

Safety Data Sheet (SDS)

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

Issued on 14-Jul-2015

1 Identification

- **Product identifier**
- **Trade name: 1000R HY and related products**

Valid for the following products:

PROMALIGHT®-1000R HY
 MICROTHERM® PANEL 1000R HY
 MICROTHERM® OVERSTICHD 1000R HY (Full HY)
 MICROTHERM® QUILTED 1000R HY
 MICROTHERM® FLOPPY 1000R HY
 SLIMFLEX®

- **Details of 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**



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer



GHS07

Skin Irrit. 2 H315 Causes skin irritation
 Eye Irrit. 2A H219 Causes eye irritation
 STOT SE 3 H335 May cause respiratory irritation

- **Label elements**
- **GHS label elements**
 The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**
 titanium dioxide

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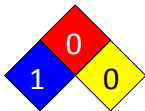
(Contd. from page 1)

· Hazard statements

Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
May cause respiratory irritation.

· Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Take off contaminated clothing and wash before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:**· NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

· HMIS-ratings (scale 0 - 4)

Health = *1
Fire = 0
Reactivity = 0

Trade name: **MICROTHERM® 1000R HY and related products**

Composition/information on ingredients

1343-98-2	Silica Fiber	0-12%
<ul style="list-style-type: none"> • Chemical characterization: Mixtures • Description: Mixture of the substances listed below with nonhazardous additions. 		
<ul style="list-style-type: none"> • Hazardous Components: 		
68611-44-9	Silane, dichlorodimethyl-, reaction product with silica ⚠ STOT SE 3, H335	10-70%
112945-52-5	Amorphous Silica	0-70%
13463-67-7	Titanium dioxide ⚠ Carc. 2, H351; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	10-50%
1344-28-1	aluminum oxide ⚠ STOT SE 3, H335	0-25%
1344-95-2	Silica fiber	0-12%
65997-17-3	Fibrous Glass ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	0-12%

- **Additional information:**

MICROTHERM 1000R HY insulation products contain no respirable fibers (see Section 11) and therefore fall outside the scope of European Community Directive Amendment 97/69/EC.

MICROTHERM 1000R HY 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 1000R 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 1000R HY 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® 1000R insulation products, especially in the encapsulated form, is unlikely to generate significant quantities of airborne dust. Dust may be generated, however, if MICROTHERM 1000R 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® 1000R HY 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.

• Components with occupational exposure limits:	
68611-44-9 Silane, dichlorodimethyl-, reaction product with silica	
ACGIH-TLV	Short-term value: 3 mg/m ³ Long-term value: 10 mg/m ³
OSHA-PEL	Short-term value: 6 mg/m ³
112945-52-5 Amorphous Silica	
ACGIH-TLV	Short-term value: 3 mg/m ³ Long-term value: 4 E mg/m ³
OSHA-PEL	Short-term value: 5 mg/m ³ Long-term value: 4 E mg/m ³

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(Contd. from page 4)	
13463-67-7 titanium dioxide	
PEL	Long-term value: 15* mg/m ³ *total dust
REL	See Pocket Guide App. A
TLV	Long-term value: 10 mg/m ³ Withdrawn from NIC
1344-28-1 aluminium oxide	
PEL	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
1344-95-2 Silica fiber	
PEL	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV	Long-term value: 10 mg/m ³ synthetic non-fibrous, 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: Brown

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** 4-5 (suspensions; 40 g/l water)

· **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® 1000R HY insulation products could decompose when heated to temperatures greater than 1500 degrees Celsius.
CORE INSULATION: MICROTHERM® 1000R HY 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:**

LD/LC50 values that are relevant for classification:

13463-67-7 titanium dioxide

Oral	LD50	>20000 mg/kg (rat)
Dermal	LD50	>10000 mg/kg (rabbit)
Inhalative	LC50/4 h	>6.82 mg/l (rat)

- **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 1000R HY 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:

Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Titanium dioxide has been reclassified by the IARC as "possibly carcinogenic to humans (Group 2B)". The classification was based on sufficient evidence in experimental animals but inadequate evidence in humans for the carcinogenicity of titanium dioxide. IARC indicated in the monograph that "the studies do not suggest an association between occupational exposure to titanium dioxide as it occurred in recent decades in Western Europe and North America and risk for cancer." (IARC Monograph Vol. 93).

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112945-52-5	Amorphous Silica	3
13463-7	titanium dioxide	2B
<ul style="list-style-type: none"> • NTP (National Toxicology Program) 		
None of the ingredients are listed.		
<ul style="list-style-type: none"> • OSHA-Ca (Occupational Safety & Health Administration) 		
None of the ingredients are listed.		

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 1000R HY 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 1000R HY 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

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**

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(Contd. from Page 8)

- **Class** Non-Regulated Material
- **Packing group**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

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):**

68611-44-9 Silane, dichlorodimethyl-, reaction product with silica

112945-52-5 Amorphous Silica

13463-67-7 titanium dioxide

1344-28-1 aluminium oxide

65997-17-3 Fibrous Glass

1343-98-2 Silicic Acid

· **Proposition 65**

· **Chemicals known to cause cancer:**

13463-67-7 titanium dioxide

· **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

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- **GHS label elements** Non-Regulated Material
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**
titanium dioxide
- **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer.
May cause respiratory irritation.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Take off contaminated clothing and wash before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

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• State Right to Know		
68611-44-9	Silane, dichlorodimethyl-, reaction product with silica ⚠ STOT SE 3, H335	10-70%
112945-52-5	Amorphous Silica	0-70%
13463-67-7	titanium dioxide ⚠ Carc. 2, H351; ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335	10-50%
10034-76-1	Calcium sulphate	0-25%
1344-28-1	aluminium oxide ⚠ STOT SE 3, H335	0-25%
1344-95-2	Silica fiber	0-12%
65997-17-3	Fibrous Glass ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335	0-12%
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** 07/14/2015
Corrected spelling errors, 1000X refs, and updated Amorphous Silica percentages
- **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