

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : FREEFLOW®-1000R

1.2. Recommended use and restrictions on use

Use of the substance/mixture : High temperature insulation.

1.3. Supplier

Supplier

Microtherm N.V.
Industriepark-Noord 1
Sint Niklaas, 9100
BELGIUM
T +32 3 7601980 - F +32 3 760 1999
info@microtherm.be - www.promat-industry.com

Other

Promat Inc. USA
1731 Fred Lawson Drive
Maryville, TN, 37801
UNITED STATES
T +1 888 681 0155 - F +1 865 681 0016
industryUS@promat.com - www.promat.com/en-us/industry

1.4. Emergency telephone number

Emergency number : Please contact a regional poison center or emergency telephone number.

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labelling

No labelling applicable

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Can occur: eye irritation, irritation of mucous membranes and skin irritation. As with most types of nuisance dust, excessive inhalation of dust may cause irritation of the bronchial tubes.

2.4. Unknown acute toxicity (GHS US)

Not established.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not established.

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Rutile	CAS-No.: 1317-80-2	≥ 25 - < 50	Not classified

Full text of hazard classes and H-statements : see section 16

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SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Seek medical attention if ill effect or irritation develops.
First-aid measures after inhalation	: Remove to fresh air and drink water. Seek medical attention if irritation or symptoms persist.
First-aid measures after skin contact	: Rinse affected areas with water, taking care not to scratch or rub. Seek medical attention if irritation or symptoms persist.
First-aid measures after eye contact	: Do not rub the eye. Rinse immediately with plenty of water. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Ingestion unlikely due to product form. Do not induce vomiting. Rinse mouth. Drink plenty of water. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract and to other mucous membranes.
Symptoms/effects after skin contact	: May cause temporary irritation/skin rash. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: May cause temporary eye irritation.
Symptoms/effects after ingestion	: None known.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : All extinguishing media can be used.

5.2. Specific hazards arising from the chemical

Explosion hazard	: Product is not explosive.
Reactivity in case of fire	: The product is non-combustible.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Minimise generation of dust. Avoid breathing dusts. Avoid eye and skin contact. Dampen down any dust or use vacuum cleaner with correct filter.

6.1.1. For non-emergency personnel

Measures in case of dust release : Use recommended respiratory protection. Prevent spread of dust. Dampen down any dust or use vacuum cleaner with correct filter.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions

Prevent spread of dust.

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6.3. Methods and material for containment and cleaning up

- For containment : Use closed containers to avoid dust release.
Methods for cleaning up : Shovel up small pieces. Dampen down any dust before putting into appropriate skips.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Dust, generated during machining and processing must be exhausted and the regulatory occupational exposure limits (workplace exposure limits in UK) must be respected.
Precautions for safe handling : Work in a well ventilated area. Use tools with appropriate dust exhaust equipment. Use always respiratory protective equipment when exposures are likely or can be foreseen to exceed the Occupational Exposure Limits or Workplace Exposure Limits in UK (refer to local regulations). Collect dust with a vacuum cleaner or soak with water before sweeping up.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in dry, covered and frost proof area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

FREEFLOW®-1000R

No additional information available.

Rutile (1317-80-2)

USA - ACGIH - Occupational Exposure Limits

Local name	Titanium dioxide
ACGIH OEL TWA	1 mg/m ³
Remark (ACGIH)	LRT irr; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)

USA - OSHA - Occupational Exposure Limits

Local name	Titanium dioxide (Total dust)
OSHA PEL TWA [1]	15 mg/m ³

8.2. Appropriate engineering controls

- Appropriate engineering controls : When machining boards (drilling, cutting, sanding, etc.), respect Occupational Exposure Limits (OEL) or Workplace Exposure Limits (WEL in the UK). Check the latest Occupational Exposure Limits (OEL) or Workplace Exposure Limits (WEL in the UK) that are applicable in your country.
Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures/Personal protective equipment

Eye protection:

Avoid contact with eyes. Use safety glasses whenever tools are used and dusts are produced.

Skin and body protection:

Avoid contact with skin. Use working clothes and gloves to protect against mechanical injury and direct skin contact.

Respiratory protection:

Avoid breathing dusts. Use appropriate respiratory equipment when exposures are likely or can be foreseen to exceed the Occupational Exposure Limits or Workplace Exposure Limits for the UK (e.g. for exposures up to 10 times the OEL (WEL) use at least a P2 type dust mask. For higher exposure, use a P3 type mask).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: brown
Odour	: None
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

Percent Solids : 100 %

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Do not use the product at temperatures in excess of the maximum recommended operating temperature.

10.5. Incompatible materials

No additional information available.

10.6. Hazardous decomposition products

Core insulation : thermally stable to the recommended maximum operating temperature.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Rutile (1317-80-2)

LD50 oral rat	> 5000 mg/kg
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract and to other mucous membranes.
Symptoms/effects after skin contact	: May cause temporary irritation/skin rash. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: May cause temporary eye irritation.
Symptoms/effects after ingestion	: None known.

SECTION 12: Ecological information

12.1. Toxicity

Rutile (1317-80-2)

NOEC (acute)	5600 mg/l
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12.2. Persistence and degradability

No additional information available.

12.3. Bioaccumulative potential

No additional information available.

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12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste) : Dispose of in accordance with relevant local regulations.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not established.
Proper Shipping Name (TDG) : Not established.
Proper Shipping Name (IMDG) : Not established.
Proper Shipping Name (IATA) : Not established.

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not established.

TDG
Transport hazard class(es) (TDG) : Not established.

IMDG
Transport hazard class(es) (IMDG) : Not established.

IATA
Transport hazard class(es) (IATA) : Not established.

14.4. Packing group

Packing group (DOT) : Not established.
Packing group (TDG) : Not established.
Packing group (IMDG) : Not established.
Packing group (IATA) : Not established.

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT
No data available

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TDG

No data available

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not established.

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Rutile	1317-80-2			

15.2. International regulations

CANADA

No additional information available.

EU-Regulations

No additional information available.

National regulations

No additional information available.

15.3. US State regulations

No additional information available.

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 10/22/2021

Indication of changes:

Composition/information on ingredients. Exposure controls/personal protection.

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.