

# SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

## BAROTHERM

Revision Date: 20-Dec-2011

Revision Number: 6

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product Identifier**

Product Name BAROTHERM

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

Recommended Use Weight Additive

Uses Advised Against No information available

**Details of the supplier of the safety data sheet**

Halliburton Manufacturing Services, Ltd.  
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Aberdeen, AB21 0GN  
United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

[www.halliburton.com](http://www.halliburton.com)

For further information, please contact

E-Mail address: [fdunexchem@halliburton.com](mailto:fdunexchem@halliburton.com)**Emergency telephone number**

+44 1224 795277 or +1 281 575 5000

**Emergency telephone \$45 - (EC)1272/2008**

|                       |   |
|-----------------------|---|
| <b>Europe</b>         | <b>112</b>  |
| <b>Denmark</b>        | Poison Control Hotline (DK): +45 82 12 12 12  |
| <b>France</b>         | ORFILA (FR): + 01 45 42 59 59   |
| <b>Germany</b>        | Poison Center Berlin (DE): +49 030 30686 790  |
| <b>Italy</b>          | Poison Center, Milan (IT): +39 02 6610 1029   |
| <b>Netherlands</b>    | National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals) |
| <b>Norway</b>         | Poisons Information (NO): + 47 22 591300  |
| <b>Poland</b>         | Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97                                  |
| <b>Spain</b>          | Poison Information Service (ES): +34 91 562 04 20   |
| <b>United Kingdom</b> | NHS Direct (UK): +44 0845 46 47   |

### 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture****REGULATION (EC) No 1272/2008**

|  |                      |
|--|----------------------|
| Carcinogenicity                                      | Category 1A - (H350) |
| Specific Target Organ Toxicity - (Repeated Exposure) | Category 1 - (H372)  |

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

For the full text of the R-phrases mentioned in this Section, see Section 16

## 2. HAZARDS IDENTIFICATION

**Classification** Crystalline silica is not classified as a carcinogen in EU Council Directives 67/548/EEC and 88/379/EEC.

**Risk Phrases** None

### Label Elements

### **Hazard Pictograms**



**Signal Word** Danger

### **Hazard Statements**

H350i - May cause cancer by inhalation

H372 - Causes damage to organs through prolonged or repeated exposure

### **Contains**

#### **Substances**

Crystalline silica, cristobalite

Crystalline silica, tridymite

Bentonite

Crystalline silica, quartz

#### **CAS Number**

14464-46-1

15468-32-3

1302-78-9

14808-60-7

### **Precautionary Statements - EU (§28, 1272/2008)**

P201 - Obtain special instructions before use

P308 + P313 - IF exposed or concerned: Get medical advice/attention

### **Other Hazards**

None known

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Substances                       | EINECS    | CAS Number | PERCENT   | EEC Classification | EU - CLP Substance Classification    | REACH No.         |
|----------------------------------|-----------|------------|-----------|--------------------|--------------------------------------|-------------------|
| Crystalline silica, cristobalite | 238-455-4 | 14464-46-1 | 0 - 1%    | Not applicable     | Carc. 1A (H350i)<br>STOT RE 1 (H372) | No data available |
| Crystalline silica, tridymite    | 239-487-1 | 15468-32-3 | 0 - 1%    | Not applicable     | Carc. 1A (H350i)<br>STOT RE 1 (H372) | No data available |
| Bentonite                        | 215-108-5 | 1302-78-9  | 60 - 100% | Not applicable     | Not applicable                       | No data available |
| Crystalline silica, quartz       | 238-878-4 | 14808-60-7 | 1 - 5%    | Not applicable     | Carc. 1A (H350i)<br>STOT RE 1 (H372) | No data available |

**For the full text of the R-phrases mentioned in this Section, see Section 16**

## 4. FIRST AID MEASURES

### **Description of first aid measures**

#### 4. FIRST AID MEASURES

|                   |   |
|-------------------|---|
| <b>Inhalation</b> | If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.    |
| <b>Eyes</b>       | In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists. |
| <b>Skin</b>       | Wash with soap and water. Get medical attention if irritation persists.   |
| <b>Ingestion</b>  | Under normal conditions, first aid procedures are not required.   |

**Most Important symptoms and effects, both acute and delayed**

May cause eye irritation.

**Indication of any immediate medical attention and special treatment needed**

|                           |                       |
|---------------------------|-----------------------|
| <b>Notes to Physician</b> | Treat symptomatically |
|---------------------------|-----------------------|

#### 5. FIREFIGHTING MEASURES

**Extinguishing media****Suitable Extinguishing Media**

All standard fire fighting media

**Extinguishing media which must not be used for safety reasons**

None known.

**Special hazards arising from the substance or mixture****Special Exposure Hazards**

Not applicable.

**Advice for firefighters****Special Protective Equipment for Fire-Fighters**

Not applicable.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid creating and breathing dust.

See Section 12 for additional information

**Environmental precautions**

None known.

**Methods and material for containment and cleaning up**

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

**Reference to other sections**

See Section 12 for additional information.

#### 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

**Conditions for safe storage, including any incompatibilities**

Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Do not reuse empty container. Product has a shelf life of 36 months.

**Specific End Use(s)****Exposure Scenario**

No information available

**Other Guidelines**

No information available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

| Substances                       | EU             | UK OEL                | Netherlands             | France OEL             | Germany MAK/TRK        |
|----------------------------------|----------------|-----------------------|-------------------------|------------------------|------------------------|
| Crystalline silica, cristobalite | Not applicable | 0.1 mg/m <sup>3</sup> | 0,075 mg/m <sup>3</sup> | 0.05 mg/m <sup>3</sup> | 0,15 mg/m <sup>3</sup> |
| Crystalline silica, tridymite    | Not applicable | 0.1 mg/m <sup>3</sup> | 0,075 mg/m <sup>3</sup> | 0.05 mg/m <sup>3</sup> | Not applicable         |
| Bentonite                        | Not applicable | 10 mg/m <sup>3</sup>  | Not applicable          | Not applicable         | Not applicable         |
| Crystalline silica, quartz       | Not applicable | 0.1 mg/m <sup>3</sup> | 0,075 mg/m <sup>3</sup> | 0.1 mg/m <sup>3</sup>  | 0,15 mg/m <sup>3</sup> |

| Substances                       | Italy          | Poland              | Hungary                | Czech Republic        | Denmark        |
|----------------------------------|----------------|---------------------|------------------------|-----------------------|----------------|
| Crystalline silica, cristobalite | Not applicable | 2 mg/m <sup>3</sup> | 0.15 mg/m <sup>3</sup> | 0.1 mg/m <sup>3</sup> | Not applicable |
| Crystalline silica, tridymite    | Not applicable | 2 mg/m <sup>3</sup> | 0.15 mg/m <sup>3</sup> | 0.1 mg/m <sup>3</sup> | Not applicable |
| Bentonite                        | Not applicable | Not applicable      | Not applicable         | 6.0 mg/m <sup>3</sup> | Not applicable |
| Crystalline silica, quartz       | Not applicable | 2 mg/m <sup>3</sup> | 0.15 mg/m <sup>3</sup> | Not applicable        | Not applicable |

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

### Exposure controls

#### Engineering Controls

Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits listed in Section 2.

#### Personal protective equipment

##### Respiratory Protection

Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

##### Hand Protection

Normal work gloves.

##### Skin Protection

Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.

##### Eye Protection

Wear safety glasses or goggles to protect against exposure.

##### Other Precautions

None known.

#### Environmental Exposure Controls

No information available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical State:** Solid

**Color:** Various

**Odor:** Odorless

**Odor Threshold:** No information available

#### Property

#### Values

#### Remarks/ Method

##### pH:

9.9

##### Melting Point/Range

No data available

##### Freezing Point/Range (C):

No data available

##### Boiling Point/Range

No data available

##### Flash Point

No data available

##### Evaporation rate

No data available

##### Vapor Pressure

No data available

##### Vapor Density

No data available

##### Specific Gravity

2.6

##### Water Solubility

Insoluble in water

##### Solubility in other solvents

No data available

##### Partition coefficient: n-octanol/water

No data available

##### Autoignition Temperature

No data available

##### Decomposition Temperature

No data available

##### Viscosity

No data available

##### Explosive Properties

No information available

##### Oxidizing Properties

No information available

### Other information

**9. PHYSICAL AND CHEMICAL PROPERTIES**

VOC Content (%)

No data available

**10. STABILITY AND REACTIVITY****Reactivity**

Not applicable

**Chemical Stability**

Stable

**Possibility of Hazardous Reactions**

Will Not Occur

**Conditions to Avoid**

None anticipated

**Incompatible Materials**

Hydrofluoric acid.

**Hazardous Decomposition Products**

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

**11. TOXICOLOGICAL INFORMATION****Information on Toxicological Effects****Acute Toxicity****Inhalation**

Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

**Eye Contact**

May cause eye irritation.

**Skin Contact**

May cause mechanical skin irritation.

**Ingestion**

None known

**Chronic Effects/Carcinogenicity**

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, *Silica, Some Silicates and Organic Fibres* (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

## 11. TOXICOLOGICAL INFORMATION

| Substances                       | LD50 Oral         | LD50 Dermal       | LC50 Inhalation   |
|----------------------------------|-------------------|-------------------|-------------------|
| Crystalline silica, cristobalite | No data available | No data available | No data available |
| Crystalline silica, tridymite    | No data available | No data available | No data available |
| Bentonite                        | No data available | No data available | No data available |
| Crystalline silica, quartz       | No data available | No data available | No data available |

## 12. ECOLOGICAL INFORMATION

### Toxicity Ecotoxicity Effects

| Substances                       | Toxicity to Algae        | Toxicity to Fish                          | Toxicity to Microorganisms | Daphnia Magna (Water Flea) |
|----------------------------------|--------------------------|---|----------------------------|----------------------------|
| Crystalline silica, cristobalite | No information available | No information available                  | No information available   | No information available   |
| Crystalline silica, tridymite    | No information available | No information available                  | No information available   | No information available   |
| Bentonite                        | No information available | TLM96: 10000 ppm<br>(Oncorhynchus mykiss) | No information available   | No information available   |
| Crystalline silica, quartz       | No information available | No information available                  | No information available   | No information available   |

### Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

### Bioaccumulative potential

No information available

### Mobility in soil

No information available

### Results of PBT and vPvB assessment

No information available.

### Other adverse effects

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### Disposal Method

#### Contaminated Packaging

Bury in a licensed landfill according to federal, state, and local regulations.  
Follow all applicable national or local regulations.

## 14. TRANSPORT INFORMATION

### IMDG/IMO

UN Number: Not restricted.  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable

### RID

UN Number: Not restricted.  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable

**14. TRANSPORT INFORMATION****ADR**

UN Number: Not restricted.  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable

**IATA/ICAO**

UN Number: Not restricted.  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable

Special Precautions for User None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

EINECS Inventory This product, and all its components, complies with EINECS  
US TSCA Inventory All components listed on inventory or are exempt.  
Canadian DSL Inventory All components listed on inventory or are exempt.

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) WGK 0: Generally not water endangering.

**Chemical Safety Assessment**

No information available

**16. OTHER INFORMATION****Full text of R-phrases referred to under Sections 2 and 3**

None

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

Revision Date: 20-Dec-2011

Revision Note Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

**Disclaimer Statement**

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**End of Safety Data Sheet**