

Trade name: PROMAGLAF® HTK 1100 & 1260 BLANKETS & BULK

issued: 01.06.2009

1. Product and Company Identification

Identification of substance/material: PROMAGLAF® HTK 1100 & 1260 BLANKETS & BULK
The above-mentioned products contain High Temperature Alkaline-Earth Silicate wools (AES wools).

USE OF THE PRODUCT

Application as thermal insulation, heat shields, heat containment, gaskets and expansion joints in industrial furnaces, ovens, kilns, boilers and other process equipment and in the aerospace, automotive and appliance industries, and as passive fire protection systems and firestops. (Please refer to specific technical data sheet for more information).

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2. Composition

COMPONENT	CAS NUMBER	SYMBOL	R PHRASES
Alkaline earth silicate	436 083 99 7	None	None
fibres	329 211 92 9	None	None

COMPOSITION

PROMAGLAF® HTI 1100 & 1260 fibre is a mix of an alkaline earth silicate fiber (AES) (87-92%) and a non-Hazardous polymer.

Use of the product:

Application as thermal insulation, heat shields, heat containment, gaskets and expansion joints at temperature up to 1260°C, in industrial furnaces ovens, kilns, boilers and other process equipment and in the aerospace, automotive and appliance industries, and as passive fire protection systems and firestops.

3. Hazard 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.

PROMAGLAF® HTK blankets, possess a fibre chemistry within the regulatory definition of a "man-made vitreous (silicate) fibre with random orientation with alkaline oxide and alkaline earth oxide content greater than 18% by weight." These fibres have been tested in accordance with both the protocol of the European Commission (ECB/TM27 REV. 7) pursuing the Nota Q of the Directive 97/69/EC and the Intratracheal Instillation Biopersistence Testing requested by the German Hazardous Substance Ordinance (Deutsche Gefahrstoffverordnung, Appendix IV nr 22 Abs. Satz 2, Kriterium 4), with results that are below regulatory thresholds. As a result, PROMAGLAF® HTK blankets are certified biosoluble materials not requiring any additional labelling.

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.

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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

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.

For wastes disposal refer to section 13.

7. Handling and storage

HANDLING/TECHNIQUES TO REDUCE DUST EMISSIONS DURING HANDLING

Handling can be a source of dust emission. The process or processes should be designed to limit the amount of handling.

Wherever possible handling should be carried out under ventilation with filtered exhaust.

Regular good housekeeping will minimise secondary dust dispersal.

STORAGE

Store in original packaging in a dry area. Always use sealed and clearly labelled containers. Avoid damaging containers.

Reduce dust emission during unpacking. Emptied containers, which may contain debris, should be cleaned before disposal or recycling.

8. Exposure Controls / 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:

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COUNTRY	Exposure limit*	Source
Germany	0,5 F/ml	TRGS 900
France	1,0 F/ml or 5 mg/m ³	Circ. DRT 95-4 del 12.01.95
UK	2,0 F/ml	HSE-EH40

*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.

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 to remove excess fibres 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 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 FFP3 respirators.

In case of higher concentrations or where the concentration is not known, please seek advice from your company or Promat Distributor.

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

Appearance:		fibre white-ice blankets, flexible
Bowling point:	n/a	
Flammability:		n/a
Flash point:		n/a
Oxidizing:		n/a
Relative density:		from 96 to 160 Kg/m ³
Odour:		n/a
Melting point:	1400°C	
Vapour pressure:		n/a
Solubility:		light
Average mean fibre diameter:		3 microns

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10. Stability and Reactivity

None

DECOMPOSITION PRODUCTS

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.

11. Toxicological information

IRRITANT PROPERTIES

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.

OTHER ANIMAL STUDIES

Fibres contained in PROMAGLAF[®] HTK blankets from Promat, possess a fibre chemistry within the regulatory definition of a "man-made vitreous (silicate) fibre with random orientation with alkaline oxide and alkaline earth oxide content greater than 18% by weight." these fibres have been tested in accordance with both the protocol of the European Commission (ECB/TM27 REV. 7) pursuing the Nota Q of the Directive 97/69/EC and the Intratracheal Instillation Biopersistence Testing requested by the German Hazardous Substance Ordinance (Deutsche Gefahrstoffverordnung, Appendix IV nr 22 Abs. Satz 2, Kriterium 4), with results that are below regulatory thresholds.

As a result, PROMAGLAF[®] HTK blankets are certified biosoluble materials not requiring any additional labelling.

12. Ecological Information

These products are inert materials, which remain stable 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 ensure national and/or regional regulations 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 sealed in containers for disposal.

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 any 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.

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15. Regulatory Information

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 (Na₂O+K₂O+CaO+MgO+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) results in no action and this would not result in irritant classification.

Under criteria listed in nota Q of Directive 67/548/EEC, **fibres contained in this (these) product(s) have been tested and are exonerated from the carcinogen classification** because of low pulmonary biopersistence measured by the methods specified in European Union (EU) protocol ECB/TM/27 (rev 7).

The official certificate of exoneration (Fraunhofer Institut) is issued on request along with material supplied.

PROTECTION OF WORKERS

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

- 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).
- 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).

Fibres included in this(these) product (s) have a half-life of less than 65 days (WHO fibres) by intratracheal instillation and do not fall under the German ban regulation (GefStoff V appendix IV N° 22). TRGS 905: 2.3 (4) These products may release fibrous dust during handling and use and need therefore to follow in Germany rules given in TRGS 521 Section 1 (Inorganic fibrous dust) paragraphs 4 and 5.

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 national 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).
- 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

As produced, all AES fibres are vitreous (glassy) materials, which, upon continued exposure to elevated temperatures (above 900°C) may devitrify. The occurrence and extent of crystalline

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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.

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 notes "in making the overall evaluation, the Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied..."

In most jurisdictions there are specific occupational exposure limits for crystalline silica (quartz, cristobalite) which may vary between countries and local jurisdictions. Check which exposure levels apply to your facility and comply with local regulation.

Simulated after use (up to 8 weeks at 1000°C) AES fibres were not toxic to macrophage like cells. High concentrations of fibres and other dusts may be generated when after-service products are mechanically disturbed during operations such as wrecking. These dusts may contain crystalline silica.

ECFIA recommends:

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

These procedures will ensure compliance with local regulatory exposure standards for free crystalline silica.

And because devitrified fibres containing silica mixed with amorphous and other crystalline phases are far less biologically active than free crystalline silica dusts, these measures will provide a high degree of protection.

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).