SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: DUROCIT-3 LIQUID I
Cat. No. 40200095, 40200096
Container size: 300 ml, 1l

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

Application: For embedding of materialographic specimens
Uses advised against: No specific uses advised against are identified. (*)

1.3. Details of the supplier of the safety data sheet

Supplier: Struers ApS
Pederstrupvej 84
DK-2750 Ballerup
Tel:+45 44 600 800

Responsible for safety data sheet authoring: Responsible for safety data sheet authoring: DHI
Any questions to the contents of this safety data sheet should be sent to: struers@struers.dk

1.4. Emergency telephone number

NHS: 111
+45 44 600 800
(Only during office hours)
SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP:
- Flam. Liq. 3;H226
- Asp. Tox. 1;H304
- Skin Irrit. 2;H315
- Eye Irrit. 2;H319
- Skin Sens. 1;H317
- Repr. 2;H361d
- STOT RE 1;H372
- Aquatic Chronic 3;H412

2.2. Label elements

Danger
Contains:
- Styrene
- Methyl methacrylate

H226 Flammable liquid and vapour.
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.
H361d Suspected of damaging the unborn child.
H372H Causes damage to organs (hearing organs) through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective clothing, gloves, eye and face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do NOT induce vomiting.

2.3. Other hazards

PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

The product contains: Methyl methacrylate and Styrene.
SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Inhalation:

Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.

Skin contact:

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and bring these instructions.

Eye contact:

Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

Ingestion:

Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions. Do not induce vomiting.

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

Symptoms/effects:

Aspiration hazard: Risk of chemical pneumonia after aspiration. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. See section 11 for more detailed information on health effects and symptoms.

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

Medical attention/treatments: Treat symptomatically.
SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture
Specific hazards: During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters
Protective equipment for firefighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel: Avoid inhalation of vapours and contact with skin and eyes. For personal protection, see section 8.
For emergency responders: No specific recommendations. For personal protection, see section 8.

6.2. Environmental precautions
Environmental precautions: Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Absorb spillage with non-combustible, absorbent material.

6.4. Reference to other sections
References: For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Safe handling advice: Avoid inhalation of vapours and contact with skin and eyes.
Technical measures: Use work methods which minimise aerosol production. Do not smoke or use open fire or other sources of ignition. Do not eat, drink or smoke when using the product.
Technical precautions: Local exhaust is recommended.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in tightly closed original container in a dry and cool place.

7.3. Specific end use(s)
Specific use(s): No information available.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>As</th>
<th>Exposure limits</th>
<th>Type</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>Methyl methacrylate</td>
<td>-</td>
<td>50 ppm, 208 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>100 ppm, 416 mg/m³</td>
<td>STEL</td>
<td>15min</td>
<td></td>
</tr>
<tr>
<td>100-42-5</td>
<td>Styrene</td>
<td>-</td>
<td>100 ppm, 430 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>250 ppm, 1080 mg/m³</td>
<td>STEL</td>
<td>15min</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.

Personal protection: Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation: Use respiratory equipment with gas filter, type A2.

Hand protection: Wear protective gloves. Butyl rubber gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Thickness: 0,3 mm

Eye protection: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Remove contaminated clothing and wash the skin thoroughly with soap and water after work. When using do not eat, drink or smoke.

Environmental Exposure Controls: Not available.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form: Liquid.
Colour: Colourless.
Odour: Characteristic.
Odour threshold: Not available.
pH: Not determined.
Melting point: Not available.
Boiling point: 101°C
Flash point: 26°C
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Explosive limits: 1.2-12.5 vol%
Vapour pressure: 47 hPa (20°C)
Vapour density: Not available.
Relative density: 1.1
Solubility: Immiscible with water.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature (°C): Not available.
Decomposition temperature (°C): Not available.
Viscosity: < 20.5 mm²/s (40°C)
Explosive properties: Not available.
Oxidising properties: Not available.

9.2. Other information

Other data: Volatile Organic Compound (VOC): approx. 650 g/l (calculated)
SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Reactivity: No data available.

10.2. Chemical stability
Stability: Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions
Hazardous Reactions: No data available.

10.4. Conditions to avoid
Conditions/materials to avoid: Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials
Incompatible materials: Avoid contact with oxidising agents.

10.6. Hazardous decomposition products
Hazardous decomposition products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute Toxicity (Oral): Based on available data, the classification criteria are not met.
Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.
Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitisation: May cause an allergic skin reaction.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive Toxicity: Suspected of damaging the unborn child.
STOT - Single exposure: Based on available data, the classification criteria are not met.
STOT - Repeated exposure: Causes damage to organs (hearing organs) through prolonged or repeated exposure.
Aspiration hazard: May be fatal if swallowed and enters airways.
Inhalation: Vapours may irritate throat and respiratory system and cause coughing. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea.
Ingestion: May irritate and cause malaise.
SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity: Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability
Degradability: The degradability of the product has not been stated.

12.3. Bioaccumulative potential
Bioaccumulative potential: No data available on bioaccumulation.

12.4. Mobility in soil
Mobility: No data available.

12.5. Results of PBT and vPvB assessment
PBT/vPvB: No information available.

12.6. Other adverse effects
Other adverse effects: The product contains volatile, organic compounds which have a photochemical ozone creation potential.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from residues: Dispose of waste and residues in accordance with local authority requirements. Waste is classified as hazardous waste. Note that fully cured material is not considered as hazardous waste.

EWC-code: 16 05 08

Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.
SECTION 14: TRANSPORT INFORMATION

The product is covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

UN-No: 1866

14.2. UN proper shipping name

Proper Shipping Name: RESIN SOLUTION, flammable

Additional IMDG information:
EmS: F-E, S-E
MFAG: 1

14.3. Transport hazard class(es)

Class: 3

14.4. Packing group

PG: III

14.5. Environmental hazards

Marine pollutant: No.
Environmentally Hazardous substance: No.

14.6. Special precautions for user

Special precautions: None known.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk: Not relevant.
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**Special provisions:**
As a general rule, persons under 18 years of age are not allowed to work with this product. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.

**National regulation:**
The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.
The Management of Health and Safety at Work Regulations 1999 (SI 1999 No. 3242), with amendments.

15.2. Chemical Safety Assessment

**CSA status:**
No chemical safety assessment has been carried out.
SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 1, 8. The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

Abbreviations and acronyms used in the safety data sheet:

PBT = Persistent, Bioaccumulative and Toxic.
vPvB = very Persistent and very Bioaccumulative.

Additional information: Classification according to Regulation (EC) No. 1272/2008:
Calculation method.

Wording of H-statements:

- H225: Highly flammable liquid and vapour.
- H226: Flammable liquid and vapour.
- 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.
- H322: Harmful if inhaled.
- H335: May cause respiratory irritation.
- H361d: Suspected of damaging the unborn child.
- H372H: Causes damage to organs (hearing organs) through prolonged or repeated exposure.
- H412: Harmful to aquatic life with long lasting effects.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.