SAFETY DATA SHEET

(According to Australian WHS Regulations)

SDS Number: AU0009 Date of last revision: 25 March 2024

1 - Identification of product

1.1 - Identification of Product:

FYREWRAP® ELITE

Product Names: Fyrewrap, Fyrewrap Elite,Fyrewrap 1.5, Fyrewrap 1.5 Duct insulation, Fyrewrap Elite 1.5, Fyrewrap 0.5 Plenum insulation, Fyrewrap Plenum insulation, Fyrewrap 1.5 Cable insulation, Fyrewrap 2.0 Cable insulation, Fyrewrap Cable insulation, Fyrewrap Structural blanket, Fyrewrap Core

1.2 - Use of 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 fire stops. (Please refer to specific technical data sheet for more information)

1.3 - Identification of Company

IDENTIFICATION OF THE MANUFACTURER/SUPPLIER

Alkegen
336 Settlement Road
Thomastown, Victoria 3074
Tel: +61 3 9463 7100

Website: www.alkegen.com
Email : australia.info@alkegen.com

1.4 - Emergency information

EMERGENCY CONTACT NUMBER

Tel 0419576681 (Lissa Glasson)
Language: English

2 – Hazards Identification

Classification of the article

Not classified as hazardous according to the criteria of Safework Australia.
Not classified as a dangerous good according to the criteria of the ADG Code.
Other hazards not contributing to the classification: Fibrous dust may cause temporary mechanical irritation to the skin, eyes and respiratory system.
Restricted to professional users.
No adverse physiochemical, human health or environmental effects.

3 - Composition / Information on Ingredients

This product is an article under the WHS definition.

COMPONENT	% by weight	CAS No.	Hazard Classification according to WHS National Guide (2020)
AES Wool (Synthetic Fibres, Alkaline Earth Silicate) (Calcium-magnesium silicate)	96-99	436083-99-7	Not classified, Exonerated under Note Q (see Section 11)
Aluminium Foil with MMMF Reinforcement and inorganic adhesive	2-4	Article	Not classified

4 - First-Aid measures

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.

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.

First aid additional information

If symptoms persist, seek medical advice.

5 - Fire-fighting measures

The product is non-flammable. Use extinguishing agent suitable for surrounding combustible materials.

6- Accidental Release Measures

6.1 - Personal precautions, protective equipment and emergency procedures

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.

6.2 - Environmental precautions

Prevent further dust dispersion for example by damping the materials.
Do not flush spillage to drain and prevent from entering natural watercourses.
Check for local regulations, which may apply

6.3 - Methods and materials for containment and clean up

Pick up large pieces and use a vacuum cleaner.
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

Handling can be a source of dust emission and therefore the processes should be designed to limit the amount of handling. Whenever possible, handling should be carried out under controlled conditions (i.e., using dust exhaust system). Regular good housekeeping will minimise secondary dust dispersal.

7.2 - Conditions for safe storage

Store in original packaging in a dry area.
Always use sealed and clearly labelled containers.
Avoid damaging containers.
Reduce dust emission during unpacking.

7.3 - Specific end use

Please refer to your local Alkegen supplier.

8 - Risk Management Measures / Exposures Controls / Personal Protection

8.1 - Control parameters

Chemical Name	Australia Workplace Exposure Standard (WES) TWA	Alkegen
AES Wool (Synthetic Fibres, Alkaline Earth Silicate)*	2 mg/m^3 (inhalable dust)*	See below**

***** An inhalable dust exposure standard of 2 mg/m^3 (8 hour TWA) should be applied to minimise mechanical irritation from fibre. Due to the potentially larger portion of non-respirable dust, it may be appropriate to apply the exposure standard for nuisance dusts of 10 mg/m^3, measured as inhalable dust (8 hour TWA). Source: https://www.safeworkaustralia.gov.au/doc/workplace-exposure-standards- airborne-contaminants

** As with most industrial materials, it is prudent to minimize unnecessary exposure to respirable dusts. Note that Industrial hygiene standards and occupational exposure limits differ between countries and local jurisdictions. Check with your employer to identify any additional "respirable dust", "total dust" or "fibre" exposure standards to follow in your area. If no regulatory dust or fibre control standard apply, a qualified industrial hygiene professional can assist with a specific evaluation of workplace conditions and the identification of appropriate respiratory protection practices. In the absence of other guidance, **Alkegen has found that it is generally feasible to control occupational fibre exposure to 0.5 f/cc or less.**

The evaluation of occupational exposure limits and determining their relative applicability to the workplace is best performed, on a case-by-case basis, by a qualified Industrial Hygienist.

8.2 - Exposure controls

8.2.1 Appropriate 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 materials handling equipment.
Keep the workplace clean. Use a vacuum cleaner. Avoid brushing and compressed air.

If necessary, consult an industrial hygienist to assist with 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 minimise or avoid dust release during handling. Consult your supplier for further details

8.2.2 - 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 cleaner, not compressed air). Wash work clothes separately from other clothing.

Eye protection:
As necessary wear goggles or safety glasses that seal to the face.

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

Information and training of workers:
Workers should be trained on good working practices and informed on applicable local regulations.

See also: Safe management of synthetic mineral fibres (SMF) – glasswool and rockwool | SafeWork NSW

8.2.3 - Environmental Exposure Controls

Refer to local or national applicable environmental standards for release to air water and soil.
For waste, refer to section 13

9 - Physical and chemical properties

Information on basic physical and chemical properties	Not applicable
Appearance	White
Odour	None
Odour threshold	Not applicable
pH	Not applicable
Melting point/freezing point	1300° C (fibres)
Initial boiling point and boiling point range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	No data available
Solubility(ies)	Less than 1 mg/l
Partition co-efficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable
Explosive properties	Not applicable
Oxidising properties	Not applicable
Other Properties	Length weighted geometric mean diameter of fibres contained in the product: 1.9 - 6 microns

10 – Stability and Reactivity

10.1. Reactivity: Stable under normal conditions of use.
10.2. Chemical stability: The product is stable at normal handling and storage conditions.
10.3. Possibility of hazardous reactions: No dangerous reactions known.
10.4. Conditions to avoid: No additional information available.
10.5. Incompatible materials: None.
10.6. Hazardous decomposition products: None.

11 - Toxicological information

The fibres contained in this product have been tested for bio-persistence according to Note Q requirements in the List of Designated Hazardous Substances [NOHSC:10005(1999)].
Based on these results they are exonerated from classification as carcinogens in Australia.
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. This low bio-persistence 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

These products are insoluble materials that remain stable over time 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 - Disposal Considerations

To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended.

Waste from these materials is not generally classified as hazardous waste and may be disposed of at a normal tipping site which has been licensed for the disposal of industrial waste.

Taking into account any possible contamination during use, which may be classified as hazardous, expert guidance should be sought.

Such a waste is normally dusty (unless wetted) and so should be properly bagged and clearly labelled for disposal. At some tip sites dusty waste may be treated differently in order to ensure they are dealt with promptly and to avoid them being windblown.

Check for national and /or regional regulations to identify all applicable disposal requirements.

14 - Transport information

14.1 - Transport information

Not classified as dangerous goods under relevant international transport regulations (Australian DG Code, ADR, RID, IATA, and IMDG).
Ensure that dust is not windblown during transportation.

UN Number: None Allocated
DG Class :None Allocated
Subsidiary risk(s): None Allocated
Packing Group: None Allocated
Hazchem Code: None Allocated

Definitions:

ADR Transport by road, council directive 94/55/EC
IMDG Regulations relating to transport by sea
RID Transport by rail, Council Directive 96/49/EC
ICAO/IATA Regulations relating to transport by air
ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

15 - Regulatory information

15.1 – EU Regulatory information

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.2 – Australia Regulatory information

National Standard for Synthetic Mineral Fibres [NOHSC: 1004(1990)]
The code details exposure standard for analogous fibres and the appropriate testing procedures.

National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)]
This code details the minimum requirements for the safe handling of synthetic mineral fibres. It details provisions for the training, air monitoring, application procedures to reduce fibre release and personal protective equipment when using synthetic mineral fibres within the workplace.

16 - Other information

PRECAUTIONARY MEASURES TO BE TAKEN AFTER SERVICE UPON REMOVAL

In almost all applications high temperature insulating wools products (HTIW) are used as an insulating material helping to maintain temperature at 900°C or more in a closed space. As produced, HTIW are vitreous (glassy) materials which, upon 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. As only a thin layer of the insulation hot face side is exposed to high temperature, respirable dust generated during removal operations does not typically 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 devitrification allowing CS to build up does not occur. This is the case for waste mould casting for instance.

Toxicological evaluation of the effect of the presence of CS in artificially heated HTIW material has not shown any increased toxicity in vitro and in vivo. The results from different combinations of factors like increased brittleness of fibres, or microcrystals embedded in the glass structure of the fibre and therefore not biologically available may explain the lack of toxicological effects.

IARC evaluation as provided in Monograph 68 is not relevant as CS is not biologically available in after service HTIW and respirable dust generated during removals operations generally do not contain detectable levels of crystalline silica..

High concentrations of fibres and other dusts may be generated when after-service products are mechanically disturbed during

operations such as wrecking. Therefore Alkegen recommends:
• control measures are taken to reduce dust emissions; and
• all personnel directly involved wear an appropriate respirator to minimise exposure and comply with local regulatory limits.
The Australian *WES* for respirable crystalline silica (silica dust) is **0.05 mg/m^3 TWA**
https://www.safeworkaustralia.gov.au/doc/workplace-exposure-standards-airborne-contaminants

FURTHER INFORMATION
Further information can be found on:
http://www.alkegen.com/
http://www.ecfia.eu/
https://www.safeworkaustralia.gov.au/doc/workplace-exposure-standards-airborne-contaminants
Safe management of synthetic mineral fibres (SMF) – glasswool and rockwool

Technical Datasheets
For more information on individual products please see the technical data sheet section at www.alkegen.com

NOTICE

The information presented on this SDS (1) provides details on material identity, manufacturer/supplier information, hazard characterization and prevention, emergency response and other specialized information, (2) is considered to be accurate to the best of our knowledge, information and good faith belief as of the date of publication, (3) is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release of the material named, (4) should be read and used in conjunction with the company's relevant literature, (5) relates only to the specific material designated and may not be valid for such material used in combination with any other material or process and (6) is provided without warranty, expressed or implied, in law or in fact, of merchantability or fitness for a particular purpose. This document does not constitute a product specification and should not be relied on as such. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product.