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

Product identifier

Product name: VERSOCIT-2 LIQUID
Cat. No. 40200091, 40200089

Container size: 500 ml, 1 l

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

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

Details of the supplier of the safety data sheet

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

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

Emergency telephone number

National Capital Poison Center: 1-800-222-1222
Infotrac: 1-800-535-5053
Struers US: 1-440-871-0071
SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA 2012:
- Skin Irritant Category 2
- Eye irritant Category 2A
- Skin Sensitizer Category 1
- Category 1B reproductive toxicant

Label elements

Danger
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective clothing, gloves, eye and face protection.
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.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local regulations.

NFPA Rating: Health:2  Fire:2  Reactivity:0  Other:-

Other hazards
PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures
The product contains: binders.
<table>
<thead>
<tr>
<th>%</th>
<th>CAS-No.</th>
<th>EC No.</th>
<th>REACH Reg. No:</th>
<th>Chemical name</th>
<th>Hazard classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-75</td>
<td>2455-24-5</td>
<td>219-529-5</td>
<td>-</td>
<td>Tetrahydrofurfuryl-2-methacrylate</td>
<td>Category 1B reproductive toxicant</td>
<td></td>
</tr>
<tr>
<td>25-50</td>
<td>27813-02-1</td>
<td>248-666-3</td>
<td>-</td>
<td>2-Hydroxypropyl methacrylate</td>
<td>Skin Irritant Category 2 Eye irritant Category 2A</td>
<td></td>
</tr>
<tr>
<td>2.5-10</td>
<td>2082-81-7</td>
<td>218-218-1</td>
<td>-</td>
<td>Tetramethylene dimethacrylate</td>
<td>Skin Sensitizer Category 1B</td>
<td></td>
</tr>
<tr>
<td>&lt;2.5</td>
<td>99-97-8</td>
<td>202-805-4</td>
<td>-</td>
<td>N,N-Dimethyl-p-toluidine</td>
<td>Acute Inhalation Toxicity Category 3</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Dermal Toxicity Category 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Oral Toxicity Category 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Category 2 Target organ toxicant, Repeated Exposure</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic Toxicity Category 3</td>
<td></td>
</tr>
<tr>
<td>&lt;0.1</td>
<td>123-31-9</td>
<td>204-617-8</td>
<td>-</td>
<td>1,4-Dihydroxybenzene</td>
<td>Category 2 carcinogen</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Category 2 mutagen</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Oral Toxicity Category 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Serious Eye Damage Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Sensitizer Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute Toxicity Category 1</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

Description of first aid measures

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.

Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: No specific precautions.

Special hazards arising from the substance or mixture

Specific hazards: When heated and in case of fire, harmful vapors/gases may be formed.

Advice for firefighters

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Avoid inhalation of vapors and contact with skin and eyes. For personal protection, see section 8.

For emergency responders: No specific recommendations. For personal protection, see section 8.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Spill Cleanup Methods: Absorb spillage with suitable absorbent material.

Reference to other sections

References: For personal protection, see section 8. For waste disposal, see section 13.
SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice: Avoid inhalation of vapors and contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Work practice should minimize contact.

Technical precautions: Local exhaust is recommended.

Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: No special precautions.

Storage conditions: Store in closed original container in a dry place. Avoid contact with oxidizing agents. Keep away from food, drink and animal feeding stuffs.

Specific end use(s)

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

## 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>123-31-9</td>
<td>Hydroquinone</td>
<td>-</td>
<td>2 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>123-31-9</td>
<td>Hydroquinone</td>
<td>-</td>
<td>1 mg/m³</td>
<td>TWA</td>
<td>DSEN; A3</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

**Notes:**

- DSEN: Dermal Sensitization.
- A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans.

## Exposure controls

**Engineering measures:**

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation. Provide easy access to water supply and eye wash facilities.

**Personal protection:**

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

**Respiratory equipment:**

In case of inadequate ventilation use suitable respirator. Use respiratory equipment with combination filter, type A2/P2.

**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:** 0.1 - 0.2 mm
- **Breakthrough time:** 5 min. (*)

**Eye protection:**

Wear goggles/face shield.

**Skin protection:**

Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene measures:**

Wash contaminated clothing before reuse. When using do not eat, drink or smoke.

**Environmental Exposure Controls:**

Not available.
**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form:</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>Colorless</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Ester</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Melting point:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Boiling point:</strong></td>
<td>&gt;93.2°F</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>195.8°F</td>
</tr>
<tr>
<td><strong>Evaporation rate:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
<td>0.1 hPa (68°F)</td>
</tr>
<tr>
<td><strong>Vapor density:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Relative density:</strong></td>
<td>1.033</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>Insoluble in water</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature (°F):</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature (°F):</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Explosive properties:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Oxidizing properties:</strong></td>
<td>Not available</td>
</tr>
</tbody>
</table>

**Other information**

**Other data:** Volatile Organic Compound (VOC): 310 g/l (calculated)
SECTION 10: STABILITY AND REACTIVITY

Reactivity
Reactivity: No data available.

Chemical stability
Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions
Hazardous Reactions: None under normal conditions.

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

Incompatible materials
Incompatible materials: Avoid contact with oxidizing agents.

Hazardous decomposition products
Hazardous decomposition products: None in particular.

SECTION 11: TOXICOLOGICAL INFORMATION

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 sensitization: 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. National Toxicology Program (NTP): No. IARC Cancer Review: Group 2B for N,N-Dimethyl-p-toluidine. IARC Cancer Review: Group 3 for Hydroquinone. OSHA: No.
Reproductive Toxicity: May damage fertility or the unborn child.
STOT - Single exposure: Based on available data, the classification criteria are not met.
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: May cause irritation to the respiratory system.
Ingestion: May irritate and cause malaise.
SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Ecotoxicity: The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Persistence and degradability
Degradability: There are no data on the degradability of this product.

Bioaccumulative potential
Bioaccumulative potential: No data available on bioaccumulation.

Mobility in soil
Mobility: No data available.

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

Other adverse effects
Other adverse effects: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Waste from residues: Dispose of waste and residues in accordance with local authority requirements.
Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

UN number
UN-No: -

UN proper shipping name
Proper Shipping Name: -

Transport hazard class(es)
Class: -

Packing group
PG: -

Environmental hazards
Marine pollutant: -
Environmentally Hazardous substance: -

Special precautions for user
Special precautions: None known.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Transport in bulk: Not relevant.
SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Special provisions: State and local regulation may apply.

TSCA: Listed.

NFPA Rating: Health: 2 Fire: 2 Reactivity: 0 Other:-

SARA Section 302: Yes. (Hydroquinone)
SARA Section 304: Yes. (Hydroquinone)
SARA Section 313: Yes. (Hydroquinone)
SARA (311/312) Hazard categories: Yes.
California Proposition 65. (N,N-Dimethyl-p-toluidine)
CAA: (Hydroquinone)

National regulation: The following lists have been checked:
Threshold Limit Values (2019), ACGIH, by the American Conference on Governmental Industrial Hygienists.
NIOSH Pocket Guide to Chemical Hazards.
The Code of Federal Regulation, Title 40, part 261.33. Identification and listing of hazardous waste.
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 HCS 2012:
Calculation method.

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.