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

Product identifier

Product name: LEVOFAST

Document No.: M0229
Batch No. ≥ 8370
Cat. No. 40100057, 40100058

Container size: 1 kg, 7.5 kg

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. (*)

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: Combustible Dust (*)

Label elements

(*) Warning
May form combustible dust concentrations in air.

Other hazards

Contains Formaldehyde. May produce an allergic reaction.
Fine particles may form explosive vapor/air mixtures. Dust may irritate the eyes and the respiratory system.
Prolonged skin contact may cause redness and irritation.

PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
MIXTURES

The product contains: Phenolic resin.

OSHA 2012:

<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-&lt;75</td>
<td>65997-17-3</td>
<td>266-046-0</td>
<td>-</td>
<td>Glass, oxide, chemicals</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>&lt;25</td>
<td>557-04-0</td>
<td>209-150-3</td>
<td>-</td>
<td>Magnesium distearate</td>
<td>Aquatic Chronic Toxicity Category 4</td>
<td></td>
</tr>
<tr>
<td>5-&lt;10</td>
<td>9004-34-6</td>
<td>232-674-9</td>
<td>-</td>
<td>Cellulose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1.0</td>
<td>108-95-2</td>
<td>203-632-7</td>
<td>01-2119471329-32-xxxx</td>
<td>Phenol</td>
<td>Category 2 mutagen</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Inhalation Toxicity Category 3</td>
<td></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>Skin Corrosive Category 1B</td>
<td></td>
</tr>
<tr>
<td>0.02-&lt;0.1</td>
<td>50-00-0</td>
<td>200-001-8</td>
<td>01-2119488953-20-xxxx</td>
<td>Formaldehyde</td>
<td>Category 1B carcinogen B; D</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Inhalation Toxicity Category 3</td>
<td></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>Skin Corrosive Category 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Sensitizer 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.

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.

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 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.

Special hazards arising from the substance or mixture

Specific hazards: When heated and in case of fire, toxic vapors/gases may be formed. Fine particles may form explosive vapor/air mixtures.

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 dust. 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

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

Methods and material for containment and cleaning up

Spill Cleanup Methods: Collect spillage with shovel, broom or the like. Dispose of collected dust according to agreement with local authorities.

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 dust. Avoid contact with skin and eyes. Wash hands before breaks and before smoking, eating or drinking. Observe good chemical hygiene practices.

Technical measures: Use work methods which minimize dust production.

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.

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>9004-34-6</td>
<td>Cellulose, total dust</td>
<td>-</td>
<td>15 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>9004-34-6</td>
<td>Cellulose, respirable fraction</td>
<td>-</td>
<td>5 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>50-00-0</td>
<td>Formaldehyde</td>
<td>-</td>
<td>0.75 ppm</td>
<td>TWA</td>
<td>1910.1048</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>2 ppm</td>
<td>STEL</td>
<td>1910.1048; 15min</td>
<td></td>
</tr>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>-</td>
<td>5 ppm</td>
<td>TWA</td>
<td>Skin</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td>Particulates not otherwise regulated (PNOR), total dust</td>
<td>-</td>
<td>15 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td>Particulates not otherwise regulated (PNOR), respirable fraction</td>
<td>-</td>
<td>5 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>9004-34-6</td>
<td>Cellulose</td>
<td>-</td>
<td>10 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>ACGIH</td>
</tr>
<tr>
<td>50-00-0</td>
<td>Formaldehyde</td>
<td>-</td>
<td>0.1 ppm</td>
<td>TWA</td>
<td>DSEN; RSEN; A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>0.3 ppm</td>
<td>STEL</td>
<td>DSEN; RSEN; A1; 15min</td>
<td></td>
</tr>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>-</td>
<td>5 ppm</td>
<td>TWA</td>
<td>Skin; A4; BEI</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles</td>
<td>-</td>
<td>3 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles</td>
<td>-</td>
<td>10 mg/m³</td>
<td>TWA</td>
<td>-</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>Stearates (does not include stearates of toxic metals), respirable particulate matter</td>
<td>-</td>
<td>3 mg/m³</td>
<td>TWA</td>
<td>A4</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>Stearates (does not include stearates of toxic metals), inhalable particulate matter</td>
<td>-</td>
<td>10 mg/m³</td>
<td>TWA</td>
<td>A4</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

### Notes:


Skin: Danger of cutaneous absorption. (ACGIH)

Skin: Skin absorption. (OSHA)

A4: Not Classifiable as a Human Carcinogen.

BEI: Biological Exposure Index.

DSEN: Dermal Sensitization.

RSEN: Respiratory Sensitization.

A1: Confirmed Human Carcinogen.
**Biological Limit Values:**

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>As:</th>
<th>Exposure limits</th>
<th>Sampling time</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>Phenol in urine</td>
<td>250 mg/g Cre</td>
<td>End of shift</td>
<td>B; Ns</td>
<td>-</td>
</tr>
</tbody>
</table>

**Exposure controls**

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

**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 and work of brief duration, use suitable respiratory equipment. Use respiratory equipment with combination filter, type A2/P2.

**Hand protection:**
Wear protective gloves. Nitrile 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.
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>Form</td>
<td>Granular</td>
</tr>
<tr>
<td>Color</td>
<td>Beige</td>
</tr>
<tr>
<td>Odor</td>
<td>Almost odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</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>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature (°F)</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature (°F)</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Other information

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

Reactivity
Reactivity: None under normal conditions.

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 dust close to ignition sources.

Incompatible materials
Incompatible materials: None specific.

Hazardous decomposition products
Hazardous decomposition products: When heated and in case of fire, toxic vapors/gases may be formed.

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: 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:
National Toxicology Program (NTP): Group K for Formaldehyde.
IARC Cancer Review: Group 3 for Phenol.
IARC Cancer Review: Group 1 for Formaldehyde.
OSHA: No.
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 may cause irritation.
Ingestion: May irritate and cause malaise.
SECTION 12: ECOLOGICAL INFORMATION

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

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: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Waste from residues: Dispose of waste and residues in accordance with local authority requirements.
RCRA: Waste number U188 (Phenol)
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: All components are listed or exempted.

NFPA Rating: Health: 1  Fire: 1  Reactivity: 0  Other:-

SARA Section 302: Yes.
SARA Section 304: Yes.
SARA Section 313: Yes.
SARA (311/312) Hazard categories: No.
CAA: Yes (Phenol)
California Proposition 65: Formaldehyde

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, 2.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

[Signature]

Allan Vørup

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.