

PRODUCT DESCRIPTION	GROUP	FAMILY
INSULATION BOARDS AND PIECES CALCIUM/MAGNESIUM SILICATE	PA	25

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3. COMPOSITION/INFORMATION CONCERNING INGREDIENTS

They not contain elements subject to registration under the current regulation

For an explanation of abbreviations see Section 16.

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

4. FIRST AID

4.1 Description of first aid:

- In case of contact with skin : Handling of this material may generate mild mechanical temporary skin irritation. If this occurs, rinse affected areas with water and wash gently.
Do not rub or scratch exposed skin.
- In case of contact with eyes : In case of eye contact wash thoroughly with water; Keep an eye drop. Do not rub eyes.
- If you have inhaled or swallowed : If you suffer irritation, the affected person must move to a dust free area, drink water and blow. In case of persistent symptoms, seek medical advice.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing measures

- Suitable extinguishing measures : Use extinguishing measures appropriate to local circumstances and the surrounding environment.

These products are not flammable. Fire reaction class: Zero.

Use extinguishing measures appropriate for products that are flammable in the vicinity, such as packaging and protective materials.

5.2 Special dangers arising from the substance or mixture

- Specific dangers during fire fighting : Do not allow extinguishing water to enter drains or waterways.

5.3 Advice for firefighters

- Special protective equipment for fire-fighters : If necessary, wear a self-contained breathing apparatus for firefighting. In case of fire or explosion do not breathe fumes

6. MEASURES IN CASE OF ACCIDENTAL RELEASE

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use appropriate personal protective equipment (PPE), goggles, gloves and protective clothing. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Precautions for the environment

- Environmental precautions : Avoid dust dispersion, damping the materials. Prevent entry into sewers and natural waterways. Check local regulations that may be applicable

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PAG.3/8**6.3 Containment and cleaning methods and procedures**

Cleaning methods : Pick up large pieces and use a vacuum cleaner fitted with a high efficiency filter (HEPA)
If brushes are used, ensure that the area is wetted down first. Do not use compressed air for clean up. Do not allow to become windblown.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Advice on safe handling : Avoid contact with the eyes and skin. For personal protection see Section 8. No smoking, eating and drinking during work. No handling dry or wet product with bare hands, unprotected. Daily cleaning procedures minimize dust generation.

Indications for fire and explosion protection : Normal measures for preventive fire protection.

Hygienic measures : Avoid contact with skin, eyes and clothing

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage and containers : Store in original container. The bags or envelopes that are opened must be carefully resealed and kept upright to prevent leakage. Keep tightly closed. Keep in a dry, cool and well-ventilated place.

Advice on joint storage : No special restrictions on storage with other products.

Other data : Stable under recommended storage conditions.

7.3 Specific use

Consult our technical-sales department

8. EXPOSURE/PERSONAL PROTECTION CONTROL**8.1 Control parameters****Occupational exposure limits**

Components	No. CAS	Value Type (Form of exposure)	Control parameters	Base
They not contain materials subject to the current regulations				

Based on the "ENVIRONMENTAL VALUE LIMIT TABLES (EVL)" published by the National Institute for Safety and Health at Work (INSHT).

Yet industrial hygiene standards and exposure limits at work may vary between countries and local jurisdictions.

To comply with local regulations, find out which rules are in force in the country.

If there are no directives on the regulation of dust or other standards, you can consult an environmental expert to help you with a specific workplace evaluation, including recommendations for respiratory protection.

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8.2 Exposure controls

Personal protection

Appropriate engineering controls : Review your application(s) and assess situations with the potential for dust release. Where practical, enclose dust sources and provide dust extraction at source. Designate work areas and restrict access to informed and trained workers. Use operating procedures that will limit dust production and exposure of workers. Keep the workplace clean. Use a vacuum cleaner fitted with a HEPA filter; avoid using brooms and never use compressed air for clean-up. If necessary, consult an industrial hygienist to design workplace controls and practices. The use of products specially tailored to your application(s) will help to control dust. Some products can be delivered ready for use to avoid further cutting or machining. Some could be pre-treated or packaged to minimize or avoid dust release during handling. Consult your supplier for further details

8.2 Personal Protective Equipment

Eye protection



: Safety glasses tightly fitting the face. Wear a face-shield and protective suit for anomalies in the process. Labeled 'CE' Category II. Eye and face protection against splashing. Standards CEN: EN 165, EN 166, EN 167, EN 168

Hand protection



: Protective gloves against chemicals. Labeled 'CE' Category III. Standards CEN: EN 374-1, EN 374-2, EN 374-3, EN 420

Body and skin protection



: Protective clothing with antistatic properties. Labeled 'CE' Category II. Protective clothing should not be too tight or loose so as not to interfere with the user's movements. Standards CEN: EN 340, EN 1149-1, EN 1149-2, EN 1149-3, EN 1149-5

Respiratory protection



: Filter mask for protection against gases and particles. Labeled 'CE' Category III. The mask must have a wide field of vision and anatomically shaped to provide sealing and tightness. Standards CEN: EN 136, EN 140, EN 405

Protection measures

: Avoid contact with skin. Do not eat, drink or smoke during use.

8.2.1 Environmental exposure controls

Refer to the national applicable environmental standards at the local level, and European for air, water and soil. See section 13 for waste disposal

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on physical and chemical properties

Appearance : White fibres
 Color : Grayish
 Smell : Odorless
 pH (20g/L, 20 °C) : No available data
 Fusion point/interval : No available data

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Boiling point/interval	: No available data
Inflammation point	: No applicable
Inflammability (liquid)	: Does not burn
Density (20 °C)	: 250 – 1200 kg/m ³
Water solubility	: Immiscible
Average of diameter	: 2 – 3 µm
Explosive properties	: Regulatory information: Non-explosive International regulations for transport. Non explosive

These fibers are far denser than air and quickly deposited under normal environmental conditions

10. STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity : Stable and non-reactive

10.2 Chemical stability

Chemical stability : The product is inorganic and chemically stable

10.3 Possibility of dangerous reactions

Dangerous reactions : Stable under recommended storage conditions

No dangerous reaction known under conditions of normal use

10.4 Conditions to avoid

Conditions to avoid : See tips on handling and storage, Section 7

See handling and storage tips in Section 7.

10.5 Incompatible materials

Incompatible materials : Without available data

10.6 Dangerous decomposition products

Dangerous Decomposition : If heated to more than 900 ° C for sustained periods, this amorphous
Products material begins to transform to mixtures of crystalline phases. For more information, see paragraph 16

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects.

Basic toxicokinetics : Exposure is predominantly by inhalation or ingestion. Man made vitreous fibres of a similar size to AES have not been shown to migrate from the lung and/or gut and do not become located in other organs of the body. Fibres contained in the products listed in the title have been designed to be rapidly cleared from lung tissue. This low biopersistence has been confirmed in many studies on AES using EU protocol ECB/TM/27(rev 7). When inhaled, even at very high doses, they do not accumulate to any level capable of producing a serious adverse biological effect.

11.1 Information on toxicological effects

Information on toxicological effects : In lifetime chronic studies there was no exposure-related effect more than would be seen with any "inert" dust. Subchronic studies at the highest doses achievable produced at worst a transient mild inflammatory response. Fibres with the same ability to persist in

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tissue do not produce tumours when injected into the peritoneal cavity of rats.

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

12. ECOLOGICAL INFORMATION

These products are insoluble materials that remain stable overtime and are chemically identical to inorganic compounds found in the soil and sediment; they remain inert in the natural environment.

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

13. DISPOSAL CONSIDERATIONS

13.1 Methods for treating waste

Product : 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 regulations are complied with. Unless wetted, such a waste is normally dusty and so should be properly sealed in containers for disposal. At some authorized disposal sites, dusty waste may be treated differently in order to ensure they are dealt with promptly to avoid them being windblown. Check for any national and/or regional regulations, which may apply.

Contaminated packaging : Empty remaining contents. Dispose of as unused product.

14. TRANSPORT INFORMATION

Not classified as dangerous goods according to international transport regulations applicable.
Ensure that dust is not windblown during transportation.

ADR (Road transport, Council Directive 94/55/CE)

IMDG (Maritime transport)

RID Rail transport, Council Directive 96/49/CE)

IATA (Air transport)

15. REGULATORY INFORMATION

15.1 Regulation and legislation on safety, health and environment specific for the substance or mixture

Regulation and legislation on safety, health and environment specific for the substance or mixture : It will be in accordance with several European Directives as amended and their implementations by the Member States

- 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 its modifications and adaptations to technical progress).
- Council Directive 1999/45/EC of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

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c) Regulation (EC) No 1907/2006 dated 18th December 2006 on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

d) Regulation (EC) No 1272/2008 dated 20th January 2009 on classification, labelling and packaging of substances and mixtures (OJ L 353)

e) 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).

f) Commission regulation (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

g) The 1st Adaptation to Technical Progress (ATP) to Regulation (EC) No 1272/2008 enters into force on 25 September 2009. It transfers the 30th and 31st ATPs of Directive 67/548/EEC to the Regulation (EC) No 1272/2008.

Other possible regulations : Member States have the responsibility 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 national regulation.

16. OTHER INFORMATION

Additional information and precautions to be considered upon removal of after service material.

As produced, all Refractory Ceramic Fibres are vitreous (glassy) materials which, upon continued exposure to elevated temperatures (above 900°C), may devitrify. The occurrence and extent of crystalline phase formation is dependent on the duration and temperature of exposure, fiber chemistry and/or the presence of fluxing agents. The presence of crystalline phases can be confirmed only through laboratory analysis of the "hot-face" fiber. IARC's evaluation of crystalline silica states "Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)" and additionally mentioned "in making the overall evaluation, the Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied..." As only a thin layer of the insulation (hot face side) is exposed to high temperatures, respirable dust generated during removal operations does not 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 the vitrification allowing CS to build up does not occur. This is the case for waste would casting for instance.

Toxicological evaluation of the effect of the presence of CS in artificially heated RCF/ASW material has not shown any increased toxicity in vitro.

The lack of toxicological effects may be explained by the following factors ; Increased brittleness of fibres after service life, favours fast fiber translocation through macrophage.

Micro crystals, including crystalline silica, are embedded in the glass structure of the fiber and are therefore not biologically available.

The IARC evaluation as provided in Monograph 68 is not relevant as CS is not biologically available in after-service RCF/ASW.

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;
- all personnel directly involved wear an appropriate respirator to minimize exposure; and
- Compliance with local regulatory limits.

ECFIA recommends that this fiber should not be used for vaporization / spraying.

For more information connect to:

Teide website Refractory Solutions (<http://www.teiderefrefractories.com/es>)

For more information about each product, check the appropriate technical or commercial technical tab.

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Other data

The information provided in this Safety Data Sheet is correct at the date of publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and should not be considered a guarantee or quality specification.

The information relates only to the specific material and may not be valid for such material used in combination with other materials or in any process, unless specified in the text.

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