1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

This Article Information Sheet (AIS) is provided as a courtesy in response to customer requests. The product is classified as an article.
Articles are not subject to this geography's hazard communication regulations. As generally defined: "Article" means any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part
on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product.

Chemical Identification: Pyrogel® XTF

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

Application of the substance / the mixture: High performance insulation material
Uses advised against: None specified.

1.3 Details of the supplier of the safety data sheet

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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008: The product is not classified, according to the GB CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008: None
Hazard pictograms: None
Signal word: None
Hazard statements: None

2.3 Other hazards

Results of PBT and vPvB assessment: The components in this formulation do not meet the criteria for classification as PBT or vPvB.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
Hazardous Components: No hazardous components in this proprietary formulation.

4. FIRST AID MEASURES

4.1 Description of first aid measures
After inhalation:
Remove person to fresh air.
After skin contact:
Wash with soap and water.
Observe good occupational hygiene for work.
If skin irritation or rash occurs: seek medical attention.
After eye contact:
Do not rub eyes.
Dust particles may cause abrasive injury.
Flush eyes with water for several minutes.
After swallowing:
No need for first aid is anticipated.

4.2 Most important symptoms and effects, both acute and delayed:
Dust may cause mechanical eye and skin irritation.
Inhalation of dust may cause irritation of the respiratory system.
Silica aerogels are hydrophobic (repel water) and may cause temporary drying and irritation of the skin, eyes, and mucous
membranes.

4.3 Indication of any immediate medical attention and special treatment needed:
Immediate medical attention is generally not required.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture:
Product is a super-insulator. Rolls of material will retain heat within internal layers that may be a source of ignition after the fire is
extinguished. Keep hot material away from combustible materials and cool hot insulation with water.

5.3 Advice for firefighters
Protective equipment: Normal firefighting procedures should be followed to avoid inhalation of smoke and gases produced by a fire

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Use personal protective equipment as required.
Ensure adequate ventilation.
Avoid formation of dust.

6.2 Environmental precautions:
Report spills as required under national and local regulations.

6.3 Methods and material for containment and cleaning up:
Collect using methods that avoid the generation of dust (pick up or vacuum dust) and place in appropriate container for disposal.

6.4 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

7.1 Precautions for Safe Handling:
Aerogel blankets may generate dust when handled. Workplace exposures to all dusts should be controlled with standard industrial hygiene practices. Local exhaust should be the primary dust control method. Dry vacuuming is the preferred method for cleaning up dust. Because aerogel dust is hydrophobic, water is not an effective dust control agent. Unpack material in the work area. This will help to minimize the area where dust exposure may occur. Trimmed material should be promptly packed in disposal bags. Trims and offcuts may be reused in secondary applications. Scrap material should be packed for disposal. Avoid dust contact with eyes, skin and clothing and avoid breathing dust. Wash hands with soap and water after handling.

7.2 Conditions for Safe Storage, Including any Incompatibilities:
Information about storage in one common storage facility:
Keep tightly closed in the packaging until ready for use.
Store in a dry place.
Further information about storage conditions:
Dispose of contents/container in accordance with local/regional/national/international regulations.

7.3 Specific end use(s):
No relevant information available

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Ingredients with limit values that require monitoring at the workplace:	
CAS: 21645-51-2 aluminium hydroxide	
WEL (Great Britain)	Long-term value: 2 mg/m³
Proprietary Non-Hazardous Pigment (iron/manganese)	
WEL (Great Britain)	Long-term value: 0.05* 0.2** mg/m³ respirable* inhalable**

Regulatory information: WEL (Great Britain): EH40/2020

Regulatory information
Monitoring of substance concentrations in air at the workplace may be necessary to ensure compliance with official exposure limit values and adequacy of exposure controls. For further information contact the supplier or the competent authorities.

8.2 Exposure controls
Appropriate engineering controls
Technical measures and the application of adequate working methods take priority over the use of personal protection equipment. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment
General protective and hygienic measures: Observe good hygiene practices.

Respiratory protection:
Select fit and use in accordance with local and national regulations.

Hand protection
Material of gloves:
Impervious gloves recommended for handling product.

Penetration time of glove material:
Not Applicable.

Eye/face protection
Appropriate safety eye wear is recommended.

Body protection:
Appropriate work clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties
General information
Physical state : Solid
Odour : Ammonia-like

Odor threshold	Not determined
Melting point/freezing point	Not determined
Boiling point or initisl boiling	
Point and boiling range	Not applicable
Flammability	Not determined
Lower and upper explosion limit	
Lower	Not determined
Upper	Not determined
Flash point	Not applicable
Ignition temperature	Not determined
Decomposition temperature	Not determined
pH	No data available
Viscosity	
Kinematic viscosity	Not applicable
Dynamic	Not applicable
Solubility	
Water	Insoluble
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure	Not applicable
Density and/or relative density	
Density	Not determined
Relative density	Not determined.
Vapour density	Not applicable.

9.2 Other information

Appearance:	
Form	Non-woven fabric

Important information on protection of health and Environment, and on safety

Auto-ignition temperature	Not determined.
Explosive properties	Product does not present an explosion hazard.
Change in condition	
Evaporation rate	Not applicable.
Information with regard to physical hazard classes	
Explosives	None
Flammable gases	None
Aerosols	None
Oxidising gases	None
Gases under pressure	None
Flammable liquids	None
Flammable solids	None
Self-reactive substances and mixtures	None
Pyrophoric liquids	None
Pyrophoric solids	None
Self-heating substances and mixtures	None

Substances and mixtures, which emit flammable gases in contact with water None

Oxidising liquids	None
Oxidising solids	None
Organic peroxides	None
Corrosive to metals	None
Desensitised explosives	None

10. STABILITY AND REACTIVITY

10.1 Reactivity:
Not reactive under normal conditions of use.

10.2 Chemical stability:
Stable under normal conditions.

10.3 Possibility of hazardous reactions:
No dangerous reactions known.

10.4 Conditions to avoid:
Avoid prolonged exposure above the recommended use temperature.

10.5 Incompatible materials:
Strong acids and bases.

10.6 Hazardous decomposition products:
No hazardous decomposition products during normal storage and handling.

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes
Acute toxicity:
Based on available data, components are not acutely toxic.
Skin corrosion/irritation:
Handling may cause dryness and may cause temporary irritation to skin.
Serious eye damage/irritation:
Handling may cause dryness and may cause temporary irritation to skin.
Respiratory tract:
Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation:
The chemical structure does not suggest a sensitizing effect.
Germ cell mutagenicity:
Based on available data, the classification criteria are not met.
Carcinogenicity:
None of the components are classified as a carcinogen or suspected carcinogens by EU CL
Reproductive toxicity:
Based on available data, the classification criteria are not met.

STOT-single exposure:
Based on available data, the classification criteria are not met.
STOT-repeated exposure:
Based on available data, the classification criteria are not met.
Aspiration hazard:
Based on available data, the classification criteria are not met.

11.2 Information on other hazards
Endocrine disrupting properties.
None of the ingredients is listed.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Aquatic toxicity:
Not toxic to aquatic environment.

12.2 Persistence and degradability
No relevant information available.

12.3 Bioaccumulative potential
No relevant information available.

12.4 Mobility in soil
No relevant information available.

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6 Endocrine disrupting properties
The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects
Other information:
General notes: Not hazardous for water

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

Uncleaned packaging:
Recommendation:
Cover promptly to avoid dust generation.
Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1 UN number or ID number
ADR, IMDG, IATA Not applicable

14.2 UN proper shipping name
ADR, IMDG, IATA Not applicable

14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA
Class Not applicable

14.4 Packing group
ADR, IMDG, IATA Not applicable

14.5 Environmental hazards Not applicable

14.6 Special precautions for user Not applicable

14.7 Maritime transport in bulk according to IMO instruments Not determined
UN "Model Regulation" Not applicable

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Regulation 98/24/EC (employee health protection)
Article Information Sheet
The Chemicals (Health and Safety) and Genetically Modified Organisms
(Contained Use) (Amendment etc.) (EU Exit) Regulations 2019
Directive 2012/18/EU
Named dangerous substances - ANNEX I: None of the ingredients are listed.

15.2 Chemical safety assessment
Chemical Safety Assessment not required.

16. OTHER INFORMATION

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this article information sheet for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this article information sheet is not valid for the new made-up material.

Abbreviations and acronyms:

ADR:	Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG:	International Maritime Code for Dangerous Goods
IATA:	International Air Transport Association
GHS:	Globally Harmonised System of Classification and Labelling of Chemicals
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)
LC50:	Lethal concentration, 50 percent
LD50:	Lethal dose, 50 percent
PBT:	Persistent, Bioaccumulative and Toxic
vPvB:	very Persistent and very Bioaccumulative

Sources: Data arise from reference works and literature

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