



## FESCO, FESCO C, RETROFIT, RETROFIT L, RETROFIT AB, FESCO B, FESCO B-DO, FESCO B-HD, FESCO C-DO, FESCOFIT, FESCO FILLET, FESCO DRAIN, FESCO LT

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

#### IDENTIFICATION OF THE PRODUCT

The above-mentioned products are expanded perlite thermal insulation boards.

#### USE OF THE PRODUCT

These products are used as flat roofing insulation boards.

#### IDENTIFICATION OF THE COMPANY

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### DESCRIPTION

The products in the form of board combine insulation with resistance to fire, mechanical properties and dimensional stability.

#### COMPOSITION

COMPONENT	%	EINECS Number	SYMBOL	R PHRASES
Expanded perlite	45-65	N.A.	N.A.	N.A.
Cellulose fibre	20-35	265-995-8	N.A.	N.A.
Mineral wool	10-20	None	N.A.	N.A.
Bitumen	3-6	232-490-9	N.A.	N.A.
Starch	2-5	232-679-6	N.A.	N.A.

*None of the components are radioactive under the terms of European Directive Euratom 96/29.*

### 3. HAZARDS IDENTIFICATION

#### IRRITANT EFFECTS

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.

Pre-existing skin and respiratory conditions including dermatitis, asthma or chronic lung disease might be aggravated by exposure.

### 4. FIRST-AID MEASURES

#### SKIN:

In case of skin irritation rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.

#### EYES:

In case of eye contact flush abundantly with water; have eye bath available. Do not rub eyes.

#### NOSE AND THROAT:

If these become irritated move to a dust free area, drink water and blow nose.

If symptoms persist, seek medical advice.

### 5. FIRE-FIGHTING MEASURES

This material is classified as a fire retardant.

Use extinguishing agent suitable for surrounding combustible materials.

### 6. ACCIDENTAL RELEASE MEASURES

Where abnormally high dust concentrations occur, provide the workers with appropriate protective equipment as detailed in section 8.

Restore the situation to normal as quickly as possible.

Prevent further dust dispersion for example by damping the materials.

Pick up large pieces and use a vacuum cleaner fitted with high efficiency filter (HEPA).

If brushing is used, ensure that the area is wetted down first.

Do not use compressed air for clean up.

Do not allow being wind blown. Do not flush spillage to drain and prevent from entering natural watercourses.

### 7. HANDLING AND STORAGE

#### HANDLING/TECHNIQUES TO REDUCE DUST EMISSIONS DURING HANDLING

Handling can be a source of dust emission. Technical or organisational control measures together with good housekeeping practices will help to comply with exposure limits.

#### STORAGE

Avoid damaging the packaging. Use of recyclable cardboard and/or plastic films are recommended.

#### SPECIFIC USE:

Please refer to your local Thermal Ceramics' supplier or ECFIA's website.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### HYGIENE STANDARDS AND EXPOSURE LIMITS

Industrial hygiene standards and occupational exposure limits vary between countries and local jurisdictions. Check which exposure levels apply to your facility, and comply with local regulations. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection. Examples of exposure limits applying (in January 2003) to mineral wools in different countries are given below:

COUNTRY	EXPOSURE LIMIT			SOURCE
	Inhalable dust (2)	Respirable dust (2)	Mineral wool (1)	
Germany	10 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	0.5 f/ml	TRGS 900
France	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	1.0 f/ml	Circulaire TR 82/46 de Juillet 1982
U.K.	10 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	2.0 f/ml and 5 mg/m <sup>3</sup>	HSE - EH40/99

(1) *Time weighted average concentrations of airborne respirable fibres measured over 8 hours by the conventional membrane filter method or the total inhalable dust using standard gravimetric techniques.*

(2) *Gravimetric concentrations of respirable or inhalable dust – 8-hour time weighted average.*

### ENGINEERING CONTROLS

Review your applications in order to identify potential sources of dust exposure.

Local exhaust ventilation, which collects dust at source, can be used. For example down draft tables, emission controlling tools and materials handling equipment.

Keep the workplace clean. Use a vacuum cleaner fitted with a HEPA filter; avoid brushing and compressed air.

### PERSONAL PROTECTIVE EQUIPMENT

#### Skin protection:

Wear gloves and work clothes, which are loose fitting at the neck and wrists. Soiled clothes should be cleaned before being taken off (e.g. use vacuum cleaning, not compressed air).

#### Eye protection:

As necessary wear goggles or safety glasses with side shields.

#### Respiratory tract protection:

For dust concentrations below the exposure limit value, RPE is not required but FFP2 respirators may be used on a voluntary basis.

For short-term operations where excursions are less than ten times the limit value use FFP2 respirators.

In case of higher concentrations or where the concentration is not known, please seek advice from your company and/or local Thermal Ceramics' supplier.

### INFORMATION AND TRAINING OF WORKERS

Workers should be trained on good working practices and informed on applicable local regulations.

### ENVIRONMENTAL EXPOSURE CONTROLS

Refer to local, national or European applicable environmental permitted standards for air, water and soil. For waste, refer to *Section 13*.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE</b>	Brown to light brown board	<b>PARTITION COEFFICIENT</b>	N.A.
<b>BOILING POINT</b>	N.A.	<b>ODOUR</b>	Slight
<b>FLASH POINT</b>	N.A.	<b>MELTING POINT</b>	> 1300°C
<b>AUTOFLAMMABILITY</b>	N.A.	<b>FLAMMABILITY</b>	N.A.
<b>OXIDING PROPERTIES</b>	N.A.	<b>EXPLOSIVE PROPERTIES</b>	N.A.
<b>SPECIFIC GRAVITY</b>	≥ 135 kg/m <sup>3</sup>	<b>VAPOUR PRESSURE</b>	N.A.
<b>SOLUBILITY</b>	Slight		
<b>LENGTH WEIGHTED GEOMETRIC MEAN DIAMETER</b>		> 1,5 µm	

## 10. STABILITY AND REACTIVITY

### CONDITIONS OR MATERIALS TO AVOID:

None

### DECOMPOSITION PRODUCTS:

None

## 11. TOXICOLOGICAL INFORMATION

### IRRITANT PROPERTIES

When tested using approved methods (Directive 67/548/EEC, Annex 5, Method B4), fibres contained in this material give negative results. All man-made mineral fibres, like some natural fibres, can produce a mild irritation resulting in itching or rarely, in some sensitive individuals, in a slight reddening. Unlike other irritant reactions this is not the result of allergy or chemical skin damage but is caused by mechanical effects.

### RESPIRATORY TOXICITY

Fibres contained in this product have been tested for their biopersistence using methods devised by the European Union.

The biopersistence values measured exonerate such wools from carcinogen classification under the criteria listed in nota Q of Directive 67/548/EEC.

### CHRONIC TOXICITY

Studies in which condensed fractions of bitumen vapour were painted on the skin of animals have shown the development of skin tumours. However, no association between human exposure to bitumen and cancer has been reported.

IARC states there is inadequate evidence that bitumens alone are carcinogenic to humans.

### RESPIRATORY TOXICITY FOR MINERAL WOOL

Epidemiological studies did not show any health effects related to fibres among Mineral Wool manufacturing workers. The excess of lung cancers reported in 1982 have been the subject of additional investigations and the examination of the confounding factors showed that the excess were not attributed to fibres. Smoking has been identified as the most important of these confounding factors.

### EXPERIMENTAL STUDIES FOR MINERAL WOOLS

Animal inhalation studies on mineral wools did show neither pulmonary fibrosis nor lung cancer nor mesotheliomas. Intratracheal and intraperitoneal injection studies did not show any disease except those involving selected fine glass fibres for special uses or experimental rock wools.

## 12. ECOLOGICAL INFORMATION

These products are inert materials, which remain over the time.

No adverse effects of this material on the environment are anticipated.

### 13. DISPOSAL CONSIDERATIONS

Waste from these materials may be generally disposed of at a landfill, which has been licensed for this purpose. Please refer to the European list (Decision N° 2000/532/CE as modified) to identify your appropriate waste number, and insure national and/or regional regulation are complied with.

Taking into account any possible contamination during use, expert guidance should be sought.

Unless wetted, such a waste is normally dusty and so should be properly disposed of in sealed plastic bags or containers. At some authorised disposal sites, dusty waste may be treated differently in order to ensure they are dealt with promptly to avoid them being wind blown. Check for national and/or regional regulations, which may apply.

### 14. TRANSPORT INFORMATION

Not classified as dangerous goods under relevant international transport regulations (ADR, RID, IATA, IMDG).

Ensure that dust is not wind blown during transportation.

### 15. REGULATORY INFORMATION

#### FIBRE TYPE DEFINITION ACCORDING TO DIRECTIVE 67/548/EEC

Regulatory status comes from European Directive 67/548/EEC on the classification, labelling and packaging of dangerous substances and preparations as modified by Directive 97/69/EC and its implementations by the Member States. According to Directive 67/548/EEC, the fibre contained in this product is a mineral wool belonging to the group of "man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide ( $\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$ ) content greater than 18% by weight".

Under Directive 67/548/EEC all types of man-made vitreous (silicate) fibres are classified as "irritant" despite the fact that testing by the appropriate EU method (B4 in annexe 5 of Directive 67/548/EEC) is providing no response and would not result in irritant classification.

Under criteria listed in nota Q of Directive 67/548/EEC, the mineral wool is exonerated from carcinogen classification because of low pulmonary biopersistence measured by the methods specified in European Union and German regulations (EU protocol ECB/TM/27(rev 7) and German method as specified in TRGS 905 (1999)).

#### PROTECTION OF WORKERS

Shall be in accordance with several European Directives as amended and their implementations by the Member States:

- a) Council Directive 89/391/EEC dated 12 June 1989 "on the introduction of measures to encourage improvements in the safety and health of workers at work" (OJEC (Official Journal of the European Community) L 183 of 29 June 1989, p.1).
- b) Council Directive 98/24/EC dated 7 April 1998 "on the protection of workers from the risks related to chemical agents at work" (OJEC L 131 of 5 May 1998, p.11).

#### OTHER POSSIBLE REGULATIONS

Member States are in charge of implementing European Directives into their own national regulation within a period of time normally given in the directive. Member States may impose more stringent requirements. Please **always** refer to any applicable regulation.

## 16. OTHER INFORMATION

### **USEFUL REFERENCES (the directives which are cited must be considered in their amended version)**

- Council Directive 89/391/EEC dated 12 June 1989 "on the introduction of measures to encourage improvements in the safety and health of workers at work" (OJEC L 183 of 29 June 1989, p.1).
- Council Directive 67/548/EEC on the "approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances as modified and adapted to the technical progress" (OJEC L 196 of 16 August 1967, p.1 and modifications and adaptations to technical progress).
- Commission Directive 97/69/EC of 5 December 1997 adapting to technical progress for the 23rd time Council Directive 67/548/EEC (OJEC of 13 December 1997, L 343, p19).
- Council Directive 98/24/EC of 7 April 1998 "on the protection of the health and safety of workers from the risks related to chemical agents at work" (OJEC L 131 of 5 May 1998, p11).
- TRGS 521: Faserstäube, February 1999.

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

Because high concentrations of dust may be generated when after-service products are mechanically disturbed during operations such as wrecking, it is recommended that:

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

### **WEBSITE:**

For more information connect to:

The Thermal Ceramics' website: (<http://www.thermalceramics.com/>)

### **NOTICE:**

The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However safe as provided by law, 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 licence. 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 (however, this shall not act to restrict the vendor's potential liability for negligence or under statute).