

MATERIAL SAFETY DATA SHEET

PRODUCT : Vacuum Formed Body Soluble Fibre Products - Alusol
DATE: March 2007
Revised 21st May 2009

1 Identification:

Product

Vacuum formed products containing Alkaline-earth silicate wools

Company address: Brightcross Insulation Ltd
Shaftesbury St
Derby DE23 8XA
England

Telephone: +44 (0)1332 331808

REACH contact: Alastair McIntyre email: alastair@brightcross.co.uk

2 Information on ingredients:

	CAS-No.	Contents	Classification	R phrases
Alkaline-earth Silicate wools	436 083 99 7	50-95%	N.A.	N.A.
Starch	(EINECS 232-679-6)	0-10%	N.A.	N.A.
Inert inorganic material	N.A.	1-50%	N.A.	N.A.

3 Hazards identification:

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 and 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:

Non combustible products. Packaging and surrounding materials may be combustible.
Use extinguishing agent suitable for surrounding combustible materials.

6 Accidental release measures:

No special measures required.

7 Handling and storage:

Handling:

Avoid creating dust. Do not use compressed air for clean up.

Keep work areas clean. Dispose of scrap material and debris in suitable containers.

Spray with water before sweeping or use vacuum equipment fitted with a HEPA filter.

Ensure good ventilation. Local exhaust ventilation may be required if the method of use produces dust levels that exceed the maximum exposure limit

Storage:

- Keep material in original packaging until it is to be used.

- Store material in dry conditions.

8 Exposure controls/personal protection.

HYGIENE STANDARDS AND CONTROL MEASURES

Hygiene standards and occupational exposure limits may vary between countries and local jurisdictions. Check which exposures apply to your facility. 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 to mineral wool in different countries are given below:

Germany 3.0 mg/m³* TRGS 900, Bunderarbeitsblatt 2005

France 1.0 f/ml Circulaire DRT no 95-4 du 12/01/95

United Kingdom 2.0 f/ml HSE EH40 Workplace Exposure Limit

* *8-hr time weighted average concentrations of airborne respirable fibres measured using the conventional membrane filter method*

* *Respirable dust, TRGS 900 does not specify an exposure limit in f/ml.*

ENGINEERING CONTROLS

Review your application(s) 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 material handling equipment.

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

PERSONAL PROTECTIVE EQUIPMENTS

SKIN PROTECTION

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

EYE PROTECTION

As necessary wear goggles or safety glass with side shields

RESPIRATORY 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

9 Physical and chemical properties:

Physical State	Solid	Melting point	>1330°C
Flammability	None	Length weighted geometric diameter	NA
Appearance	Pale green	Explosive properties	None
Oxidising properties	None	Odour	None
pH	NA		

10 Stability and reactivity:

Conditions or materials to avoid

None

Decomposition products

When first heated above 200°C, the starch binder will start to decompose and oxidise. The decomposition products are mainly carbon dioxide, carbon monoxide, carbon particles, water, and trace gases (e.g. nitrogen dioxide, sulphur dioxide)

Upon heating above 900°C for sustained periods, this amorphous material begins to transform to mixtures of crystalline phases. For further information please refer to Section 16. However in most foundry applications the time for which the material is exposed to high temperatures is far too short for detectable amounts of crystalline silica to be formed.

11 Toxicological information:

Irritant Properties

When tested using approved methods (Directive 67/548/EC, Annex V, 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 slight reddening. Unlike other irritant reactions this is not the result of allergy or chemical skin damage but is caused by a temporary mechanical effect.

Other Animal Studies

These materials have been designed to allow rapid clearance from tissue. And this low biopersistence has been confirmed in many studies using EU protocol ECB/TM/27(rev 7) and the German method specified in TRGS 905 (1999). When inhaled, even at very high doses, they do not accumulate to any level capable of producing a serious adverse biological effect. 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 tissue do not produce tumours when injected into the peritoneal cavity of rats.

12 Ecological information:

Stable product with no known adverse environmental effects.

13 Disposal consideration:

Waste from these products are classed as non hazardous and may generally be disposed of at landfill, which has been licensed for this purpose. Please refer to the European list (Decision no 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.

14 Transport information:

Not classified as dangerous goods under relevant international transport regulations (ADR, RID, IATA, IMDG Refer Section 16 “Definitions”).

15 Regulatory information:

Fibre type definition according to Directive 67/548/EEC

Regulatory status in the EU, comes from European Directive 67/548/EEC, on the classification, labelling and packaging of dangerous substances and preparations as modified by Directive 97/69/EEC 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 (Na₂O +K₂O+CaO+MgO+BaO) content greater than 18% by weight”.

In accordance with 31st adaptation to Technical Progress of Directive 67/548/ECC as published 15th January 2009 the classification as “irritant” has been removed for all types of man made vitreous fibres (MMVFs).

Under criteria listed in nota Q of Directive 67/548/EEC, AES wools are 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)).

This applies for sales in the European Union

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 1997 “ on the protection of workers from the risks related to chemical agents at work” (OJEC L 131 of 5 May 1998,p.11).

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 national regulations.

16 Further 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 provision 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*).

Commission Directive 97/69/EC of 5 December 1997 “adapting to technical progress for the 23rd time Council Directive 67/548/EEC ,(OJEC L 343 *Official Journal of the European Communities, 13/12/97 , p.19*).

Council Directive 98/24/EC of 7th April 1998 “on the protection of the health and safety of workers from risks related to chemical agents at work” (OJEC L131 of 5th May 1998, P.11)
TRGS 521 : Faserstaube 5/2000 - Germany

Precautionary measures to be taken after service and upon removal

As produced, these mineral fibres are vitreous (glassy) materials which, if raised up to 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.

The presence of crystalline phases can be confirmed only through laboratory analysis of the “hot-face” fibre.

However, in typical foundry applications the time of exposure to high temperatures is too short for formation of appreciable quantities of crystalline silica.

High concentrations of fibres and other dusts may be generated when after-service products are mechanically disturbed during removal operations such as break out and sand reclamation. These dusts may contain crystalline silica, which some authorities have classified as a carcinogen. Therefore ECFIA recommends:

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

NOTE

The directives and subsequent regulations detailed in this Material Safety Data Sheet are only applicable to the European Union (EU) Countries and not to countries outside of the EU.

The information presented here in is based on data considered to be accurate as of the date of preparation of this Material 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. 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.