

# FIBERFRAX Z PRODUCTS, ARTICLES

According to (EC) No 1907/2006 (REACH)

## 1. IDENTIFICATION OF THE PRODUCTS AND OF THE COMPANY

### 1.1 Identification of the products

**Trade Names: Fiberfrax Z**

Product form : Article

Trade name : Fiberfrax Z Modules, Fiberfrax Z Blankets

Type of product :

This product is an article under the REACH definition. As the Classification and labelling regulations (CLP) strictly applies to substances and mixtures it does not make provision for articles. However this product SDS and the defined labelling is provided voluntarily. As a duty of care to the user.

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

#### 1.2.1 Relevant identified uses

Use of the substance/mixture : For industrial use within high temperature applications.

#### 1.2.2 Uses advised against

No additional information available

### 1.3 Identification of the company

**INSULCON B.V.**

The Netherlands

Tel. : +31 (0)167-565750

Zilverhoek 4, 4651 SP STEENBERGEN

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

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**INSULCON N.V.**

Belgium

Tel. : + 32 (0)3 711.02.78

**INSULCON GmbH**

Germany

Tel.: + 49 (0) 2131-408548-0

## 2. HAZARD IDENTIFICATION

### 2.1 Classification of the substance/mixture

**Classification according to Regulation (EC) No 1272/2008 (CLP)**

Under the CLP-Regulation (classification, labelling and packaging of substances and mixtures)

Carcinogenicity (inhalation) Category 1B H350i

Full text of hazard classes and H-statements : see section 16

#### **Adverse physicochemical, human health and environmental effect:**

May cause cancer (if inhaled). Contains a substance on the REACH candidate list: Aluminosilicate refractory ceramic fibres (CAS 142844-00-6) . This product is an article under the REACH definition. As the Classification and labelling regulations (CLP) strictly applies to substances and mixtures it does not make provision for articles. However this product SDS and the defined labelling is provided voluntarily. As a duty of care to the user. Voluntary labelling will be added in line with the regulatory label detailed below.

### 2.2 Labelling elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

**Insulcon B.V.**- The Netherlands - Tel: +31 (0) 167 565750  
**Insulcon GmbH** - Germany - Tel: +49 (0) 2131 408548-0  
**Insulcon N.V.** - Belgium - Tel: +32 (0) 3 711 02 78  
**Insulcon Projects S.A.** - Switzerland - Tel: +41 (0) 91911739-0

**INSULCON**

LEADER IN HIGH TEMPERATURE SOLUTIONS  
[www.insulcon.com](http://www.insulcon.com)

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# FIBERFRAX Z PRODUCTS, ARTICLES

Hazard pictograms (CLP)



Signal word (CLP) : Danger  
 Hazard statements (CLP) : H350i - May cause cancer by inhalation.  
 Precautionary statements (CLP) : P201 - Obtain special instructions before use.  
 P280 - Wear eye protection, protective gloves, Respiratory protection. P308+P313 - IF exposed or concerned: Get medical advice, medical attention.  
 Extra phrases : For professional users only.

## 2.3 Other hazards

Other hazards not contributing to the classification:  
 May cause mechanical irritation to the skin, eyes and respiratory system.

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII.

Component	
Aluminosilicate refractory ceramic fibres (142844-006)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Component	
Aluminosilicate refractory ceramic fibres(142844-00-6)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**3.1 Substance**  
 Not applicable

## FIBERFRAX Z PRODUCTS, ARTICLES

### 3.2 Mixtures

Comments

Article

All products contain Aluminosilicate Refractory Ceramic Fibres (RCF/ASW, CAS 14284400-6): None of the components are radioactive under the terms of European Directive Euratom 96/29. substance with national workplace exposure limit(s) Fiberfrax Modules, Fiberfrax Blankets, Fiberfrax Textiles are ready to use products in high temperature applications

COMPONENT	CAS NUMBER	Classification according to Regulation (EC) No 1272/2008 (CLP)	% by weight
Aluminosilicate refractory ceramic fibres substance listed as REACH Candidate (Note A)(Note R)	CAS No: 142 844-00-6 EC No: 604-214-4 EC index No: 650-017-00-8 REACH No: 1-2119458050-0000	Carc. 1B H350i	-

Note A:

Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4.

Note R : The classification as a carcinogen need not apply to fibres with a length-weighted geometric mean diameter less two standard geometric errors greater than 6 µm.

Full text of H-statements: see section 16

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

First-aid measures general	In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	Fibrous dust may be liberated when handling in use. If irritation to nose and throat, move to fresh air.
First-aid measures after skin contact	Wash skin with plenty of water. Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
First-aid measures after eye contact	Rinse cautiously with water for several minutes.
First-aid measures after ingestion	Ingestion unlikely.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	Mechanical irritation.
Symptoms/effects after skin contact	Mechanical irritation.
Symptoms/effects after eye contact	Mechanical irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically

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# FIBERFRAX Z PRODUCTS, ARTICLES

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media      The product is not flammable. Water spray. Dry powder. Foam.  
Unsuitable extinguishing media      Strong water jet.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Firefighting instructions      Prevent fire fighting water from entering the environment.  
Protection during firefighting      Do not enter fire area without proper protective equipment,  
including respiratory protection.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures      Prohibit unauthorized persons

#### 6.1.1. For non-emergency personnel

Emergency procedures      Only qualified personnel equipped with suitable protective equipment  
may intervene.

#### 6.1.2. For emergency responders

Protective equipment      Ensure adequate ventilation. Concerning personal protective equipment  
to use, see section 8.

### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up      Mechanically recover the product. Minimise generation of dust. Dust can  
be vacuumed with a vacuum cleaner containing a HEPA (High Efficiency  
Particulate Air) filter.  
Other information      Disposal must be done according to official regulations.

### 6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see  
section 8. For further information refer to section 13.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Precautions for safe handling      Obtain special instructions before use. Do not handle until all safety  
Precautions have been read and understood. Wear personal protective  
equipment. Ensure good ventilation of the work station.

## FIBERFRAX Z PRODUCTS, ARTICLES

Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Avoid contact with skin and eyes. Do not breathe dust. Clean contaminated areas thoroughly.

### Hygiene measures

Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Separate working clothes from town clothes. Launder separately.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Product must only be kept in the original packaging. Store in a well-ventilated place. Store tightly closed in a dry and cool place.

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

For professional users only. See Section 8. Exposure scenarios.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Fiberfrax Z Modules, Fiberfrax Z Blankets	
<b>United Kingdom - Occupational Exposure Limits</b>	
	Observe general threshold limit for dust.
<b>Aluminosilicate refractory ceramic fibres (142 844-00-6)</b>	
<b>EU - Binding Occupational Exposure Limit (BOEL)</b>	
Local name	Refractory ceramic fibres which are carcinogens
BOEL TWA	0.3 fibers/ml
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Refractory ceramic fibres and special purpose fibres
WEL TWA (OEL TWA) [1]	5 mg/m <sup>3</sup> total inhalable dust
WEL TWA (OEL TWA) [2]	0.3 fibers/ml respirable fraction
Remark	Carc (Capable of causing cancer and/or heritable genetic damage)

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Recommended monitoring procedures	“Man-made mineral fibre - Airborne number concentration by phase-contrast light microscopy” and MDHS 14/3
The UK follow MDHS 59 specific for MMVF	“General methods for sampling and gravimetric analysis of respirable and inhalable dust”.
	WHO-EURO method: Determination of airborne fibre number concentrations; A recommended method, by phase-contrast optical microscop
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

#### Aluminosilicate refractory ceramic fibres (142844-00-6)

#### DNEL/DMEL (additional information)

long term - Local, Inhalation	2,17 f/ml
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### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

Appropriate engineering controls:  
Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

Eye protection:

Where excessive dust may result, wear goggles. Safety glasses with side shields. EN 166

#### 8.2.2.2. Skin protection

Skin and body protection:

Impervious clothing. Do not take working clothes home

#### Hand protection:

Leather protective gloves

## FIBERFRAX Z PRODUCTS, ARTICLES

### 8.2.2.3. Respiratory protection

Respiratory protection:

If dust are formed : Wear appropriate mask. (FFP3)

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

Environmental exposure controls: Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use; Do not take working clothes home; Separate working clothes from town clothes. Launder separately Uses and Risk Management Measures (RMM)

Intended use

Secondary use – Conversion into wet and dry mixtures and articles.

Process would include: Mixing forming operations, handling of RCF/ASW products, assembly of RCF/ASW containing products, machine and hand finishing of RCF/ASW products.

Reference ES 2\*

RMM - Hierarchy of Controls

- Where it is practical to do so, automatically feed RCF/ASW in to the process - Where practical to do so, segregate dry and wet processing - Enclose the process where practically possible.
- Where practical to do so, segregate machine areas and restrict access to operators involved in the process.
- Enclose Machines as far as practically possible.
- Install LEV where possible, when machine finishing, handling, compressing and hand cutting to remove dust at source - Employ experienced personnel – trained in the correct use of fibrous products
- PPE and RPE used for all dusty tasks
- Provide vacuum cleaner connection point to central system where practical or use a portable

HEPA vacuum

- Regular clean up – using a wet scrubbing unit where practically possible and in general a HEPA vacuum should be used.
- Dry brushing and use of compressed air should be prohibited
- Waste materials to be contained at source, labelled and stored separately for disposal or recycling.

Intended use

Tertiary use - maintenance and service life (Industrial or professional use)

Process: Small scale repairs involving removal and installation of RCF/ASW products. Use of the product in an enclosed system, where there is occasional control access or no access.

Reference ES 3\*

RMM - Hierarchy of Controls

- Use pre-cut, pre-sized pieces where practically possible.
- Allow access only to trained (authorised) operators
- Where practically possible, perform all hand cutting in a segregated area, on a down draft bench.
- Clean up work area regularly during the shift using a HEPA equipped vacuum cleaner.
- Prohibit use of dry brushing and compressed air cleaning.

## FIBERFRAX Z PRODUCTS, ARTICLES

- Bag and seal waste immediately at source.
- Use PPE and RPE appropriate to task.
- Employ good hygiene practices.

### Intended use

Tertiary use- installation and removal (industrial or professional).

Large scale removal and installation of RCF/ASW from Industrial processes. Large scale removal and installation by professionals.

Reference ES 4\*

### RMM - Hierarchy of Controls

- Where practically possible enclose or segregate the work area.
- Allow only authorised personnel.
- Pre-wet insulation prior to removal where practically possible.
- Where practically possible use a water lance for removal or vacuum-truck.
- Use down draft bench for hand cutting products.
- Cover pre-cut section during transport and storage to prevent secondary exposure.
- Where practically possible provide multiple vacuum hoses for convenient cleanup of spillage or use portable HEPA filtered vacuums.
- Bag waste materials immediately at source
- Prohibit use of dry brushing and or compressed air cleaning.
- Experienced personnel only
- Use appropriate PPE and RPE appropriate to expected concentrations.

### Intended use

Secondary use – Conversion into wet and dry mixtures and articles.

Process would include: Mixing forming operations, handling of RCF/ASW products, assembly of RCF/ASW containing products, machine and hand finishing of RCF/ASW products.

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### RMM - Hierarchy of Controls

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- Where practical to do so, segregate dry and wet processing
- Enclose the process where practically possible.
- Where practical to do so, segregate machine areas and restrict access to operators involved in the process.
- Enclose Machines as far as practically possible.
- Install LEV where possible, when machine finishing, handling, compressing and hand cutting to remove dust at source
- Employ experienced personnel – trained in the correct use of fibrous products
- PPE and RPE used for all dusty tasks
- Provide vacuum cleaner connection point to central system where practical or use a portable

### HEPA vacuum

- Regular clean up – using a wet scrubbing unit where practically possible and in general a HEPA vacuum should be used.
- Dry brushing and use of compressed air should be prohibited
- Waste materials to be contained at source, labelled and stored separately for disposal or recycling.

## FIBERFRAX Z PRODUCTS, ARTICLES

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Tertiary use - maintenance and service life (Industrial or professional use)

Process: Small scale repairs involving removal and installation of RCF/ASW products. Use of the product in an enclosed system, where there is occasional control access or no access.

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Large scale removal and installation of RCF/ASW from Industrial processes. Large scale removal and installation by professionals.

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- Prohibit use of dry brushing and or compressed air cleaning.
- Experienced personnel only
- Use appropriate PPE and RPE appropriate to expected concentrations.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical state	Solid
Colour	White. Beige.
Odour	Odourless.
Odour threshold	Not available
Melting point	> 1740 °C Fibres
Freezing point	Not applicable
Boiling point	Not applicable

## FIBERFRAX Z PRODUCTS, ARTICLES

Flammability	Non flammable
Explosive properties	Not explosive.
Oxidising properties	Non oxidizing.
Explosive limits	Not applicable
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not self-igniting
Decomposition temperature	Not available
pH	Not applicable
pH solution	Not available
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable
Solubility	Water: < 1 mg/l
Partition coefficient n-octanol/water (Log Kow):	Not applicable
Partition coefficient n-octanol/water (Log Pow):	Not applicable
Vapour pressure	Not applicable
Vapour pressure at 50 °C	Not available
Density	Not available
Relative density	Not available
Relative vapour density at 20 °C:	Not applicable
Particle size	Not available
Particle size distribution	Not available
Particle shape	Not available
Particle aspect ratio	Not available
Particle aggregation state	Not available
Particle agglomeration state	Not available
Particle specific surface area	Not available
Particle dustiness	Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

**Relative evaporation rate (butylacetate=1)** Not applicable

#### Other properties

Length weighted geometric mean diameter of fibres contained in the product: 1.4 - 3 µm

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

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### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under normal use.

### 10.5. Incompatible materials

None.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Do contain organics and on first heating can liberate VOCs.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
Serious eye damage/irritation	Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
Respiratory or skin sensitisation:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	May cause cancer by inhalation.
Additional information	Fibres May cause cancer by inhalation. Method: Nose only Inhalation. Multi-dose Species: Rat, Dose: 3 mg/m <sup>3</sup> , 9 mg/m <sup>3</sup> and 16 mg/m <sup>3</sup> for 24 months Results: Minimal to mild lung fibrosis at 9mg/m <sup>3</sup> and 16 mg/m <sup>3</sup> . No evidence of RCFrelated lung tumours at "any of these doses."  Method: Nose only Inhalation. Single dose Species: Rat, Dose: 30 mg/m <sup>3</sup> . Results: This study was designed to test the chronic toxicity and carcinogenicity of RCF at extreme exposures. Tumour incidence (incl. mesothelioma) was raised at this dose level. The presence of overload conditions (only detected after the experiment was completed), whereby the delivered dose exceeded the clearance capability of the lung, makes meaningful conclusions in terms of hazard and risk assessment difficult.

## FIBERFRAX Z PRODUCTS, ARTICLES

Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	Not classified (Not relevant)

Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	Not classified (Not relevant)

Fiberfrax Z Modules, Fiberfrax Z Blankets	
Viscosity, kinematic	Not applicable

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Other information

Basic toxicokinetic

Exposure is predominantly by inhalation or ingestion. Man made vitreous fibres of a similar size to RCF/ASW have not been shown to migrate from the lung and/or gut and do not become located in other parts of the body When compared to many naturally occurring minerals, RCF/ASW has a low ability to persist and accumulate in the body (half-life of long fibres (> 20 µm) in 3 week rat inhalation test is approx. 60 days).

Human toxicological data

In order to determine possible human health effects following RCF exposure, the University of Cincinnati has been conducting medical surveillance studies on RCF workers in the U.S. The Institute of Occupational Medicine (IOM) has conducted medical surveillance studies on RCF workers in European manufacturing facilities.

Pulmonary morbidity studies among production workers in Europe and USA have demonstrated an absence of interstitial fibrosis and no loss in lung function was observed in the longitudinal study with RCF exposure.

A statistically significant correlation between pleural plaques and cumulative RCF exposure was evidenced in the USA longitudinal study.

The USA mortality study did not show evidence of increased lung tumour development either in the lung parenchyma or in the pleura.

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### Irritant Properties

Negative results have been obtained in animal studies (EU method B 4) for skin irritation. Inhalation exposures using the nose only route produce simultaneous heavy exposures to the eyes, but no reports of excess eye irritation exist. Animals exposed by inhalation similarly show no evidence of respiratory tract irritation. Human data confirm that only mechanical irritation, resulting in itching, occurs in humans. Screening at manufacturers' plants in the UK has failed to show any human cases of skin conditions related to fibre exposure.

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecology - general The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute): Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic): Not classified (Based on available data, the classification criteria are not met).

### 12.2. Persistence and degradability

Fiberfrax Z Modules, Fiberfrax Z Blankets	
Persistence and degradability	Not applicable.

### Aluminosilicate refractory ceramic fibres (142844-00-6)

Persistence and degradability	Not applicable for inorganic substances.
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### 12.3. Bioaccumulative potential

Fiberfrax Z Modules, Fiberfrax Z Blankets	
Partition coefficient n-octanol/water (Log Pow)	Not applicable
Partition coefficient n-octanol/water (Log Kow)	Not applicable
Bioaccumulative potential	Not applicable.

### 12.4. Mobility in soil

Fiberfrax Z Modules, Fiberfrax Z Blankets	
Ecology - soil	Not applicable.

### 12.5. Results of PBT and vPvB assessment

No additional information available

## FIBERFRAX Z PRODUCTS, ARTICLES

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment method

Waste treatment methods	Disposal must be done according to official regulations. European waste catalogue. Do not discharge into drains or the environment. Do not dispose of with domestic waste.
Product/Packaging disposal recommendations:	Recycle or dispose of in compliance with current legislation.
Additional information	Fiberfrax Z Modules SCIP: 5b9a7360-3e30-4ee8-9aa6-c7c6a2ba7ebb, Fiberfrax Z Blankets SCIP: 2f947ee4-945d-41e9-adcc-53f39a9c0892.
European List of Waste (LoW) code	16 03 03* - inorganic wastes containing dangerous substances
HP Code	HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence

## 14. TRANSPORT INFORMATION

In accordance with ADR/RID/IMDG/IATA/AND

ADR	IMDG	IATA	AND	RID
<b>14.1 UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2 UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3 Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4 Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5 Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

### 14.6 Special precautions for user

Overland transport

Transport regulations (ADR) : Not applicable

Transport by sea

Transport regulations (IMDG) : Not applicable

## FIBERFRAX Z PRODUCTS, ARTICLES

Air transport  
Transport regulations (IATA) : Not applicable

Inland waterway transport  
Transport regulations (ADN) : Not applicable

Rail transport  
Transport regulations (RID) : Not applicable

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**  
Not applicable

### 15. REGULATORY INFORMATION

#### 15.1 Safety, health and environment regulations/legislation specific for the substances or mixtures EU regulations

Contains one substance (s) from the list of candidate substances of REACH in a concentration > 0,1%:  
Aluminosilicate refractory ceramic fibres  
(CAS 142844-00-6)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Other information, restriction and prohibition : The zircon used in this product contains small amounts of uranium and thorium, which are regulations naturally occurring radioactive materials (NORMS). However none of the components are radioactive under the terms of the European Directive 2013/59/EURATOM. Take note of Directive 94/33/EC on the protection of young people at work. Take note of Directive 92/85/EC on the safety and health of pregnant workers at work. Directive (EC) 2017/2398 . A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis. Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

#### 15.1.2. National regulations

United Kingdom

National regulations:

Take note of Directive 92/85/EC on the safety and health of pregnant workers at work.

#### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out

For the following substances of this mixture a chemical safety assessment has been carried out:

Aluminosilicate refractory ceramic fibres.

## FIBERFRAX Z PRODUCTS, ARTICLES

### 16. OTHER INFORMATION

#### Abbreviations and acronyms:

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

## FIBERFRAX Z PRODUCTS, ARTICLES

SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative
CAS-No.	Chemical Abstract Service number

### CARE PROGRAMME

ECFIA, representing the high temperature insulation wool (HTIW) industry, has undertaken an extensive industrial hygiene program to provide assistance to the users of all products containing HTIW.

The objectives are twofold:

- to monitor workplace dust concentrations at both manufacturers' and customers' premises.
- to document manufacturing and use of HTIW products from an industrial hygiene perspective in order to establish appropriate recommendations to reduce exposures.

### PRECAUTIONARY MEASURES TO BE TAKEN AFTER SERVICE UPON REMOVAL

In almost all applications high temperature insulating wools products (HTIW) are used as an insulating material helping to maintain temperature at 900°C or more in a closed space. As produced, HTIW are vitreous (glassy) materials which, upon continued exposure to elevated temperatures (above 900 °C) might de-vitrify. The occurrence and extent of crystalline phase formation is dependent on the duration and temperature of exposure, fibre chemistry and/or the presence of fluxing agents. As only a thin layer of the insulation hot face side is exposed to high temperature, respirable dust generated during removal operations does not typically contain detectable levels of crystalline silica (CS). In applications where the material is heat soaked, duration of heat exposure is normally short and a significant de-vitrification allowing CS to build up does not occur. This is the case for waste mould casting for instance.

Toxicological evaluation of the effect of the presence of CS in artificially heated HTIW material has not shown any increased toxicity in vitro and in vivo. The results from different combinations of factors like increased brittleness of fibres, or microcrystals embedded in the glass structure of the fibre and therefore not biologically available may explain the lack of toxicological effects.

IARC evaluation as provided in Monograph 68 is not relevant as CS is not biologically available in after service HTIW and respirable dust generated during removals operations generally do not contain detectable levels of crystalline silica..

High concentrations of fibres and other dusts may be generated when after-service products are mechanically disturbed during operations such as wrecking. Therefore ECFIA recommends:

- control measures are taken to reduce dust emissions; and
- all personnel directly involved wear an appropriate respirator to minimise exposure and comply with local regulatory limits.

## FIBERFRAX Z PRODUCTS, ARTICLES

Full text of H- and EUH-statements:	
Carc. 1B	Carcinogenicity (inhalation) Category 1B
H350i	May cause cancer by inhalation.

### NOTICE:

*The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.*