

Material Safety Data Sheet

1 IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 PRODUCT IDENTIFIERS

Product identifier: Nefalit 16

1.2 RELEVANT IDENTIFIED USES

Thermal protection, insulation and sealing applications

1.3 SUPPLIER DETAILS

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2 HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

According to the European regulation N°1272/2008 (CLP), the Refractory Ceramic Fiber (RCF) are classified carcinogenicity (inhalation) 1B, H350i (May cause cancer by inhalation).

Crystalline silica contain in the product is classified STOT RE1, H372 (cause damage to lung through prolonged or repeated inhalation exposure).

Exposure to the product may cause slight mechanical irritation of the skin, eyes and upper respiratory system. These effects are generally transitory.

This product contains a substance of the candidate list REACH (SVHC) with concentration $\geq 0.1\%$: Refractory Ceramic Fiber. This product is an article, it does not require to be classified and labelled in accordance with regulation 1907/2006/EC (REACH).

2.2 LABEL ELEMENTS

Not applicable (Article)

3 COMPOSITION / INFORMATION OF INGREDIENTS

3.1 SUBSTANCES

Not applicable

3.2 INGREDIENTS

Composition:

| Elements | No - CAS | No - EINECS | % | Classification according to European regulation N°1272/2008 (CLP) |
|--------------------------------|--------------|-------------|-----|---|
| Refractory Ceramic Fiber (RCF) | 142-844-00-6 | - | | Carc. 1B, H350i |
| Quartz | 14808-60-7 | 238-878-4 | | - |
| Quartz < 10µm | - | - | < 3 | Stot RE1, H372 |

4 FIRST AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURES

Inhalations: In case of high inhalation of dust, remove to fresh air, drink water to clear throat.

Skin contact: Wash with water.

Eyes contact: Wash with water.

General: If in doubt, or if symptoms persist, get medical advice.

4.2 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Symptomatic treatment

5 FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

The material is non-combustible, use extinguishing agent appropriate to type of surrounding materials.

5.2 SPECIAL HAZARDS ARISING FROM SUBSTANCE OR MIXTURE

The material is not classified as flammable according to EC criteria.

6 ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

- Individual protection in event of accidental spillage resulting in a high dust concentration.
- Provide workers with appropriate protective equipment as detailed in section 8.
- Restrict access to the to the area to a minimum number of workers.
- Restore normal situations as quickly as possible.
- Avoid the spillage by wetting materials.

6.2 ENVIRONMENTAL PRECAUTIONS

- Do not allow to be windblown.
- Do not flush spillage to drain and prevent from entering natural water courses.
- Check for local regulations which may apply.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

- Pick up large pieces first and finish with a vacuum cleaner fitted with high efficiency filter. If brushing is use, ensure that the area in wetted down first.
- Do not use compressed air for clean-up.
- For waste disposal refer to section 13.

7 HANDLING AND STORAGE

7.1 PRECAUTION FOR SAFE HANDLING

- Avoid formation and accumulation of dust.
- Standard respiratory protective equipment and goggles recommended.

7.2 CONDITIONS FOR SAFE STORAGE AND INCOMPATIBILITIES

Storage in dry conditions.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

Dusts:

There is a regulatory limit value for all dusts with no specific effect:

| Country | Limit values | Reference |
|------------|--|---|
| France | 4 mg/m ³ 0.9 mg/m ³ | Total dusts - TWA Breathable dusts - TWA (Art. R4222-10 du code du travail) |
| Germany | 10 mg/m ³ 1.25 mg/m ³ | Total dusts - TWA Breathable dusts- TWA (AGS) |
| Spain | 10 mg/m ³ 3 mg/m ³ | Total dusts - TWA Breathable dusts- TWA |
| USA (OSHA) | 5 mg/m ³ | Breathable dusts - TWA |

Quartz (breathable dusts of crystalline silica)

For the quartz the Occupational exposure limit is:

| Country | Limit values | Reference |
|------------|---|--|
| France | 0.1 mg/m ³ | TWA (Art. R4412-149) |
| Germany | 0.05 mg/m ³ 0.4 mg/m ³ | TWA STEL |
| Spain | 0.05 mg/m ³ | TWA |
| USA (OSHA) | 0.05 mg/m ³ | TWA |
| Europe | 0.1 mg/m ³ | Annex II of European directive 2017/2398 |

Refractory Ceramic Fibre:

For the quartz the Occupational exposure limit is:

| Country | Limit values | Reference |
|---------|---------------------------|---|
| France | 0.1 fibre/cm ³ | TWA (Art. R4412-149) |
| Europe | 0.3 fibre/ml | Annex III of European directive 2017/2398 |
| Germany | 0.1 fibre/cm ³ | TWA (AGS) |
| Spain | 0.5 fibre/cm ³ | TWA |

Respecting limit values

Analyse the process and tasks for identify source of dust exposure.

If necessary, take dust measurements.

Use technical preventive protection (e.g. Ventilation and dust removal at workstation) and regular cleaning to comply with exposure limit values.

Skin and eye protection

During tasks involving a lot of handling, wear gloves and coveralls which are loose fitting at the neck and wrists.

Wear goggles or safety glasses with side shields in case of overhead working.

After handling rinse exposed skin with water

Wash work clothing separately.

Respiratory protection

Use a respiratory protection in event of excessive concentrations of dusts or other contaminants.

For concentration below the exposure limit value, respiratory protection is not required (FFP2)

For short term operations where concentration do not exceed 10 time the limit value, use FFP2 respiratory protection.

Information and training of workers

Workers must be informed about:

- Tasks involving the product.
- Internal rules on smoking.
- Rules in eating and drinking in workplace.
- Tasks requiring a respiratory protection and protective clothes.

Workers must be trained in:

- Good working practices to limit dust release.
- The correct use of protective equipment.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- Physical state: Solid
- Colour: various
- Odor: none
- Specific gravity: ~ 1.0 g/cm³

9.2 OTHER INFORMATION

No further information available.

10 STABILITY AND REACTIVITY EXPO

10.1 CHEMICAL STABILITY

The product is stable at room temperature.

10.2 INCOMPATIBLE MATERIALS

Avoid contact with Fluorhydric acid.

11 TOXICOLOGICAL INFORMATION

Irritant Properties

All mineral fibres (man-made or natural) can produce a mild irritation resulting in aching 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.

Toxicity by inhalation: (human data)

Cincinnati University has been conducting medical studies on workers exposed to RCF in the USA. IOM (Institute of Occupational Medicine), did the same thing in the European Factory. These two studies longitudinal of morbidity on production workers have demonstrated an absence of interstitial fibrosis and any losses of lung function.

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

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

12 ECOLOGICAL INFORMATION

The product presents no specific risk for environment.

13 DISPOSAL CONSIDERATIONS

Waste from this material is not classified as hazardous waste; it can be disposed of in accordance with the local regulations.

14 TRANSPORT INFORMATION

The product is not hazardous according to regulation transport, no special precautions are required.

15 REGULATORY INFORMATION

Classification of fibre according to European Regulation N°1272/2008 (CLP)

The European CLP regulation classifies the fibre as Man-Made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali oxide ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight.

This group is classified as carcinogenic category 1B according to Annex Vi, part 3 of CLP.

Operator protections

Comply with the regulation in force concerning the Occupational Exposure Limit (OEL) and others disposal of preventive measures mentioned in Directives 89/391/CEE and 98/24/CE on protection of health and safety of workers from the risks related to chemical agent at work.

Other regulations

Member States are in charges of implementing European directives into their own national regulations 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

This document completes the technical data sheet but by no means replaces them. Information given in this document is based on our knowledge of the product concerned on the date.

All data is given in good faith. We attract user attention to risks that might be taken when using a product for the other application than the one it was designed for.

This document does not exempt the user from knowing and applying all regulations concerning their activity. The user is entirely responsible for caring out all precautions linked to use of the product.

All legal information given in this document has only been mentioned in order to help user fulfil their obligations in terms of using hazardous products.

This list must not be considered to be complete. It does not mean that the user does not have to ensure that any other article laying down obligations concerning the detention and use of this product exist. The user is entirely responsible for respecting all possible legislation.

The European REACH regulation lays down for communicating information on hazardous substances and mixtures using Material Safety Data Sheets (MSDS). This product is defined as an article according to REACH. For this reason, it does not require MSDS according to Article 31 of Regulation N°1907/2006. PBI has decided to provide a MSDS to its customers on a voluntary basis.