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

Product identifier
Product name: MULTIFAST BLACK
Cat. No. 40100064, 40100065, 40100066, 40100067
Container size: 2,5 kg, 7,5 kg, 25 kg, 75 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: 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 Methenamine and Formaldehyde. May produce an allergic reaction.
Fine particles may form explosive vapor/air mixtures. Inhalation of dust may irritate the respiratory system.
Prolonged skin contact may cause redness and irritation. Dust in the eyes will cause irritation.

PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures
SECTION 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.

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.

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: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: No specific precautions.

Special hazards arising from the substance or mixture

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

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

Personal precautions, protective equipment and emergency procedures

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

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

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: Collect spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste 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 contact with skin and eyes. Avoid inhalation of dust and vapors. Observe good chemical hygiene practices.

Technical measures: Work practice should minimize contact. 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>1317-65-3</td>
<td>Limestone, total dust</td>
<td>-</td>
<td>15 mg/m3</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>1317-65-3</td>
<td>Limestone, 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; OSHA</td>
<td></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>50-00-0</td>
<td>Formaldehyde</td>
<td>-</td>
<td>0.1 ppm</td>
<td>TWA</td>
<td>DSEN; RSEN; ACGIH 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>
</tbody>
</table>

**Notes:**
- A4: Not Classifiable as a Human Carcinogen.
- Skin: Danger of cutaneous absorption. (ACGIH)
- Skin: Skin absorption. (OSHA)
- DSEN: Dermal Sensitization.
- RSEN: Respiratory Sensitization.
- BEI: Biological Exposure Index.

### 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>

**Notes:**
- Cre = Creatinine
Exposure controls

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

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: Risk of contact: 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. Breakthrough time: 480 min. Thickness: 0.4 mm (*)

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

Skin protection: Wear apron or protective clothing in case of contact.

Hygiene measures: Wash hands after handling.

Environmental Exposure Controls: Not available.
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Powder</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Black</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Phenolic</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>Not available</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not available</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>Not available</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not available</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): < 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: Avoid contact with acids and oxidizing substances.

Hazardous decomposition products

Hazardous decomposition products: When heated and in case of fire, toxic vapors/gases may be formed.
<table>
<thead>
<tr>
<th><strong>Information on toxicological effects</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute Toxicity (Oral):</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Acute Toxicity (Dermal):</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Acute Toxicity (Inhalation):</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Skin Corrosion/Irritation:</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Serious eye damage/irritation:</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitization:</strong> Test has determined that the product is not sensitizing by skin contact. Buehler test: Not sensitizing. Guinea pig maximization test (GPMT): Not sensitizing.</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity:</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Carcinogenicity:</strong> Based on available data, the classification criteria are not met. National Toxicology Program (NTP): Group K for Formaldehyde. IARC Cancer Review: Group 1 for Formaldehyde. IARC Cancer Review: Group 3 for Phenol. OSHA: No.</td>
</tr>
<tr>
<td><strong>Reproductive Toxicity:</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>STOT - Single exposure:</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>STOT - Repeated exposure:</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Aspiration hazard:</strong> Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td><strong>Inhalation:</strong> Dust may irritate throat and respiratory system and cause coughing. Vapors liberated during curing of the product may in high concentrations irritate the throat and respiratory system and cause coughing.</td>
</tr>
<tr>
<td><strong>Skin contact:</strong> Prolonged contact may cause redness and irritation. Phenol can be absorbed through the skin and cause chronic poisoning.</td>
</tr>
<tr>
<td><strong>Eye contact:</strong> Dust in the eyes will cause irritation.</td>
</tr>
<tr>
<td><strong>Ingestion:</strong> No harmful effects expected in amounts likely to be ingested by accident.</td>
</tr>
<tr>
<td><strong>Specific effects:</strong> Contains a small amount of a substance/group of substances with possible risks of irreversible effects.</td>
</tr>
</tbody>
</table>
SECTION 12: ECOLOGICAL INFORMATION

**Toxicity**

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

**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.

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.

All components of this product are listed or exempt from listing on the TSCA inventory.

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

SARA Section 302: Yes. (Phenol)
SARA Section 304: Yes. (Phenol)
SARA Section 313: Yes. (Phenol)
SARA (311/312) Hazard categories: No.
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, 8.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

[Signature]
Allan Vorup

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:
On basis of test data.

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.