraft**<br>Quantity limitation: 1 L<br>Packaging instructions: Y342<br><br>**Special provisions**<br>A3, A72 |

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Other EU regulations**

**Europe inventory** : Not determined.

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

| Classification | Justification |
|---|---|
| Flam. Liq. 3, H226 | On basis of test data |
| Skin Corr. 1C, H314 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |

**Full text of abbreviated H statements** :

| | |
|---|---|
| H225 | Highly flammable liquid and vapor. |
| H226 | Flammable liquid and vapor. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H312 (dermal) | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H332 | Harmful if inhaled. |
| H332 (inhalation) | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness and dizziness. |
| H373 (ears) | May cause damage to organs through prolonged or repeated exposure. (ears) |
| H412 | Harmful to aquatic life with long lasting effects. |

**Full text of classifications [CLP/GHS]** :

| | |
|---|---|
| Acute Tox. 2, H330 | ACUTE TOXICITY (inhalation) - Category 2 |
| Acute Tox. 4, H302 | ACUTE TOXICITY (oral) - Category 4 |
| Acute Tox. 4, H312 | ACUTE TOXICITY (dermal) - Category 4 |
| Acute Tox. 4, H332 | ACUTE TOXICITY (inhalation) - Category 4 |
| Aquatic Chronic 3, H412 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| Asp. Tox. 1, H304 | ASPIRATION HAZARD - Category 1 |
| Eye Dam. 1, H318 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Eye Irrit. 2, H319 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 |
| Flam. Liq. 2, H225 | FLAMMABLE LIQUIDS - Category 2 |
| Flam. Liq. 3, H226 | FLAMMABLE LIQUIDS - Category 3 |
| Skin Corr. 1B, H314 | SKIN CORROSION/IRRITATION - Category 1B |
| Skin Corr. 1C, H314 | SKIN CORROSION/IRRITATION - Category 1C |
| Skin Irrit. 2, H315 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1, H317 | SKIN SENSITIZATION - Category 1 |

| | |
|---|---|
| Skin Sens. 1B, H317 | SKIN SENSITIZATION - Category 1B |
| STOT RE 2, H373 (ears) | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (ears) - Category 2 |
| STOT SE 3, H335 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| STOT SE 3, H336 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |

**Full text of abbreviated R phrases** : R11- Highly flammable.
R10- Flammable.
R26- Very toxic by inhalation.
R20- Harmful by inhalation.
R20/21- Harmful by inhalation and in contact with skin.
R20/22- Harmful by inhalation and if swallowed.
R21/22- Harmful in contact with skin and if swallowed.
R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65- Harmful: may cause lung damage if swallowed.
R34- Causes burns.
R41- Risk of serious damage to eyes.
R37- Irritating to respiratory system.
R38- Irritating to skin.
R36/38- Irritating to eyes and skin.
R37/38- Irritating to respiratory system and skin.
R43- May cause sensitization by skin contact.
R67- Vapors may cause drowsiness and dizziness.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Full text of classifications [DSD/DPD]** : F - Highly flammable
T+ - Very toxic
C - Corrosive
Xn - Harmful
Xi - Irritant

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## Notice to reader

**This Safety Data Sheet is prepared in accordance with Annex II (EU) No 453/2010 to Regulation (EC) No 1907/2006 (REACH. The information contained in this Safety Data Sheet is based on the present state of knowledge and current EU and national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.**