

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g), Rev. 2012 and GHS Rev 03.

Issued on 11-Oct-2017

### 1 Identification

- **Product identifier**
- **Trade name: 1000X and related products**

**Valid for the following products:**

PROMALIGHT®-1000X  
 STEELFLEX®-1000X  
 PROMAGUARD®  
 AEROGUARD®-1000x SD/ED/HD  
 MICROTHERM® PANEL 1000X  
 MICROTHERM® OVERSTICHD / SEMI-OVERSTICHD 1000X  
 MICROTHERM® QUILTED / SEMI-QUILTED 1000X  
 MICROTHERM® FLOPPY 1000X

- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Promat Inc.  
 1731 Fred Lawson Drive  
 Maryville, TN 37801  
 Phone: 888-681-0155  
 Fax: 865-681-0016  
 E-mail: Sales@promat.us  
 Web site: www.promat.us
- **Emergency telephone number:** 888-681-0155

### 2 Hazard(s) identification

- **Classification of the substance or mixture**  
 The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Non-Regulated Material
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Non-Regulated Material
- **Hazard statements** Non-Regulated Material
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
 Fire = 0  
 Reactivity = 0

- **HMS-ratings (scale 0 - 4)**



Health = \*0  
 Fire = 0  
 Reactivity = 0

Trade name: **MICROTHERM® 1000X and related products**

### 3 Composition/information on ingredients

10034-76-1	Calcium sulphate	0-25%
1343-98-2	Silica Fiber	0-12%

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· <b>Hazardous Components:</b>		
112945-52-5	Amorphous Silica	50-90%
409-21-2	silicon carbide	10-50%
1344-28-1	aluminium oxide	0-25%
	⚠ STOT SE 3, H335	
1344-95-2	Silica fiber	0-12%
65997-17-3	Fibrous Glass	0-12%
	⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	

- **Additional information:**  
MICROTHERM 1000X insulation products contain no respirable fibers (see Section 11) and therefore fall outside the scope of European Community Directive Amendment 97/69/EC.

MICROTHERM 1000X insulation products may be supplied encapsulated in covering materials such as woven glass cloth, non-woven polyester cloth, PE foil, aluminum foil and mica sheet.

### 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Remove affected person to fresh air. Seek medical attention if symptoms persist.
- **After skin contact:**  
Rinse affected areas with water, taking care not to scratch or rub. Seek medical attention if irritation persists.
- **After eye contact:**  
Flush immediately with copious amounts of water. Do not rub eyes. Seek medical attention if irritation persists.
- **After swallowing:** In the event of suspected problems, seek medical attention.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water, carbon dioxide, foam or dry extinguishing media.
- **Special hazards arising from the substance or mixture**  
Plastic encapsulations used to contain MICROTHERM 1000X insulation products will burn if exposed to flames.
- **Advice for firefighters**
- **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
- **Additional information**  
MICROTHERM 1000X insulation products are classified as "non-combustible" by tests to BS 476 Part 4: 1970, Fire Tests on Building Materials and Structures. Non-combustibility test for materials (equivalent to ISO/R 1182).

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### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
In the event of high dust levels, use approved respiratory protective equipment (see Section 8).
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Powder and fragments should be cleaned up using a method that will avoid the generation of dust in the workplace atmosphere. The use of a vacuum cleaner fitted with an exhaust air filter fine enough to trap the dust is recommended.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Precautions for safe handling**  
The handling of MICROTHERM® 1000X insulation products, especially in the encapsulated form, is unlikely to generate significant quantities of airborne dust. Dust may be generated, however, if MICROTHERM 1000X HY insulation products have to be machined, cut to size, broken up or removed from equipment. In such circumstances, if adequate control of personal exposure cannot be achieved by engineering measures alone, it will be necessary to wear approved respiratory protective equipment with the appropriate nominal protection factor and eye protection.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
MICROTHERM® 1000X insulation products should be stored in dry conditions.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

· <b>Components with occupational exposure limits:</b>	
<b>112945-52-5 Amorphous Silica</b>	
ACGIH-TLV	Short-term value: 3 mg/m <sup>3</sup> Long-term value: 4 E mg/m <sup>3</sup>
OSHA-PEL	Short-term value: 5 mg/m <sup>3</sup> Long-term value: 4 E mg/m <sup>3</sup>
<b>409-21-2 silicon carbide</b>	
PEL	Long-term value: 15* 5** mg/m <sup>3</sup> fibrous dust: *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	Long-term value: 10* 3** mg/m <sup>3</sup> fibrous dust:0.1 f/cc; nonfibrous:*inh.,**resp.

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**Components with occupational exposure limits:**

**1344-28-1 aluminium oxide**

PEL	Long-term value: 15*; 15** mg/m <sup>3</sup> *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m <sup>3</sup> as Al; *as respirable fraction

**1344-95-2 Silica fiber**

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	Long-term value: 10 mg/m <sup>3</sup> synthetic nonfibrous, E

**Additional information:** The lists that were valid during the creation were used as basis.

**Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Where sufficient control of exposure to airborne dust cannot be achieved by engineering measures alone, or if irritation problems arise, the following protective equipment may be necessary:

**Breathing equipment:**

NIOSH/MSHA or EN approved respiratory protection is recommended for use in airborne concentrations exceeding exposure limits.

**Protection of hands:**

Protective gloves and protective skin cream



Protective gloves

**Eye protection:** Tightly sealed goggles

**Body protection:** Protective work clothing

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### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Solid (may be encapsulated in a covering material)

**Color:** Grey

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

**Melting point/Melting range:** >1700C (silica)

**Boiling point/Boiling range:** Not determined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** 0.1-0.5 g/cc

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

**Water:** Not determined.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

· **Other information** No further relevant information available.

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### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Product is stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**

COVERING: The organic components applied to the glass cloth, and some coatings and adhesives used with MICROTHERM® 1000X insulation products could decompose when heated to temperatures greater than 1500 degrees Celsius.

CORE INSULATION: MICROTHERM® 1000X insulation products are thermally stable up to their recommended maximum operating temperature.

- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.
- **Additional information:**

WHEN HANDLING INSULATION WHICH MAY HAVE BEEN SUBJECTED TO TEMPERATURES IN EXCESS OF THE MAXIMUM RECOMMENDED OPERATING TEMPERATURES CARE MUST BE TAKEN TO ENSURE THAT DUST LEVELS ARE MAINTAINED AS FAR BELOW THE APPROPRIATE CONTROL LIMIT AS IS REASONABLY PRACTICAL.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Other information (about experimental toxicology):**  
Note: with filament diameters in the range 6-11 microns, MICROTHERM 1000X insulation products contain no respirable fibers as defined by the WHO (World Health Organization).
- **Additional toxicological information**  
The product shows the following dangers according to internally approved calculation methods for preparations:
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

112945-52-5	Amorphous Silica	3
· <b>NTP (National Toxicology Program)</b>		
None of the ingredients are listed.		
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients are listed.		

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### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Waste MICROTHERM 1000X insulation products (even after use above their recommended operating temperatures) are not classified as hazardous waste, and may generally be disposed of at a normal landfill site that has been licensed for the disposal of industrial waste.

Where MICROTHERM 1000X insulation waste has been contaminated by products that may be classified as hazardous, expert guidance should be sought.

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |                        |
|--|------------------------|
| · <b>UN-Number</b>   |                        |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Non-Regulated Material |
| · <b>UN proper shipping name</b>   |                        |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Non-Regulated Material |
| · <b>Transport hazard class(es)</b>  |                        |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   |                        |
| · <b>Class</b>   | Non-Regulated Material |
| · <b>Packing group</b>   |                        |
| · <b>DOT, ADR, IMDG, IATA</b>  | Non-Regulated Material |
| · <b>Environmental hazards:</b>  |                        |
| · <b>Marine pollutant:</b>   | No                     |
| · <b>Special precautions for user</b>  | Not applicable.        |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.        |
| · <b>UN "Model Regulation":</b>  | -                      |

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**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

1344-28-1 aluminium oxide

· **TSCA (Toxic Substances Control Act):**

112945-52-5 Amorphous Silica

409-21-2 silicon carbide

1344-28-1 aluminium oxide

1344-95-2 Silicic acid, calcium salt

65997-17-3 Fibrous Glass

1343-98-2 Silicic Acid

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

This product is listed as a hazardous material under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200

- **GHS label elements** Non-Regulated Material
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Non-Regulated Material
- **Hazard statements** Non-Regulated Material

· **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

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· <b>State Right to Know</b>		
112945-52-5	Amorphous Silica	50-90%
409-21-2	silicon carbide	10-50%
10034-76-1	Calcium sulphate	0-25%
1344-28-1	aluminium oxide	0-25%
	⚠ STOT SE 3, H335	
1344-95-2	Silicic acid, calcium salt	0-12%
65997-17-3	Fibrous Glass	0-12%
	⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
All ingredients are listed.		

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision** 10/11/2017

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3