1. IDENTIFICATION

Product identifier

Product name: CLAROFAST
Cat. No. 40100053, 40100054, 40100055

Container size: 1; 7.5; 25 kg

Recommended use and restrictions on use

Application: For embedding of materialographic specimens

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
(Only during office hours)

2. HAZARDS IDENTIFICATION

Classification of the hazardous product

WHMIS 2015: The product is not classified.

Label elements

The substance/mixture does not meet the criteria for classification and labelling.

Other hazards

Contains Methyl methacrylate, Dibenzoyl peroxide. May produce an allergic reaction.
Fine particles may form explosive vapor/air mixtures. May irritate eyes and skin. Inhalation of dust may irritate the respiratory system.

PBT/vPvB: Not Classified as PBT/vPvB by current EU criteria.
3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: acrylic resin.

WHMIS 2015:

<table>
<thead>
<tr>
<th>%:</th>
<th>Chemical name</th>
<th>Hazard classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-100</td>
<td>Methacrylate polymer</td>
<td>Flammable Liquids Category 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Irritation Category 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Sensitizer Category 1B</td>
<td></td>
</tr>
<tr>
<td>0.1-&lt;1</td>
<td>Methyl methacrylate</td>
<td>Specific Target Organ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toxicity Single Exposure Category 3</td>
<td></td>
</tr>
<tr>
<td>0.1-&lt;1</td>
<td>Dibenzoyl peroxide</td>
<td>Organic Peroxides Type B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye Irritation Category 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Sensitizer Category 1B</td>
<td></td>
</tr>
</tbody>
</table>

References: The full text for all hazard statements is displayed in section 16.

4. FIRST-AID MEASURES

Description of first-aid measures

Inhalation: Move into fresh air and keep at rest.

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 eyes wide apart.

Ingestion: Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable take to hospital along with these instructions.

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 foam, carbon dioxide, dry powder or water fog. (*)

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: In case of fire, toxic and irritating 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**

Protective equipment: Avoid inhalation of dust and contact with skin and eyes. For personal protection, see section 8. (*)

Emergency procedures: For personal protection, see section 8. No specific recommendations. (*)

**Environmental precautions**

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

**Methods and material for containment and cleaning up**

Spill Cleanup Methods: Dampen spillage with water. Collect spillage with shovel, broom or the like.

**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: Observe good chemical hygiene practices. Avoid inhalation of dust and contact with skin and eyes.

Technical measures: Avoid spreading dust.

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 tightly closed original container.

**Specific end-use(s)**

Specific use(s): No information available.
8. EXPOSURE CONTROLS/PERSOAL 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>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>Methyl methacrylate (monomer)</td>
<td>-</td>
<td>100 ppm 410 mg/m³</td>
<td>TWA</td>
<td>S</td>
<td>Quebec</td>
</tr>
<tr>
<td>80-62-6</td>
<td>Methyl methacrylate</td>
<td>-</td>
<td>50 ppm 205 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>Alberta</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>100 ppm 410 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</td>
<td>TWA</td>
<td>S</td>
<td>BC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>100 ppm</td>
<td>STEL</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>94-36-0</td>
<td>Benzoyl peroxide</td>
<td>-</td>
<td>5 mg/m³</td>
<td>TWA</td>
<td>3</td>
<td>Alberta</td>
</tr>
<tr>
<td>94-36-0</td>
<td>Benzoyl peroxide</td>
<td>-</td>
<td>5 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>BC</td>
</tr>
<tr>
<td>94-36-0</td>
<td>Benzoyl peroxide</td>
<td>-</td>
<td>5 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>Quebec</td>
</tr>
<tr>
<td></td>
<td>Particulates not otherwise regulated (PNOR), total dust</td>
<td>-</td>
<td>10 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>Quebec</td>
</tr>
<tr>
<td></td>
<td>Particulates not otherwise regulated (PNOR), total dust</td>
<td>-</td>
<td>10 mg/m³</td>
<td>TWA</td>
<td>3</td>
<td>Alberta</td>
</tr>
<tr>
<td></td>
<td>Particulates not otherwise regulated (PNOR), respirable fraction</td>
<td>-</td>
<td>3 mg/m³</td>
<td>TWA</td>
<td>3</td>
<td>Alberta</td>
</tr>
</tbody>
</table>

Notes:
S: Sensitizer.
3: Based on irritation effects. Adjustment to compensate for unusual work schedules is not required.

Exposure controls

Engineering measures:
Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust. Local exhaust is recommended.

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 suitable respirator. Use respiratory equipment with particle filter, type P3.

Hand protection:
Risk of contact: Wear protective gloves. Laminate (PE/EVOH) gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection:
Risk of contact: Wear goggles/face shield.

Skin protection:
No special precautions.

Environmental Exposure Controls:
Not available.
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>Form</td>
<td>Solid</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</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>150-230°C / 302-446°F</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</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>Explosion limits</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.18</td>
</tr>
<tr>
<td>Solubility</td>
<td>insoluble in water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not applicable.</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>Fine particles may form explosive vapor/air mixtures.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Other information

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

Reactivity
Reactivity: None under normal conditions.

Chemical stability
Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions
Hazardous Reactions: No data available.

Conditions to avoid
Conditions/materials to avoid: Heating. Avoid dust formation.

Incompatible materials
Incompatible materials: No data available.

Hazardous decomposition products
Hazardous decomposition products: By heating and fire, irritating vapors/gases may be formed.

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: Based on available data, the classification criteria are not met.
Serious eye damage/irritation: Based on available data, the classification criteria are not met.
Respiratory or skin sensitization: Based on available data, the classification criteria are not met.
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 3 for Methyl methacrylate.
IARC Cancer Review: Group 3 for Benzoyl peroxide.
Reproductive Toxicity: Based on available data, the classification criteria are not met.
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: Dust may irritate throat and respiratory system and cause coughing.
Skin contact: Prolonged contact may cause redness and irritation.
Eye contact: Dust in the eyes will cause irritation.
Ingestion: May irritate and cause malaise.
Specific effects: The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals.
12. ECOLOGICAL INFORMATION

Ecotoxicity
Ecotoxicity: The environmental hazard of the product is considered to be limited.

Persistence and degradability
Degradability: The product is not biodegradable.

Bioaccumulative potential
Bioaccumulative potential: Bioaccumulation: Is not expected to be bio-accumulable.

Mobility in soil
Mobility: No data available.

Results of PBT and vPvB assessment
PBT/vPvB: This product does not contain any PBT or vPvB substances.

Other adverse effects
Other adverse effects: No information available.

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 not covered by international regulation on the transport of dangerous goods (IMDG, IATA, TDG).

**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

15. REGULATORY INFORMATION

**Safety, health and environmental regulations specific to the product**

**Special provisions:**
- DSL: All chemicals included in the product are DSL listed or exempt.

**National regulation:**
- Hazardous Products Regulations, with amendments.
- Canadian Environmental Protection Act, Reporting for the Domestic Substances List (DSL), with amendments.
- Quebec: Regulation respecting the quality of the work environment, with amendments (2013-12-13).
- Ontario: Control of Exposure to Biological or Chemical Agents R.R.O. 1990, Reg. 833, with amendments (2016).
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: 5, 6, 9.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

[Signature]

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.