

SAFETY DATA SHEET

DUROCIT-3 LIQUID II

Section 1. Identification

GHS product identifier : DUROCIT-3 LIQUID II
Cat. No. : 40200097, 50200064
Container size : 150 ml, 1 l
Other means of identification : Not available.
Product type : Liquid.

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

Product use : For embedding of materialographic specimens
Area of application : Professional applications.

Supplier's details : Struers Inc.
24766 Detroit Rd. Westlake
Cleveland, OH 44145
United States
Telephone: +1 (440) 871 0071

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

Emergency telephone number (with hours of operation) : National Capital Poison Center: 1-800-222-1222
Infotrac: 1-800-535-5053
Struers US:
1-440-871-0071

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : H225 FLAMMABLE LIQUIDS - Category 2
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H317 SKIN SENSITIZATION - Category 1
H350 CARCINOGENICITY - Category 1B
H361 TOXIC TO REPRODUCTION - Category 2
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Date of issue/Date of revision : 01/31/2023 **Date of previous issue** : 12/15/2022 **Version** : 3.01 1/16



Section 2. Hazards identification

| | |
|---|--|
| Hazard statements | : H225 - Highly flammable liquid and vapor. 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. H361 - Suspected of damaging fertility or the unborn child. H372 - Causes damage to organs through prolonged or repeated exposure. (hearing organs, reproductive organs) |
| <u>Precautionary statements</u> | |
| Prevention | : P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling. P272 - Contaminated work clothing must not be allowed out of the workplace. |
| Response | : P308 + P313 - IF exposed or concerned: Get medical advice or attention. P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P363 - Wash contaminated clothing before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| Storage | : P405 - Store locked up. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool. |
| Disposal | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazards not otherwise classified | : None known. |

Section 3. Composition/information on ingredients

| | |
|--------------------------------------|------------------|
| Substance/mixture | : Mixture |
| Other means of identification | : Not available. |

| Ingredient name | Other names | % | CAS number |
|--------------------------|-------------|-----------|------------|
| methyl methacrylate | - | ≥50 - ≤75 | 80-62-6 |
| styrene | - | ≥10 - ≤15 | 100-42-5 |
| N,N-dimethyl-p-toluidine | - | ≤3 | 99-97-8 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.



Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 4. First aid measures

Description of necessary 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.

Most important symptoms/effects, acute and delayed

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.

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 fetal weight
increase in fetal deaths
skeletal malformations



Section 4. First aid measures

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

Indication of immediate medical attention and special treatment needed, if necessary

- 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.
- 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. 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
- 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.



Section 6. Accidental release measures

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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".
- Environmental precautions** : Avoid dispersal of spilled 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).

Methods and materials 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 release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

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 vapor 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.



Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : 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 oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|--------------------------|---|
| methyl methacrylate | ACGIH TLV (United States, 1/2022). Skin sensitizer. TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes. NIOSH REL (United States, 10/2020). TWA: 100 ppm 10 hours. TWA: 410 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 410 mg/m ³ 8 hours. |
| styrene | ACGIH TLV (United States, 1/2022). Ototoxicant. TWA: 10 ppm 8 hours. STEL: 20 ppm 15 minutes. OSHA PEL Z2 (United States, 2/2013). TWA: 100 ppm 8 hours. CEIL: 200 ppm AMP: 600 ppm 5 minutes. NIOSH REL (United States, 10/2020). TWA: 50 ppm 10 hours. TWA: 215 mg/m ³ 10 hours. STEL: 100 ppm 15 minutes. STEL: 425 mg/m ³ 15 minutes. |
| N,N-dimethyl-p-toluidine | OARS WEEL (United States, 1/2021). TWA: 0.5 ppm 8 hours. |

Biological exposure indices

| Ingredient name | Exposure indices |
|-----------------|--|
| styrene | ACGIH BEI (United States, 1/2022) BEI: 400 mg/g creatinine, mandelic acid plus phenylglyoxylic acid [in urine]. Sampling time: end of shift. BEI: 40 µg/l, styrene [in urine]. Sampling time: end of shift. |

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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.



Section 8. Exposure controls/personal protection

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.

Individual protection measures

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.
Breakthrough time: 60 minutes
thickness: 0.3 mm

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.

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/vapor filter: A2

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state : Liquid.
Color : Green.
Odor : Characteristic.
Odor threshold : Not available.
pH : Not applicable.
Melting point/freezing point : Not available.
Boiling point, initial boiling point, and boiling range : 101°C (213.8°F)



Section 9. Physical and chemical properties and safety characteristics

| | |
|---|-------------------------------|
| Flash point | : Closed cup: 10°C (50°F) |
| Evaporation rate | : Not available. |
| Flammability | : Not available. |
| Lower and upper explosion limit/flammability limit | : Lower: 2.1% Upper: 12.5% |
| Vapor pressure | : 4.7 kPa (35.253 mm Hg) |
| Relative vapor density | : Not available. |
| Relative density | : 1.05 |
| Density | : Not available. |
| Solubility(ies) | : |

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

| | |
|---|-------------------|
| Miscible with water | : No. |
| Partition coefficient: n-octanol/water | : Not applicable. |
| Auto-ignition temperature | : |

| Ingredient name | °C | °F | Method |
|---------------------|-----|-----|-----------|
| methyl methacrylate | 400 | 752 | DIN 51794 |

| | |
|--|-------------------------------------|
| Decomposition temperature | : Not available. |
| SADT | : Not available. |
| Viscosity | : Not available. |
| Flow time (ISO 2431) | : Not available. |
| Particle characteristics | : |
| Median particle size | : Not applicable. |
| Additional information | : |
| Physical/chemical properties comments | : VOC content: 650 g/l (calculated) |

Section 10. Stability and reactivity

| | |
|---|---|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : The product is stable. (SAPT = Self-Accelerating Polymerization Temperature: 55 °C) |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur. |
| Conditions to avoid | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| Incompatible materials | : Reactive or incompatible with the following materials: oxidizing materials |



Section 10. Stability and reactivity

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--------------------------|-----------------------|-----------------------|-------------------------|----------|
| methyl methacrylate | LC50 Inhalation Vapor | Rat | 78000 mg/m ³ | 4 hours |
| | LC50 Inhalation Vapor | Rat | 7093 ppm | 4 hours |
| | LD50 Dermal | Rabbit | >5 g/kg | - |
| | LD50 Oral | Rat | 7872 mg/kg | - |
| styrene | LC50 Inhalation Vapor | Rat | 24 mg/l | 4 hours |
| | LD50 Dermal | Rat - Male, Female | >2000 mg/kg | - |
| | LD50 Oral | Rat | 5000 mg/kg | - |
| N,N-dimethyl-p-toluidine | LD50 Oral | Rat | 980 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|-----------------|-------------|
| styrene | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 100 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|--------------------------|------|------|--|
| methyl methacrylate | - | 3 | - |
| styrene | - | 2A | Reasonably anticipated to be a human carcinogen. |
| N,N-dimethyl-p-toluidine | - | 2B | - |

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|---------------------|------------|-------------------|------------------------------|
| methyl methacrylate | Category 3 | - | Respiratory tract irritation |
| styrene | Category 3 | - | Respiratory tract irritation |
| | Category 3 | - | Narcotic effects |

Specific target organ toxicity (repeated exposure)



Section 11. Toxicological information

| Name | Category | Route of exposure | Target organs |
|-------------------------------------|--------------------------|--------------------|---------------------------------------|
| styrene N,N-dimethyl-p-toluidine | Category 1 Category 2 | inhalation oral | hearing organs reproductive organs |

Aspiration hazard

| Name | Result |
|---------|--------------------------------|
| styrene | ASPIRATION HAZARD - Category 1 |

Information on the 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 fetal weight
 increase in fetal deaths
 skeletal malformations

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

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

Delayed and immediate effects and also 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



Section 11. Toxicological information

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 fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| DUROCIT-3 LIQUID II | 21973.1 | 8108.1 | N/A | 120 | N/A |
| methyl methacrylate | 7872 | N/A | N/A | 78 | N/A |
| styrene | 5000 | 2500 | N/A | 24 | N/A |
| N,N-dimethyl-p-toluidine | 980 | 300 | N/A | 3 | N/A |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--------------------------|------------------------------------|--|----------|
| methyl methacrylate | Acute EC10 100 mg/l | Micro-organism - Pseudomonas putida | 16 hours |
| | Acute EC50 69 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 191000 µg/l Fresh water | Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| styrene | Acute NOEC 40 mg/l | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute EC50 78000 µg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 72 mg/l | Micro-organism - Pseudomonas putida | 16 hours |
| N,N-dimethyl-p-toluidine | Acute LC50 52 mg/l Marine water | Crustaceans - Artemia salina | 48 hours |
| | Acute LC50 23 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 46000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |

Conclusion/Summary : Not available.

Persistence and degradability

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

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--------------------------|--------------------|-------|-----------|
| methyl methacrylate | 1.38 | - | low |
| styrene | 0.35 | 13.49 | low |
| N,N-dimethyl-p-toluidine | 1.729 | 33 | low |



Section 12. Ecological information

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.




Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

| Ingredient | CAS # | Status | Reference number |
|---------------------------|---------|--------|------------------|
| Methyl methacrylate (I,T) | 80-62-6 | Listed | U162 |

Section 14. Transport information

| | DOT Classification | IMDG | IATA |
|----------------------------|--|--|--|
| UN number | UN1866 | UN1866 | UN1866 |
| UN proper shipping name | Resin Solution | RESIN SOLUTION | Resin solution |
| Transport hazard class(es) | 3  | 3  | 3  |
| Packing group | II | II | II |
| Environmental hazards | No. | No. | No. |

Additional information



Section 14. Transport information

- DOT Classification** : **Reportable quantity** 2000 lbs / 908 kg [228.45 gal / 864.76 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 173. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.
Special provisions 149, B52, IB2, T4, TP1, TP8
- 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
- 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.
- Transport in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

- U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are active or exempted.
Clean Water Act (CWA) 311: methyl methacrylate; styrene
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed
- SARA 302/304**
Composition/information on ingredients
 No products were found.
- SARA 304 RQ** : Not applicable.
- SARA 311/312**
Classification : FLAMMABLE LIQUIDS - Category 2
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 SKIN SENSITIZATION - Category 1
 CARCINOGENICITY - Category 1B
 TOXIC TO REPRODUCTION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1



Section 15. Regulatory information

Composition/information on ingredients

| Name | % | Classification |
|--------------------------|-----------|--|
| methyl methacrylate | ≥50 - ≤75 | FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| styrene | ≥10 - ≤15 | FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 ASPIRATION HAZARD - Category 1 |
| N,N-dimethyl-p-toluidine | ≤3 | HNOC - Static-accumulating flammable liquid FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |

SARA 313

| | Product name | CAS number | % |
|--|---------------------|------------|-----------|
| Form R - Reporting requirements | methyl methacrylate | 80-62-6 | ≥50 - ≤75 |
| | styrene | 100-42-5 | ≥10 - ≤15 |
| Supplier notification | methyl methacrylate | 80-62-6 | ≥50 - ≤75 |
| | styrene | 100-42-5 | ≥10 - ≤15 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: METHYL METHACRYLATE; STYRENE
- New York** : The following components are listed: Methyl methacrylate; Styrene
- New Jersey** : The following components are listed: METHYL METHACRYLATE; STYRENE MONOMER
- Pennsylvania** : The following components are listed: 2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER; BENZENE, ETHENYL-

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Styrene and N,N-Dimethyl-p-toluidine, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

| Ingredient name | No significant risk level | Maximum acceptable dosage level |
|--------------------------|---------------------------|---------------------------------|
| Styrene | Yes. | - |
| N,N-Dimethyl-p-toluidine | - | - |



Section 15. Regulatory information

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 16. Other information

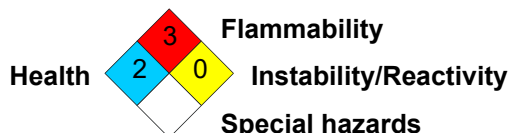
Hazardous Material Information System (U.S.A.)

| | | |
|------------------|---|---|
| Health | * | 3 |
| Flammability | | 3 |
| Physical hazards | | 0 |
| | | |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

| Classification | Justification |
|--|-----------------------|
| FLAMMABLE LIQUIDS - Category 2 | On basis of test data |
| SKIN IRRITATION - Category 2 | Calculation method |
| EYE IRRITATION - Category 2A | Calculation method |
| SKIN SENSITIZATION - Category 1 | Calculation method |
| CARCINOGENICITY - Category 1B | Calculation method |
| TOXIC TO REPRODUCTION - Category 2 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 | Calculation method |

History

Date of issue/Date of revision : 01/31/2023



Section 16. Other information

| | |
|-------------------------------|---|
| Date of previous issue | : 12/15/2022 |
| Version | : 3.01 |
| Prepared by | : Sphera Solutions |
| Key to abbreviations | : ATE = Acute Toxicity Estimate AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations |
| References | : HCS (U.S.A.)- Hazard Communication Standard International transport regulations |

▣ Indicates information that has changed from previously issued version.

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.

