SAFETY DATA SHEET

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

Product identifier

Product name: REPLISET-F1, -F5, -T1, -T3, -GF1, -GT1
Cat. No. 40900050, 40900051, 40900052, 40900053, 40900069, 40900047, 40900068, 40900046, 40900071, 40900049, 40900070, 40900048, 40900076, 40900077, 40900078, 40900079

Container size: 50 ml; 265 ml

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

Application: Replication system for materialographic surfaces.

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: The product is not classified.

Label elements: The substance/mixture does not meet the criteria for classification and labeling.

Other hazards

PBT/vPvB: Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: Titanium dioxide. Trace of chloroplatinic acid impurity.
SAFETY DATA SHEET

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation: Move into fresh air and keep at rest.

Skin contact: Remove contaminated clothes and rinse skin thoroughly with 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: Extinguish with foam, carbon dioxide, dry powder or water fog. Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards: In case of fire, toxic 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
Protective equipment: Avoid contact with skin and eyes. For personal protection, see section 8. (*)
Emergency procedures: No specific recommendations. For personal protection, see section 8. (*)

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

Methods and material for containment and cleaning up
Spill Cleanup Methods: Dam and absorb spillage with sand, sawdust or other absorbent.

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. 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
Storage conditions: Store in tightly closed original container. Store at room temperature.

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>60676-86-0</td>
<td>Silica, fused, respirable dust</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
<td>-</td>
<td>3.5 mg/m3</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>13463-67-7</td>
<td>Titanium dioxide, total dust</td>
<td>-</td>
<td>15 mg/m3</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
</tr>
<tr>
<td>13463-67-7</td>
<td>Titanium dioxide</td>
<td>-</td>
<td>10 mg/m3</td>
<td>TWA</td>
<td>A4</td>
<td>ACGIH</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black, inhalable particulate matter</td>
<td>-</td>
<td>3 mg/m3</td>
<td>TWA</td>
<td>A3</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Notes:  
A4: Not Classifiable as a Human Carcinogen.  
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.

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. It is recommended to 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.

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.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

(*)

Form: Viscous liquid.
Color: Black. / Blue.
Odor: Slight odor.
Odor threshold: Not available.
pH: Not applicable.
Melting point: Not available.
Boiling point: Not available.
Flash point: >302°F
Evaporation rate: Not available.
Flammability (solid, gas): Not applicable.
Explosion limits: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: 1.1
Solubility: insoluble in water
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature (°F): 752°F
Decomposition temperature (°F): >392°F
Viscosity: 18000 mm²/s (77°F)
Explosive properties: Not considered to be explosive.
Oxidizing properties: Not available.

Other information

Other data: Volatile Organic Compound (VOC): 0 g/l
# 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:** During storage, this product may generate hydrogen gas. Quantity of hydrogen potentially released (l/kg of product): < 4.

## Conditions to avoid

**Conditions/materials to avoid:** Temperatures above 200°C.

## Incompatible materials

**Incompatible materials:** Chemical compounds with mobile hydrogen, in the presence of metal salts and complexes. Strong oxidizing substances, strong acids and strong bases.

## Hazardous decomposition products

**Hazardous decomposition products:** Silica dust and oxides of carbon are released at temperatures above 200°C.
SECTION 11: TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity (Oral)</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Acute Toxicity (Dermal)</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Acute Toxicity (Inhalation)</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>National Toxicology Program (NTP): No.</td>
</tr>
<tr>
<td></td>
<td>IARC Cancer Review: Group 2B for Titanium dioxide.</td>
</tr>
<tr>
<td></td>
<td>IARC Cancer Review: Group 2B for Carbon black. (*)</td>
</tr>
<tr>
<td></td>
<td>IARC Cancer Review: Group 3 for Silica, Amorphous.</td>
</tr>
<tr>
<td></td>
<td>OSHA: No.</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>STOT - Single exposure</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>STOT - Repeated exposure</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Inhalation hazard</td>
<td>Not relevant at normal room temperatures. When heated, corrosive and toxic vapors may be formed.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Prolonged contact may cause redness and irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Splashes may irritate.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No harmful effects expected in amounts likely to be ingested by accident.</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

**Toxicity**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity</td>
<td>The product is not expected to be hazardous to the environment.</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degradability</td>
<td>The product contains inorganic compounds which are not biodegradable. The other substances of the product are slowly biodegradable.</td>
</tr>
</tbody>
</table>

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>No data available on bioaccumulation.</td>
</tr>
</tbody>
</table>

**Mobility in soil**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

**Results of PBT and vPvB assessment**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT/vPvB</td>
<td>This product does not contain any PBT or vPvB substances.</td>
</tr>
</tbody>
</table>

**Other adverse effects**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other adverse effects</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
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.

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: No.
SARA Section 304: No.
SARA Section 313: No.
SARA (311/312) Hazard categories: No.
California Proposition 65. (Titanium dioxide (airborne, unbound particles of respirable size))

National regulation:

The following lists have been checked:
Threshold Limit Values (2018), 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: 6, 8, 9, 11, 15.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

[Signature]
Allan Vorup

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.