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

Product identifier

Product name: HEAT CONDUCTIVE PASTE
Cat. No. 40300001

Container size: 20 g

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

Application: Conductive paste

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:
Aquatic Acute Toxicity Category 1
Aquatic Chronic Toxicity Category 1

Label elements

Warning
H410 Very toxic to aquatic life with long lasting effects.
P273 Avoid release to the environment.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local regulations.

PBT/vPvB: No information available. (*)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
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 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. (*)

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: 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

Personal precautions: Avoid contact with skin and eyes.

Environmental precautions: Do not discharge into drains, 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. Avoid inhalation of dust. Avoid breathing fume. 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

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/PERSOANL 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>
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</thead>
<tbody>
<tr>
<td>1314-13-2</td>
<td>Zinc oxide, fume</td>
<td>-</td>
<td>5 mg/m3</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
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<td>TWA</td>
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<td>OSHA</td>
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<tr>
<td>1314-13-2</td>
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<td>-</td>
<td>5 mg/m3</td>
<td>TWA</td>
<td>-</td>
<td>OSHA</td>
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<tr>
<td>1314-13-2</td>
<td>Zinc oxide, respirable fraction</td>
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<td>-</td>
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<td></td>
<td>-</td>
<td>10 mg/m3</td>
<td>STEL</td>
<td>15min</td>
<td></td>
</tr>
</tbody>
</table>

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 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 or rubber gloves are recommended.

Eye protection: Risk of splashes: 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

Appearance: white paste

Odor: Odorless.

pH: Not available.

Boiling point: Not available.

Flash point: >213.8°F

Explosion limits: Not available.

Relative density: 2.0

Solubility: insoluble in water

Decomposition temperature (°F): 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: None under normal conditions. (*)

Conditions to avoid:
Conditions/materials to avoid: None specific.

Incompatible materials:
Incompatible materials: Oxidizing agents.

Hazardous decomposition products:
Hazardous decomposition products: Formaldehyde. (*)

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: Based on available data, the classification criteria are not met. National Toxicology Program (NTP): No. I.A.R.C. Monographs: No. 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: Not relevant at normal room temperatures.
Skin contact: Prolonged contact may cause redness and irritation.
Eye contact: May irritate.
Ingestion: No harmful effects expected in amounts likely to be ingested by accident.
Specific effects: Risk of long-term effects is expected to be minimal from occupational exposure.
SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Ecotoxicity: Very toxic to aquatic life with long lasting effects.

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.
Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.
SECTION 14: TRANSPORT INFORMATION

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

**UN number**

UN-No: 3077

**UN proper shipping name**

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)

Additional IMDG information:

EmS: F-A, S-F

MFAG: 1

**Transport hazard class(es)**

Class: 9

**Packing group**

PG: III

**Environmental hazards**

Marine pollutant: Yes.

Environmentally Hazardous substance: Yes.

**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: Listed.

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

SARA Section 302: No.
SARA Section 304: Yes.
SARA Section 313: Yes.
SARA (311/312) Hazard categories: Yes.

National regulation: The following lists have been checked:
Threshold Limit Values (2017), 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: 2, 4, 5, 7, 10, 12.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

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.