



SAFETY DATA SHEET

1. Identification

Product identifier ThermoTap
Recommended use For Industrial Use Only
Refractory Sand
Recommended restrictions None

Manufacturer/Supplier information

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Product Support/Technical Services
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2. Hazard(s) identification

Classified hazards This item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available. This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves/protective clothing/eye protection.

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Hazard(s) not otherwise classified (HNOC)

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3. Composition/information on ingredients

| Chemical Name | Common Name/Synonyms | CAS Number | % |
|--------------------------------|------------------------------|-------------|---|
| Magnesium Silicate | | | |
| MgO | Magnesium Oxide | 1309-48-4 | * |
| SiO ₂ ** | Amorphous silica | 112926-00-8 | * |
| Fe ₂ O ₃ | Iron (III) Oxide | 1309-37-1 | * |
| Al ₂ O ₃ | Aluminum Oxide (Non-Fibrous) | 1344-28-1 | * |
| CaO | Calcium oxide | 1308-38-9 | * |
| Others | | | * |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

** Linked with magnesium in silicate form with less than 1 % free silica.

Common Name: Synthetic Olivine
 CAS Number: RN 12 44 003-26-6
 Chemical name of impurities, solvents, and/or additives:
 None

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed
 Direct contact with the eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed
 Provide general supportive measures and treat symptomatically. Keep the victim under observation. Symptoms may be delayed.

General information
 If concerned: Get medical advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media Not available.

Specific hazards arising from the chemical Not available.

Special protective equipment and precautions for firefighters Not available.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures No specific protection equipment is needed in case of such a release

Methods and materials for containment and cleaning up None.

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

7. Handling and storage

Precautions for safe handling Keep the formation of airborne dust to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in a dry location

8. Exposure controls/personal protection

Occupational exposure limits

Threshold limit values under regulation (S-2.1,r.15)

| <i>Components</i> | <i>Type</i> | <i>Value</i> | <i>Form</i> |
|-------------------|-------------|---------------------|----------------------|
| ThermoTap | | 10mg/m ³ | Total dust |
| | | 5 mg/m ³ | Respirable fraction. |

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| <i>Components</i> | <i>Type</i> | <i>Value</i> | <i>Form</i> |
|------------------------------------|-------------|---------------------|----------------------|
| Iron oxide fume (CAS 1309-37-1) | | 10mg/m ³ | Total dust |
| alpha-Alumina (CAS 1344-28-1) | | 15mg/m ³ | Respirable fraction. |
| | | 5mg/m ³ | Total dust. |

US OSHA Table Z-3 (29 CFR 1910.1000)

| <i>Components</i> | <i>Type</i> | <i>Value</i> | <i>Form</i> |
|---|-------------|----------------------------------|-------------|
| Silicon Dioxide, Amorphous (CAS 112926-00-8) | TWA | 0.8mg/m ³ 20 mppcf | |

| | |
|--|---|
| Biological limit values | No biological exposure limits were noted for the ingredient(s). |
| Appropriate engineering controls | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | If contact is likely, safety glasses with side shields are recommended. |
| Skin protection | |
| Hand protection | Wear appropriate protective gloves. |
| Respiratory protection | Use a NIOSH/MSHA-approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General Hygiene Considerations | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

9. Physical and chemical properties

| | |
|---|----------------------------------|
| Appearance | |
| Physical state | Solid. |
| Form | Solid. |
| Color | Varies from light to dark brown. |
| Odor | Not available. |
| Odor threshold | Not available. |
| pH | 8.4 |
| Melting point/freezing point | <1700°C |
| Initial boiling point and boiling range | Not available. |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |

| | |
|---|--|
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Bulk density sand products | 1.36 - 1.4 g / cm ³ - 84.55 - 87.80 lbs / ft ³ |
| Solubility(ies) | |
| Solubility (water) | Insoluble in water |
| Partition coefficient (n-octanol/water) | |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |

10. Stability and reactivity

| | |
|------------------------------------|--|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage, and transport. |
| Chemical stability | Material is stable under normal conditions |
| Possibility of hazardous reactions | No dangerous reaction is known under conditions of normal use. |
| Conditions to avoid | None known. |
| Incompatible materials | None known. |
| Hazardous decomposition products | No hazardous decomposition products are known. |

11. Toxicological information

Information on likely routes of exposure

| | |
|--------------|--|
| Inhalation | No long-term effect on the respiratory system is expected. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | Expected to be a low ingestion hazard. |

Symptoms related to the physical, chemical, and toxicological characteristics

Direct contact with the eyes may cause temporary irritation.

Information on toxicological effects

| | |
|-----------------------------------|--|
| Acute toxicity | Not available. |
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irritation. |
| Serious eye damage/eye irritation | |

Direct contact with the eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization

Not a respiratory sensitizer.

Skin sensitization

This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data is available to indicate product, or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.
Specific target organ toxicity - repeated exposure Not classified.
Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous.
Persistence and degradability No data is available on the degradability of this product.
Bio-accumulative potential No data available.
Mobility in soil No data available.
Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.
Hazardous waste code Not applicable.
Waste from residues / unused products Not available.
Contaminated packaging Not available.

14. Transport information

DOT Not regulated as dangerous goods.
IATA Not regulated as dangerous goods.
IMDG Not regulated as dangerous goods.
Packaging In 1200 kg big bag or in 25 kg bag.
Bulk Transport Possible

15. Regulatory information

No specific regulation in the fields of occupational health and safety and/or environment apply.

16. Other information, including date of preparation or last revision

This information is supplied to be informative and to alert the user of the material. The ultimate compliance with federal, state, and/or local regulations concerning the use of this material, or compliance with respect to product liability, rests solely upon the purchaser thereof.

Prepared by: FRC Global
Date: September 2021

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End of Safety Data Sheet