

# SAFETY DATA SHEET

## VIAFIX LIQUID

### Section 1. Identification

**Product identifier** : VIAFIX LIQUID  
**Cat. No.** : 40200069, 50209068  
**Container size** : 500 ml, 1 l  
**Chemical name** : isobutyl methacrylate  
**Other means of identification** : 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester; Methacrylic acid, isobutyl ester; 2-Methyl-2-propenoic acid 2-methylpropyl ester; METHACRYLIC ACID, I-BUTYL ESTER; Isobutyle methacrylate; Iso-Butyl methacrylate; Methacrylic acid isobutyl ester; Isobutyl-2-methyl-2-propenoate; Isobutyl 2-methyl-2-propenoate; Isobutyl alpha-methylacrylate; 2-Methylpropyl methacrylate  
**Product type** : Liquid.

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

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

**Supplier's details** : Struers ApS Singapore Branch  
1008 Toa Payoh North  
#05-07/08  
Singapore 318996  
Singapore  
Telephone: +65 ( ) 3165 0200

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

**Emergency telephone number (with hours of operation)** : 24-hour Emergency Medical Service (EMS): 995.

### Section 2. Hazards identification

**Classification of the substance or mixture** : H226 FLAMMABLE LIQUIDS - Category 3  
H332 ACUTE TOXICITY (inhalation) - Category 4  
H315 SKIN IRRITATION - Category 2  
H319 EYE IRRITATION - Category 2A  
H317 SKIN SENSITISATION - Category 1  
H350 CARCINOGENICITY - Category 1B  
H361 REPRODUCTIVE TOXICITY - Category 2  
H335 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

#### GHS label elements

**Hazard pictograms**



**Signal word** : Danger

**Version** : 4

**Date of issue/Date of revision** : 3/20/2026



## Section 2. Hazards identification

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hazard statements</b>        | : H226 - Flammable liquid and vapour.<br>H315 - Causes skin irritation.<br>H317 - May cause an allergic skin reaction.<br>H319 - Causes serious eye irritation.<br>H332 - Harmful if inhaled.<br>H335 - May cause respiratory irritation.<br>H350 - May cause cancer.<br>H361 - Suspected of damaging fertility or the unborn child.                                                                                                                                                                                                                                                                                    |
| <b>Precautionary statements</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Prevention</b>               | : P201 - Obtain special instructions before use.<br>P280 - Wear protective gloves: > 8 hours (breakthrough time): Recommended: natural rubber (latex). Wear protective clothing. Wear eye or face protection. Wear hearing protection.<br>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P261 - Avoid breathing vapour.<br>P264 - Wash thoroughly after handling.                                                                                                                                                                                             |
| <b>Response</b>                 | : P308 + P313 - IF exposed or concerned: Get medical advice or attention.<br>P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.<br>P302 + P352 - IF ON SKIN: Wash with plenty of water.<br>P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.<br>P362 + P364 - Take off contaminated clothing and wash it before reuse.<br>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| <b>Storage</b>                  | : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Disposal</b>                 | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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

## Section 3. Composition/information on ingredients

|                                      |                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Substance/mixture</b>             | : Substance                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Chemical name</b>                 | : isobutyl methacrylate                                                                                                                                                                                                                                                                                                                                                             |
| <b>Other means of identification</b> | : 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester; Methacrylic acid, isobutyl ester; 2-Methyl-2-propenoic acid 2-methylpropyl ester; METHACRYLIC ACID, I-BUTYL ESTER; Isobutyle methacrylate; Iso-Butyl methacrylate; Methacrylic acid isobutyl ester; Isobutyl-2-methyl-2-propenoate; Isobutyl 2-methyl-2-propenoate; Isobutyl alpha-methylacrylate; 2-Methylpropyl methacrylate |

| Ingredient name          | %   | Identifiers  |
|--------------------------|-----|--------------|
| Isobutyl methacrylate    | >80 | CAS: 97-86-9 |
| N,N-dimethyl-p-toluidine | <4  | CAS: 99-97-8 |

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 and hence require reporting in this section.

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

**Chemical formula** : Not applicable.

## Section 3. Composition/information on ingredients

## 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** : Harmful if inhaled. 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 foetal weight  
increase in foetal deaths  
skeletal malformations

## Section 4. First aid measures

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

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : 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

- 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 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".

**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).

### 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.

## 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 ingest. Avoid breathing vapour or mist. 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 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.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None.

#### Biological exposure indices

No exposure indices known.

**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.

**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. > 8 hours (breakthrough time): Recommended: natural rubber (latex)

## Section 8. Exposure controls/personal protection

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Body protection</b>        | : 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. |
| <b>Other skin protection</b>  | : 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.                                                                                                                                                                                               |
| <b>Respiratory protection</b> | : 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: organic vapour filter (Type A)                                                                                            |
| <b>Thermal hazards</b>        | : Not available.                                                                                                                                                                                                                                                                                                                                                                                                  |

## 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

| <b>Physical state</b>                                           | : Liquid.                                                                                                                                            |       |        |       |             |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|-------|-------------|
| <b>Colour</b>                                                   | : Colourless.                                                                                                                                        |       |        |       |             |
| <b>Odour</b>                                                    | : Ester.                                                                                                                                             |       |        |       |             |
| <b>Odour threshold</b>                                          | : Not available.                                                                                                                                     |       |        |       |             |
| <b>pH</b>                                                       | : Not available.                                                                                                                                     |       |        |       |             |
| <b>Melting point/freezing point</b>                             | : -35°C (-31°F)                                                                                                                                      |       |        |       |             |
| <b>Boiling point or initial boiling point and boiling range</b> | : 155°C (311°F)                                                                                                                                      |       |        |       |             |
| <b>Flash point</b>                                              | : Closed cup: 42.5°C (108.5°F) [DIN 51755]                                                                                                           |       |        |       |             |
| <b>Evaporation rate</b>                                         | : Not available.                                                                                                                                     |       |        |       |             |
| <b>Flammability</b>                                             | : Not available.                                                                                                                                     |       |        |       |             |
| <b>Lower and upper explosion limit/flammability limit</b>       | : Lower: 2%<br>Upper: 8%                                                                                                                             |       |        |       |             |
| <b>Vapour pressure</b>                                          | : 0.21 kPa (1.5826 mm Hg) [OECD 104]                                                                                                                 |       |        |       |             |
| <b>Relative vapour density</b>                                  | : Not available.                                                                                                                                     |       |        |       |             |
| <b>Relative density</b>                                         | : 0.89                                                                                                                                               |       |        |       |             |
| <b>Solubility(ies)</b>                                          | : <table border="1"> <thead> <tr> <th>Media</th><th>Result</th></tr> </thead> <tbody> <tr> <td>water</td><td>Not soluble</td></tr> </tbody> </table> | Media | Result | water | Not soluble |
| Media                                                           | Result                                                                                                                                               |       |        |       |             |
| water                                                           | Not soluble                                                                                                                                          |       |        |       |             |
| <b>Solubility in water</b>                                      | : 0.47 g/l                                                                                                                                           |       |        |       |             |
| <b>Miscible with water</b>                                      | : No.                                                                                                                                                |       |        |       |             |
| <b>Partition coefficient: n-octanol/water</b>                   | : 2.66                                                                                                                                               |       |        |       |             |
| <b>Auto-ignition temperature</b>                                | : Not available.                                                                                                                                     |       |        |       |             |
| <b>Decomposition temperature</b>                                | : Not available.                                                                                                                                     |       |        |       |             |

## Section 9. Physical and chemical properties and safety characteristics

**Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): 1.01 mm<sup>2</sup>/s (1.01 cSt) [DIN 51562]  
Kinematic (40°C (104°F)): Not available.

**Flow time (ISO 2431)** : Not available.

### Particle characteristics

**Median particle size** : Not applicable.

### Other information

**Physical/chemical properties comments** : No additional information.

## Section 10. Stability and reactivity

**Reactivity** : Exothermic polymerization (peroxides, reducing agents, Heavy metals.)

**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 polymerisation will not occur.

**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.

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

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

**SADT** : Not available.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

#### **Product/ingredient name**

#### **Result**

isobutyl methacrylate

**Rat - Male, Female - Oral - LD50**  
9590 mg/kg

STDMETH, ASTM and USEPA

N,N-dimethyl-p-toluidine

**Rat - Oral - LD50**  
980 mg/kg

Toxic effects: Behavioral -  
Somnolence (general depressed  
activity) Behavioral - Ataxia

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

#### Skin corrosion/irritation

**Version** : 4

**Date of issue/Date of revision** : 3/20/2026

## Section 11. Toxicological information

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

### Serious eye damage/eye irritation

**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

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

### Reproductive toxicity

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

### Specific target organ toxicity (single exposure)

#### **Product/ingredient name**

Isobutyl methacrylate

#### **Result**

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

### Specific target organ toxicity (repeated exposure)

#### **Product/ingredient name**

N,N-dimethyl-p-toluidine

#### **Result**

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (blood system, respiratory tract) - Category 2

### Aspiration hazard

Not available.

### Information on likely routes of exposure

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

### Potential acute health effects

**Version** : 4

**Date of issue/Date of revision** : 3/20/2026



## Section 11. Toxicological information

|              |                                                                |
|--------------|----------------------------------------------------------------|
| Eye contact  | : Causes serious eye irritation.                               |
| Inhalation   | : Harmful if inhaled. 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:<br>pain or irritation<br>watering<br>redness                                                                                |
| Inhalation   | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing<br>reduced foetal weight<br>increase in foetal deaths<br>skeletal malformations |
| Skin contact | : Adverse symptoms may include the following:<br>irritation<br>redness<br>reduced foetal weight<br>increase in foetal deaths<br>skeletal malformations                    |
| Ingestion    | : Adverse symptoms may include the following:<br>reduced foetal weight<br>increase in foetal deaths<br>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               | : 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

## 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) |
|--------------------------|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| isobutyl methacrylate    | 3535.4       | 7575.8         | N/A                      | N/A                         | 1.1                                 |
| isobutyl methacrylate    | 9590         | N/A            | N/A                      | N/A                         | N/A                                 |
| N,N-dimethyl-p-toluidine | 140          | 300            | N/A                      | N/A                         | 0.05                                |

## Section 12. Ecological information

### Toxicity

#### Product/ingredient name

isobutyl methacrylate

#### Result

##### Acute - LC50

Fish - *Oncorhynchus mykiss*  
20 mg/l [96 hours]

OECD 203 [Fish, Acute Toxicity Test]

##### Acute - EC50

Daphnia - *Daphnia magna*  
>29 mg/l [48 hours]

OECD 202 [Daphnia sp. Acute Immobilization Test and Reproduction Test]

##### Acute - EC50

Algae - *Selenastrum capricornutum*  
16 mg/l [72 hours]

OECD 201 [Alga, Growth Inhibition Test]

##### Acute - NOEC

Algae - *Selenastrum capricornutum*  
5.8 mg/l [72 hours]

OECD 201 [Alga, Growth Inhibition Test]

##### Acute - NOEC

Algae - *Selenastrum capricornutum*  
9.5 mg/l [72 hours]

OECD 201 [Alga, Growth Inhibition Test]

##### Acute - EC50

Algae - *Selenastrum capricornutum*  
44 mg/l [72 hours]

OECD 201 [Alga, Growth Inhibition Test]

N,N-dimethyl-p-toluidine

##### Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Effect: Mortality

Age: 32 days; Size: 24.5 mm; Weight:  
0.242 g  
46 mg/l [96 hours]

#### Conclusion/Summary[Product]

: Not available.

### Persistence and degradability

#### Product/ingredient name

isobutyl methacrylate

#### Result

74.3% [28 days] - Readily

OECD 301D [ Ready Biodegradability - Closed Bottle Test]

#### Conclusion/Summary[Product]

: Not available.

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

## Section 12. Ecological information

### Bioaccumulative potential

| Product/ingredient name  | LogP <sub>ow</sub> | BCF | Potential |
|--------------------------|--------------------|-----|-----------|
| Isobutyl methacrylate    | 2.66               | -   | Low       |
| N,N-dimethyl-p-toluidine | 1.729              | 33  | Low       |

### Mobility in soil

Soil/water partition coefficient : 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 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. 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. 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

|                            | UN                                                                                       | IMDG                                                                                     | IATA                                                                                     | ADR/RID                                                                                    | ADN                                                                                        |
|----------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| UN number                  | UN2283                                                                                   | UN2283                                                                                   | UN2283                                                                                   | UN2283                                                                                     | UN2283                                                                                     |
| UN proper shipping name    | ISOBUTYL METHACRYLATE, STABILIZED                                                        | ISOBUTYL METHACRYLATE, STABILIZED                                                        | Isobutyl methacrylate, stabilized                                                        | ISOBUTYL METHACRYLATE, STABILIZED                                                          | ISOBUTYL METHACRYLATE, STABILIZED                                                          |
| Transport hazard class(es) | 3<br> | 3<br> | 3<br> | 3<br> | 3<br> |
| Packing group              | III                                                                                      | III                                                                                      | III                                                                                      | III                                                                                        | III                                                                                        |
| Environmental hazards      | No.                                                                                      | No.                                                                                      | No.                                                                                      | No.                                                                                        | Yes.                                                                                       |

### Additional information

UN : **Special provisions** 386

Version : 4

Date of issue/Date of revision : 3/20/2026



## Section 14. Transport information

|         |                                                                                                                                                                                                                                                                                                                                                                                   |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IMDG    | : <b>Emergency schedules</b> F-E, S-D<br><b>Special provisions</b> 386                                                                                                                                                                                                                                                                                                            |
| IATA    | : The environmentally hazardous substance mark may appear if required by other transportation regulations.<br><b>Quantity limitation</b> Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.<br><b>Special provisions</b> A209 |
| ADR/RID | : <b>Hazard identification number</b> 39<br><b>Limited quantity</b> 5 L<br><b>Special provisions</b> 386, 676<br><b>Tunnel code</b> (D/E)                                                                                                                                                                                                                                         |
| ADN     | : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.<br><b>Special provisions</b> 386, 676                                                                                                                                                                                                                                 |

**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

### Singapore - hazardous chemicals under government control

None.

### 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

### History

|                                |                    |
|--------------------------------|--------------------|
| Date of issue/Date of revision | : 3/20/2026        |
| Date of previous issue         | : 1/13/2025        |
| Version                        | : 4                |
| Prepared by                    | : Sphera Solutions |

## Section 16. Other information

**Key to abbreviations** :

- 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
- 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
- IMO = International Maritime Organization
- 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
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- SGG = Segregation Group
- UN = United Nations

### Procedure used to derive the classification

| Classification                                                                                                                                                                                                                                                                                                                                          | Justification                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FLAMMABLE LIQUIDS - Category 3<br>ACUTE TOXICITY (inhalation) - Category 4<br>SKIN IRRITATION - Category 2<br>EYE IRRITATION - Category 2A<br>SKIN SENSITISATION - Category 1<br>CARCINOGENICITY - Category 1B<br>REPRODUCTIVE TOXICITY - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY - SINGLE<br>EXPOSURE (Respiratory tract irritation) - Category 3 | On basis of test data<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method |

**References** : GHS - Globally Harmonised System of Classification and Labelling of Chemicals  
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.