According to REACH Regulation (EC) 1907/2006 and (EC) No 1272/2008

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Tradename : Refrex® 1400

This product is defined as an article under REACH and does not require a Safety Data Sheet under Article 31 of Regulation (EC) No. 1907/2006. Since an SDS is not required, this document does not contain all of the information that is required for substance and mixture SDSs under REACH.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Cermic fibre cloth

Identification of the company

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2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Regulation (EC) No 1272/2008
Classification of the substance/ mixture
Not applicable

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive
This product is considered an article and is exempt from hazard classification.

2.2. Label elements
CLP Direction (EG) nr. 1272/2008
Not applicable

Dangerous substances(67/548/EEC)/preparations(1999/45/EC) directive
Not applicable

2.3. Other hazards
None known.

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SAFETY DATASHEET

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Nbr	% by Wt	Classification
Aluminoborosilicate	12788-79-3	>95	Substance not classified as hazardous
Organic sizing	Trade Secret	<5	Substance not classified as hazardous

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. Get medical attention.

Skin Contact:
If exposed, wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, get medical attention.

If Swallowed:
Do not induce vomiting. Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media
Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

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6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable

6.2. Environmental precautions
Not applicable

6.3. Methods and material for containment and cleaning up
Not applicable

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Avoid skin contact with hot material. Avoid breathing of dust created by cutting, sanding, grinding or machining. This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities
Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Organic Sizing	Trade Secret	AIHA	TWA(as aerosol):10 mg/m^3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA : Time-Weighted-Average
STEL : Short Term Exposure Limit
CEIL : Ceiling

8.2. Exposure controls
8.2.1. Engineering controls
Not applicable.

8.2.2. Personal protective equipment (PPE)
Eye/face protection
Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

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Skin/hand protection
No chemical protective gloves are required.

Respiratory protection
None required.

Thermal hazards
Wear heat insulating gloves, indirect vented goggles, and a full face shield when handling hot material to prevent thermal burns.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Colour	White
Odour threshold	Not applicable.
pH	Not applicable.
Boiling point/boiling range	Not applicable.
Melting point	>=1800°C
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Vapor Density	Not Applicable
Density	2.70 - 3.05 g/cm^3
Specific Gravity	2.70 - 3.05 [Ref Std:WATER=1]
Solubility In Water	0.5 - 3.5 % [Details:CONDITIONS: 0.5-3.5% BY WEIGHT]
Solubility- non-water	Not applicable.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	Not applicable.
Viscosity	Not Applicable
Molecular weight No Data Available	
Volatile organic compounds (VOC)	No data available.
VOC Less H2O & Exempt Solvents	No Data Available

10. STABILITY AND REACTIVITY

10.1 Reactivity
This material is considered to be non-reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

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10.4 Conditions to avoid
None known.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	Condition
Carbon monoxide.	At elevated temperatures.
Irritant vapours or gases.	At elevated temperatures.

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

11. TOXICOLOGICAL INFORMATION

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from Insulcon assessments.

11.1 Information on Toxicological effects
Signs and Symptoms of Exposure
Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Vapours from heated material may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain. Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain.

Skin contact
Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye contact
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Ingestion
Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

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Additional health effects:
Due to their large size (7-15 microns in diameter), Refrex® does not meet the definition of respirable as defined by WHO convention and ECHA. Because Refrex® fibers are considered non-respirable, they are not expected to pose a cancer risk.

Information on the following relevant hazard classes
This product, when used under reasonable conditions and in accordance with the Insulcon directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.
Due to their large size (7-15 microns in diameter), Refrex® does not meet the definition of respirable as defined by WHO convention and ECHA. Because Refrex® fibers are considered non-respirable, they are not expected to pose a cancer risk.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Organic sizing	Dermal	Rabbit	LD50>20,000 mg/kg
Organic sizing	Ingestion	Rat	LD50 32,770 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	No significant irritation
Aluminoborossilkicate fibers	In vitro data	No significant irritation
Organic sizing	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Organic sizing	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Organic sizing	Guinea pig	Not classified

Respiratory sensitization
Either no data is currently available for the component(s) or the available data is insufficient for a classification.

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Germ Cell Mutagenicity

Name	Species	Value
Organic sizing	In Vitro	Not mutagenic
Organic sizing	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Organic sizing	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity
Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Organic sizing	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Organic sizing	Ingestion	Not toxic to male reproduction	Rat	NOAEL 5699 +/- 1341 mg/kg/day	5 days
Organic sizing	Not specified	Some positive reproductive/developmental data exist, but the data are not sufficient for classification		NOEL N/A	
Organic sizing	Ingestion		Mouse	NOAEL 562 mg/animal/day	during gestation

Target Organ(s)
Specific Target Organ Toxicity – single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Organic sizing	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks

Specific Target Organ Toxicity – repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Organic Sizing	Inhalation	respiratory system	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks

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Organic Sizing	Ingestion	kidney and/or bladder/ heart endocrine system/ hematopoietic system /liver/ nervous system	Not classified	Rat	NOAEL 5,640 mg/kg/day	13 weeks

Aspiration hazard
For the component/components, either no data is currently available or the data is not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

12. ECOLOGICAL INFORMATION

Ecotoxicological information
Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information
Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

13. DISPOSAL CONSIDERATIONS

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.
Dispose of waste product in a permitted industrial waste facility.

EPA Hazardous Waste Number (RCRA):
Not regulated

14. TRANSPORT INFORMATION

Not hazardous for transportation

15. REGULATORY INFORMATION

15.1. US Federal Regulations
Contact Insulcon for more information.

EPCRA 311/312 Hazard Classifications:
Physical Hazards
Not applicable

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Health Hazards
Not applicable

15.2. State Regulations
Contact Insulcon for more information.

15.3. Chemical Inventories
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements. Contact Insulcon for more information.

15.4. International Regulations
Contact Insulcon for more information.

16. OTHER INFORMATION

NFPA Hazard Classification
Health: 0 Flammability: 0 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 0 Flammability: 0 Physical Hazard: 0 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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