# SAFETY DATA SHEET

DUROCIT-3 LIQUID II

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

### 1.1 Product identifier

**Product name** : DUROCIT-3 LIQUID II

**UFI** : UX33-U0H8-V00T-NG8D

**Cat. No.** : 40200097, 50200064

**Container size** : 150 ml, 1 l

**Product type** : Liquid.

**Other means of identification** : Not available.

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

**Product use** : For embedding of materialographic specimens

**Area of application** : Professional applications.

| Uses advised against |
|---|
| None identified. |

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

Struers ApS
Pederstrupvej 84
DK-2750 Ballerup

Telephone: +45 44 600 800

**e-mail address of person responsible for this SDS** : sdsquestions@struers.dk

### 1.4 Emergency telephone number

**National advisory body/Poison Centre**

**Telephone number** : 2122 4071

**Supplier**

**Telephone number** : +45 44 600 800 (Only during office hours)

## 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. 2, H225
Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
Carc. 1B, H350
Repr. 2, H361d
STOT SE 3, H335
STOT RE 1, H372

# SECTION 2: Hazards identification

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

**Ingredients of unknown toxicity** : 2.5 percent of the mixture consists of component(s) of unknown acute dermal toxicity

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

## 2.2 Label elements

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : H225 - Highly flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H350 - May cause cancer.
H361d - Suspected of damaging the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

**Prevention** : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Response** : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

**Storage** : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : methyl methacrylate
styrene
N,N-dimethyl-p-toluidine

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

## 2.3 Other hazards

## SECTION 2: Hazards identification

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Product meets the criteria for endocrine disrupting properties according to Regulation (EC) No. 1907/2006.** : No.

**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 | Specific Conc. Limits, M-factors and ATEs | Type |
|---|---|---|---|---|---|
| methyl methacrylate | EC: 201-297-1<br>CAS: 80-62-6<br>Index: 607-035-00-6 | ≥25 - ≤50 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>STOT SE 3, H335 | - | [1] [2] |
| styrene | EC: 202-851-5<br>CAS: 100-42-5<br>Index: 601-026-00-0 | ≥2.5 - ≤10 | Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Repr. 2, H361d<br>STOT RE 1, H372 (hearing organs)<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | ATE [Inhalation (vapours)] = 11 mg/l | [1] |
| N,N-dimethyl-p-toluidine | EC: 202-805-4<br>CAS: 99-97-8<br>Index: 612-296-00-4 | <2.5 | Acute Tox. 3, H301<br>Acute Tox. 2, H330<br>Carc. 1B, H350<br>STOT RE 2, H373 (blood system, respiratory tract)<br>Aquatic Chronic 3, H412<br>**See Section 16 for the full text of the H statements declared above.** | ATE [Oral] = 140 mg/kg<br>ATE [Inhalation (vapours)] = 1.4 mg/l | [1] |

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, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

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

# SECTION 4: First aid measures

## 4.1 Description of first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

**Over-exposure signs/symptoms**

**Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

**Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

## SECTION 4: First aid measures

**Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, $CO_2$, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## SECTION 6: Accidental release measures

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Absorb spill with inert material (e.g. dry sand or earth) and place in a chemical waste container.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

Store between the following temperatures: 10 to 25°C (50 to 77°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Seveso Directive - Reporting thresholds (in tonnes)**

# SECTION 7: Handling and storage

**Danger criteria**

| Category | Notification and MAPP threshold | Safety report threshold |
|---|---|---|
| P5c | 5000 tonnes | 50000 tonnes |

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

# SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational exposure limits**

| Product/ingredient name | Exposure limit values |
|---|---|
| methyl methacrylate | **EU OEL (Europe, 1/2022)**<br>TWA 8 hours: 50 ppm.<br>STEL 15 minutes: 100 ppm. |

**Biological exposure indices**

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

| Product/ingredient name | Result | |
|---|---|---|
| methyl methacrylate | **DNEL - General population - Short term - Dermal**<br>1.5 mg/cm² | Effects: Local |
| | **DNEL - General population - Long term - Dermal**<br>1.5 mg/cm² | Effects: Local |
| | **DNEL - Workers - Short term - Dermal**<br>1.5 mg/cm² | Effects: Local |
| | **DNEL - Workers - Long term - Dermal**<br>1.5 mg/cm² | Effects: Local |
| | **DNEL - General population - Long term - Oral** | Effects: Systemic |

## SECTION 8: Exposure controls/personal protection

| | | |
|---|---|---|
| | 8.2 mg/kg bw/day | |
| | **DNEL - General population - Long term - Dermal**<br>8.2 mg/kg bw/day | Effects: Systemic |
| | **DNEL - Workers - Long term - Dermal**<br>13.67 mg/kg bw/day | Effects: Systemic |
| | **DNEL - General population - Long term - Inhalation**<br>74.3 mg/m³ | Effects: Systemic |
| | **DNEL - General population - Long term - Inhalation**<br>104 mg/m³ | Effects: Local |
| | **DNEL - General population - Short term - Inhalation**<br>208 mg/m³ | Effects: Local |
| | **DNEL - Workers - Long term - Inhalation**<br>208 mg/m³ | Effects: Local |
| | **DNEL - Workers - Long term - Inhalation**<br>348.4 mg/m³ | Effects: Systemic |
| | **DNEL - Workers - Short term - Inhalation**<br>416 mg/m³ | Effects: Local |
| styrene | **DNEL - General population - Long term - Oral**<br>7.7 µg/kg bw/day | Effects: Systemic |
| | **DNEL - General population - Long term - Inhalation**<br>1 mg/m³ | Effects: Local |
| | **DNEL - General population - Long term - Inhalation**<br>1 mg/m³ | Effects: Systemic |
| | **DNEL - General population - Short term - Inhalation**<br>10 mg/m³ | Effects: Local |
| | **DNEL - General population - Short term - Inhalation**<br>10 mg/m³ | Effects: Systemic |
| | **DNEL - Workers - Long term - Inhalation** | Effects: Systemic |

## SECTION 8: Exposure controls/personal protection

| | | |
|---|---|---|
| | 85 mg/m³ | |
| | **DNEL - Workers - Short term - Inhalation**<br>100 mg/m³ | Effects: Local |
| | **DNEL - Workers - Long term - Inhalation**<br>100 mg/m³ | Effects: Local |
| | **DNEL - Workers - Short term - Inhalation**<br>100 mg/m³ | Effects: Systemic |
| | **DNEL - General population - Long term - Dermal**<br>343 mg/kg bw/day | Effects: Systemic |
| | **DNEL - Workers - Long term - Dermal**<br>406 mg/kg bw/day | Effects: Systemic |
| N,N-dimethyl-p-toluidine | **DNEL - General population - Long term - Oral**<br>20 µg/kg bw/day | Effects: Systemic |
| | **DNEL - General population - Long term - Inhalation**<br>22.7 µg/m³ | Effects: Systemic |
| | **DNEL - Workers - Long term - Inhalation**<br>0.128 mg/m³ | Effects: Systemic |
| | **DNEL - General population - Long term - Dermal**<br>0.223 mg/kg bw/day | Effects: Systemic |
| | **DNEL - Workers - Long term - Dermal**<br>0.624 mg/kg bw/day | Effects: Systemic |

**PNECs**

Not available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures**

## SECTION 8: Exposure controls/personal protection

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Recommended: Butyl rubber gloves. Nitrile gloves.
Breakthrough time: 60 minutes
thickness: 0.3 mm
Not recommended: PVC gloves.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: multi-gas/vapour filter: A

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state** : Liquid.

**Colour** : Green. [Light]

**Odour** : Characteristic.

**Odour threshold** : Not available.

## SECTION 9: Physical and chemical properties

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : 101°C

**Flammability** : Not available.

**Lower and upper explosion limit** : Lower: 2.1%
Upper: 12.5%

**Flash point** : Closed cup: 10°C

**Auto-ignition temperature** : 430°C

**Decomposition temperature** : Not available.

**pH** : Not applicable.

**Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): Not available.

**Solubility** :

| Media | Result |
|---|---|
| water | Not soluble |

**Solubility in water** : Not available.

**Partition coefficient n-octanol/ water (log Pow)** : Not applicable.

**Vapour pressure** : 4.7 kPa (35.253 mm Hg)

**Relative density** : 1.05

**Relative vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

#### 9.2.2 Other safety characteristics

**Miscible with water** : No.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable. (SAPT = Self-Accelerating Polymerization Temperature: 55 °C)

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.

**10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

## SECTION 10: Stability and reactivity

**10.5 Incompatible materials** : Reactive or incompatible with the following materials: oxidising materials

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity**

| Product/ingredient name | Result | |
|---|---|---|
| methyl methacrylate | **Rat - Oral - LD50**<br>7872 mg/kg | Toxic effects: Behavioral - Muscle weakness Behavioral - Coma Lung, Thorax, or Respiration - Respiratory depression |
| | **Rabbit - Dermal - LD50**<br>>5 g/kg | Toxic effects: Skin After systemic exposure - Dermatitis, other |
| | **Rat - Inhalation - LC50 Vapour**<br>78000 mg/m³ [4 hours] | |
| | **Rat - Inhalation - LC50 Vapour**<br>7093 ppm [4 hours] | |
| styrene | **Rat - Oral - LD50**<br>5000 mg/kg | |
| | **Rat - Male, Female - Dermal - LD50**<br>>2000 mg/kg | 402 [Acute Dermal Toxicity] |
| N,N-dimethyl-p-toluidine | **Rat - Oral - LD50**<br>980 mg/kg | Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia |
| | **Rat - Inhalation - LC50 Vapour**<br>1400 mg/m³ [4 hours] | Toxic effects: Olfaction - Ulcerated nasal septum Lung, Thorax, or Respiration - Dyspnea Lung, Thorax, or Respiration - Respiratory stimulation |

**Conclusion/Summary [Product]** : Not available.

**Acute toxicity estimates**

## SECTION 11: Toxicological information

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| DUROCIT-3 LIQUID II | 5656.6 | N/A | N/A | 37.4 | 56.6 |
| methyl methacrylate | 7872 | N/A | N/A | 78 | N/A |
| styrene | 5000 | N/A | N/A | 11 | N/A |
| N,N-dimethyl-p-toluidine | 140 | N/A | N/A | 1.4 | 1.4 |

**Skin corrosion/irritation**

| Product/ingredient name | Result |
|---|---|
| styrene | **Rabbit - Skin - Mild irritant**<br>Amount/concentration applied: 500 mg<br><br>**Rabbit - Skin - Moderate irritant**<br>Amount/concentration applied: 100 % |

**Conclusion/Summary [Product]** : Not available.

**Serious eye damage/eye irritation**

| Product/ingredient name | Result |
|---|---|
| styrene | **Rabbit - Eyes - Moderate irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 100 mg<br><br>**Rabbit - Eyes - Severe irritant**<br>Amount/concentration applied: 100 mg |

**Conclusion/Summary [Product]** : Not available.

**Respiratory corrosion/irritation**

**Conclusion/Summary [Product]** : Not available.

**Respiratory or skin sensitization**

**Skin**

**Conclusion/Summary [Product]** : Not available.

**Respiratory**

**Conclusion/Summary [Product]** : Not available.

**Germ cell mutagenicity**

**Conclusion/Summary [Product]** : Not available.

**Carcinogenicity**

# SECTION 11: Toxicological information

**Conclusion/Summary [Product]** : Not available.

**Reproductive toxicity**

**Conclusion/Summary [Product]** : Not available.

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

| Product/ingredient name | Result |
|---|---|
| methyl methacrylate | STOT SE 3, H335 (Respiratory tract irritation) |

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

| Product/ingredient name | Result |
|---|---|
| styrene | STOT RE 1, H372 (hearing organs) |
| N,N-dimethyl-p-toluidine | STOT RE 2, H373 (blood system, respiratory tract) |

**Aspiration hazard**

| Product/ingredient name | Result |
|---|---|
| styrene | ASPIRATION HAZARD - Category 1 |

**Information on likely routes of exposure**

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

**Potential acute health effects**

**Eye contact** : Causes serious eye irritation.

**Inhalation** : May cause respiratory irritation.

**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness

**Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

## SECTION 11: Toxicological information

**Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

**Conclusion/Summary [Product]** : Not available.

**General** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : Suspected of damaging the unborn child.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Product/ingredient name | Result | |
|---|---|---|
| methyl methacrylate | **Acute - LC50 - Fresh water**<br>Fish - Bluegill - *Lepomis macrochirus* - Juvenile (Fledgling, Hatchling, Weanling)<br>Size: 3.65 cm; Weight: 0.9 g<br>191 mg/l [96 hours] | Effect: Mortality |
| | **Acute - EC50 - Fresh water**<br>Daphnia - *Daphnia magna*<br>69 mg/l [48 hours] | |
| | **Acute - NOEC**<br>Fish - *Oncorhynchus mykiss* | ISO |

## SECTION 12: Ecological information

| | | |
|---|---|---|
| | 40 mg/l [96 hours] | |
| styrene | **Acute - LC50 - Fresh water**<br>Daphnia - Water flea - *Daphnia magna*<br>Age: ≤24 hours<br>23 mg/l [48 hours] | Effect: Mortality<br>US EPA |
| | **Acute - EC50 - Marine water**<br>Algae - Diatom - *Skeletonema costatum*<br>78 mg/l [96 hours] | Effect: Population |
| | **Acute - EC50**<br>Micro-organism - *Pseudomonas putida*<br>72 mg/l [16 hours] | |
| N,N-dimethyl-p-toluidine | **Acute - LC50 - Fresh water**<br>Fish - Fathead minnow - *Pimephales promelas*<br>Age: 32 days; Size: 24.5 mm; Weight: 0.242 g<br>46 mg/l [96 hours] | Effect: Mortality |

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary [Product]** : Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| methyl methacrylate | - | - | Readily |

### 12.3 Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| methyl methacrylate | 1.38 | - | Low |
| styrene | 2.96 | 13.49 | Low |
| N,N-dimethyl-p-toluidine | 1.729 | 33 | Low |

### 12.4 Mobility in soil

**Soil/water partition coefficient**

| Product/ingredient name | logKoc | Koc |
|---|---|---|
| methyl methacrylate | 1.2 | 16.6906 |
| styrene | 3 | 896.322 |
| N,N-dimethyl-p-toluidine | 1.9 | 79.6007 |

**Results of PMT and vPvM assessment**

| Product/ingredient name | PMT | P | M | T | vPvM | vP | vM |
|---|---|---|---|---|---|---|---|
| methyl methacrylate | No | N/A | Yes | No | N/A | N/A | Yes |
| styrene | N/A | N/A | Yes | Yes | No | N/A | No |
| N,N-dimethyl-p-toluidine | N/A | N/A | Yes | Yes | N/A | N/A | Yes |

**Mobility** : Not available.

## SECTION 12: Ecological information

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

**Regulation (EC) No. 1907/2006 [REACH]**

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|---|---|---|---|---|---|---|---|
| methyl methacrylate | No | N/A | N/A | No | N/A | N/A | N/A |
| styrene | No | N/A | No | Yes | No | N/A | No |
| N,N-dimethyl-p-toluidine | No | N/A | No | Yes | No | N/A | No |

**Regulation (EC) No. 1272/2008 [CLP]**

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|---|---|---|---|---|---|---|---|
| methyl methacrylate | No | N/A | N/A | No | N/A | N/A | N/A |
| styrene | No | N/A | No | Yes | No | N/A | No |
| N,N-dimethyl-p-toluidine | No | N/A | No | Yes | No | N/A | No |

**Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP]** : The product does not meet the criteria to be considered as a PBT or vPvB.

### 12.6 Endocrine disrupting properties

Not available.

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Product**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

**European waste catalogue (EWC)**

| Waste code | Waste designation |
|---|---|
| 07 01 04* | other organic solvents, washing liquids and mother liquors |

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

## SECTION 13: Disposal considerations

| Type of packaging | European waste catalogue (EWC) | |
|---|---|---|
| Glass bottles or jugs | 15 01 07 | glass packaging |

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|---|---|---|---|---|
| **14.1 UN number or ID number** | UN1866 | UN1866 | UN1866 | UN1866 |
| **14.2 UN proper shipping name** | RESIN SOLUTION | RESIN SOLUTION | RESIN SOLUTION | Resin solution |
| **14.3 Transport hazard class(es)** | 3 | 3 | 3 | 3 |
| **14.4 Packing group** | II | II | II | II |
| **14.5 Environmental hazards** | No. | Yes. | No. | No. |

**Additional information**

**ADR/RID** : **Hazard identification number** 33
**Limited quantity** 5 L
**Special provisions** 640D
**Tunnel code** (D/E)

**ADN** : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
**Special provisions** 640D

**IMDG** : **Emergency schedules** F-E, _S-E_

**IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
**Special provisions** A3

**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 Maritime transport in bulk according to IMO instruments** : 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)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

| Product/ingredient name | % | Designation [Usage] |
|---|---|---|
| DUROCIT-3 LIQUID II | ≥90 | 3<br>28 |
| N,N-dimethyl-p-toluidine | <2.5 | 28 |

**Labelling** : Restricted to professional users.

**Other EU regulations**

**Explosive precursors** : Not applicable.

**Ozone depleting substances (EU 2024/590)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

| Category |
|---|
| P5c |

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

## SECTION 15: Regulatory information

**15.2 Chemical safety assessment** : The supplier has not performed a chemical safety assessment for the substance/ product.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
B = Bioaccumulative
BCF = Bioconcentration Factor
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
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
M = Mobile
N/A = Not available
P = Persistent
PBT = Persistent, Bioaccumulative and Toxic
PMT = Persistent, Mobile and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SGG = Segregation Group
T = Toxic
vB = Very Bioaccumulative
vM = Very Mobile
vP = Very Persistent
vPvB = Very Persistent and Very Bioaccumulative
vPvM = Very Persistent and Very Mobile

**Key literature references and sources for data** : Regulation (EC) No. 1272/2008 [CLP]; European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), concluded in Geneva on 30 September 1957 plus amendments (Uniform text: Journal of Laws 27/2009 pos. 162 plus amendments); European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN); Occupational exposure limits; International regulations

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

| Classification | Justification |
|---|---|
| Flam. Liq. 2, H225 | On basis of test data |
| Skin Irrit. 2, H315 | Calculation method |
| Eye Irrit. 2, H319 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| Carc. 1B, H350 | Calculation method |
| Repr. 2, H361d | Calculation method |
| STOT SE 3, H335 | Calculation method |
| STOT RE 1, H372 | Calculation method |

**Full text of abbreviated H statements**

## SECTION 16: Other information

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H350 | May cause cancer. |
| H361d | Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |

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

| | |
|---|---|
| Acute Tox. 2 | ACUTE TOXICITY - Category 2 |
| Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| Asp. Tox. 1 | ASPIRATION HAZARD - Category 1 |
| Carc. 1B | CARCINOGENICITY - Category 1B |
| Eye Irrit. 2 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
| Flam. Liq. 2 | FLAMMABLE LIQUIDS - Category 2 |
| Flam. Liq. 3 | FLAMMABLE LIQUIDS - Category 3 |
| Repr. 2 | REPRODUCTIVE TOXICITY - Category 2 |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| STOT RE 1 | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1 |
| STOT RE 2 | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |

**Training advice** : Ensure operatives are trained to minimise exposures. Training staff on good practice.

**Date of issue/ Date of revision** : 20/03/2026

**Date of previous issue** : No previous validation

**Version** : 1

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**