1. IDENTIFICATION

Product identifier

Product name: DUROCIT-3 LIQUID II
Cat. No. 40200095, 40200097

Recommended use and restrictions on use

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

Details of the supplier of the safety data sheet

Supplier: Struers Ltd
7275 West Credit Avenue
Ontario L5N 5M9 Mississauga
Canada
Tel: +1 (905) 8148855

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

Emergency telephone number

Alberta & NWT:
Poison & Drug Information Service (PADIS): 1-800-332-1414

British Columbia:
Drug and Poison Information Centre (DPIC): 604-682-5050 / 1-800-567-8911

Ontario:
Poison Centre: 1-800-268-9017
Québec:
Poison Control Centre: 1-800-463-5060

Infotrac:
1-800-535-5053
Struers CAN:
+1 (905) 8148855

2. HAZARDS IDENTIFICATION

Classification of the hazardous product

WHMIS 2015:
Flammable Liquids — Category 2
Skin Irritation — Category 2
Skin Sensitizer — Category 1
Reproductive Toxicity — Category 2
Specific Target Organ Toxicity — Single Exposure — Category 3 (respiratory tract irritation)
Specific Target Organ Toxicity — Repeated Exposure — Category 2

Label elements
SAFETY DATA SHEET

Product name: DUROCIT-3 LIQUID II
Revision Date: 2020-01-09
Document No.: M0191

Danger

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe gas, fume, vapours or spray.
P280 Wear protective clothing, gloves, eye and face protection.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P501 Dispose of contents/container in accordance with local regulations.

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating and lighting equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use alcohol resistant foam, carbon dioxide or dry powder to extinguish.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Other hazards
The product is highly flammable, and explosive vapors/air mixtures may be formed even at normal room temperatures.

PBT/vPvB: No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures
The product contains: Methyl methacrylate and Styrene.

WHMIS 2015:

<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>
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<tr>
<td>25-50</td>
<td>80-62-6</td>
<td>201-297-1</td>
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<td>5-&lt;10</td>
<td>100-42-5</td>
<td>202-851-5</td>
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<td>Styrene</td>
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<td>Acute (Inhalation) Toxicity Category 4</td>
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<td></td>
<td>Skin Irritation Category 2</td>
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<td>Eye Irritation Category 2</td>
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<td>Specific Target Organ Toxicity Repeated Exposure Category 1</td>
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</tr>
<tr>
<td>&lt;1</td>
<td>99-97-8</td>
<td>202-805-4</td>
<td>-</td>
<td>N,N-Dimethyl-p-toluidine</td>
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<td>Aquatic Chronic Toxicity Category 3</td>
<td></td>
</tr>
</tbody>
</table>
4. FIRST-AID MEASURES

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 take along 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 take along 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.

5. FIRE-FIGHTING MEASURES

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.

Specific hazards arising from the hazardous product

Specific hazards: During fire, health hazardous gases may be formed.

Advice for fire-fighters

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.
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:
Do not discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Spill Cleanup Methods:
Absorb spillage with non-combustible, absorbent material.

Reference to other items

References:
For personal protection, see section 8. For waste disposal, see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice:
Avoid inhalation of vapors and contact with skin and eyes.

Technical measures:
Use work methods which minimize 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.

Conditions for safe storage, including any incompatibilities

Technical measures for safe storage:
Follow rules for flammable liquids.

Storage conditions:
Store in tightly closed original container in a dry and cool place.

Specific end-use(s)

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

Control parameters

Other provincial OEL's may apply.

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>
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<tr>
<td>80-62-6</td>
<td>Methyl methacrylate (monomer)</td>
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<td>100 ppm 410 mg/m3</td>
<td>TWA</td>
<td>S</td>
<td>Quebec</td>
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<td>TWA</td>
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<td>Alberta</td>
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<tr>
<td></td>
<td></td>
<td>-</td>
<td>100 ppm 410 mg/m3</td>
<td>STEL</td>
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<tr>
<td>80-62-6</td>
<td>Methyl methacrylate</td>
<td>-</td>
<td>50 ppm</td>
<td>TWA</td>
<td>S</td>
<td>BC</td>
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<tr>
<td></td>
<td></td>
<td>-</td>
<td>100 ppm</td>
<td>STEL</td>
<td>S;</td>
<td></td>
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<tr>
<td>100-42-5</td>
<td>Styrene (monomer)</td>
<td>-</td>
<td>20 ppm 85 mg/m3</td>
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<td>-</td>
<td>40 ppm 170 mg/m3</td>
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<td>-</td>
<td>50 ppm</td>
<td>TWA</td>
<td>2B</td>
<td>BC</td>
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<td>-</td>
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<td>100-42-5</td>
<td>Styrene (monomer)</td>
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<td>50 ppm 213 mg/m3</td>
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<td>Pc; C3</td>
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<td>100 ppm 425 mg/m3</td>
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<td>Pc; C3; 15min</td>
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</table>

Exposure controls

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

Personal protection: Personal protection equipment should be chosen according to relevant 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

Breakthrough time: 60 min (*)

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.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form: Liquid.
Colour: Greenish.
Odour: Characteristic.
Odour threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: 101°C / 213.8°F (*)
Flash point: 10°C / 50°F (*)
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Explosion limits: 2.1-12.5 vol%
Vapour pressure: 47 hPa (20°C / 68°F)
Vapour density: Not available.
Relative density: 1.05
Solubility: Immiscible with water.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature (°C): Not available.
Decomposition temperature (°C): Not available.
Viscosity: Not available.
Explosive properties: Not available.
Oxidising properties: Not available.

Other information

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

Reactivity:
No data available.

Chemical stability:
Stability: Stable under normal temperature conditions.

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

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: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

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: Based on available data, the classification criteria are not met.
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): Group R for Styrene.
IARC Cancer Review: Group 2A for Styrene.
IARC Cancer Review: Group 3 for Methyl methacrylate.
IARC Cancer Review: Group 2B for N,N-Dimethyl-p-toluidine
Reproductive Toxicity: Suspected of damaging fertility or the unborn child.
STOT - Single exposure: May cause respiratory irritation.
STOT - Repeated exposure: May cause damage to organs (hearing organs) through prolonged or repeated exposure.
Aspiration hazard: Based on available data, the classification criteria are not met.

Inhalation:
Vapors may irritate throat and respiratory system and cause coughing. In high concentrations, vapors are narcotic and may cause headache, fatigue, dizziness and nausea.

Eye contact:
Direct contact may irritate.

Ingestion:
May irritate and cause malaise.
12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity: The product contains a substance which causes risk of hazardous effects to the environment.

Persistence and degradability

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

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

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Note that fully cured material is not considered as hazardous waste.

Contaminated packaging: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
14. TRANSPORT INFORMATION

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

**UN number**

UN-No: 1866

**UN proper shipping name**

Proper Shipping Name: RESIN SOLUTION, flammable

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

**Transport hazard class(es)**

Class: 3

**Packing group**

PG: II

**Environmental hazards**

Marine pollutant: No.
Environmentally Hazardous substance: No.

**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
15. REGULATORY INFORMATION

Safety, health and environmental regulations specific to the product

Special provisions: This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

DSL: All chemicals included in the product are DSL listed or exempt.

National regulation: Hazardous Products Regulations, with amendments. 
Ontario: Control of Exposure to Biological or Chemical Agents R.R.O. 1990, Reg. 833, with amendments (2016). 
Quebec: Regulation respecting the quality of the work environment, with amendments (2013-12-13). 
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, 9.
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 WHMIS 2015:
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.