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

1.1. Product identifier

Product name: CLAROCIT LIQUID
Cat. No. 40200073, 40200072
Container size: 500 ml, 1 l

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. 2;H225
- Skin Irrit. 2;H315
- Skin Sens. 1;H317
- STOT SE 3;H335

2.2. Label elements

Danger
Contains:
- Methyl methacrylate
- Tetramethylene dimethacrylate

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards
The product is highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures.
PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures
The product contains: organic solvents, binders and additives.
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: Seek medical attention and 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: 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: Do not smoke or use open fire, or other sources of ignition. 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: Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Remove sources of ignition. Dam and absorb spillages with sand, earth or other non-combustible 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: Do not smoke or use open fire or other sources of ignition. Avoid inhalation of vapours and contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Work practice should minimise contact.

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 well-ventilated 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>67-64-1</td>
<td>Acetone</td>
<td>-</td>
<td>500 ppm 1210 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>1500 ppm 3620 mg/m³</td>
<td>STEL</td>
<td>15min</td>
<td></td>
</tr>
<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>
</tbody>
</table>

#### 8.2. Exposure controls

**Engineering measures:** Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours. Provide easy access to water supply and eye wash facilities.

**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 and work of brief duration, use suitable respiratory equipment. Use respiratory equipment with gas filter, type AX.

**Hand protection:** Wear protective gloves. Butyl rubber gloves are recommended. 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: 0,1 - 0,2 mm
- Breakthrough time: 5 min (*)

**Eye protection:** Wear goggles/face shield.

**Skin protection:** Risk of contact: 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Ester</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>101 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>10 °C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>2.1-12.5 vol%</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>47 hPa (20 °C)</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Miscible with water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>The product is highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not available</td>
</tr>
</tbody>
</table>

### 9.2. Other information

**Other data:** Volatile Organic Compound (VOC): 691 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: Polymerises generating heat.

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: No information available.

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: Based on available data the classification criteria are not met.
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: Based on available data the classification criteria are not met.
STOT - Single exposure: May cause respiratory irritation.
STOT - Repeated exposure: Based on available data the classification criteria are not met.
Aspiration hazard: Based on available data the classification criteria are not met.
Inhalation: Vapours may cause headache, fatigue, dizziness and nausea.
Skin contact: Contains components which may penetrate the skin.
Eye contact: May irritate and cause redness and pain.
Ingestion: Irritating. May be absorbed in the body and cause dizziness, nausea and vomiting.
Specific effects: Frequent inhalation of even small concentrations may cause irritability, fatigue and memory failure and eventually permanent damage to the nervous system, including the brain.
SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity: The product is not expected to be hazardous to the environment.

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: No information available.

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.

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 (Methyl methacrylate)
Additional IMDG information:
EmS: F-E, S-E
MFAG: 1

14.3. Transport hazard class(es)
Class: 3

14.4. Packing group
PG: II

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.
SECTION 15: REGULATORY INFORMATION

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.


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:

EUH066  Repeated exposure may cause skin dryness or cracking.
H225  Highly flammable liquid and vapour.
H315  Causes skin irritation.
H317  May cause an allergic skin reaction.
H319  Causes serious eye irritation.
H335  May cause respiratory irritation.
H336  May cause drowsiness or dizziness.
H373  May cause damage to organs through prolonged or repeated exposure.
H413  May cause long lasting harmful effects to aquatic life.

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.