

MATERIAL SAFETY DATA SHEET

KLINGERSIL C-4500

Page 1 of 7

1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name KLINGERSIL C-4500

Other Names Compressed Non-Asbestos Fibre Sheeting/Jointing/Gaskets
KLINGERSIL C-4500

Recommended Use High temperature gasket material

Supplier KLINGER Limited (ABN 95 008 679 838)
38 McDowell St
Welshpool
WA 6106
AUSTRALIA
Tel +61 (0)8 9350 1100 (0800 – 1700 Australian Western
Standard Time – GMT +8 hrs)
Fax +61 (0)8 9350 6200

2 - HAZARDS IDENTIFICATION

Not classified as hazardous according to the criteria of NOHSC.

The product is considered harmless to health and the environment in the form supplied and if stored and handled in the correct manner – see Section 7. No hazards are known based on present information.

3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS	Proportion
Calcined Alumina Silicate	92704-41-1	30 – 60%
Carbon Fibre	7440-44-0	30 – 60%
Nitrile Butadiene Rubber	9003-18-3	10 - < 30%
Aramid Fibre	26125-61-1	< 10%
Precipitated Silica	112926-00-8	< 10%

MATERIAL SAFETY DATA SHEET

KLINGERSIL C-4500

Page 2 of 7

4 - FIRST AID MEASURES

Inhalation	Dust arising from working the product should be treated as nuisance particulate material. Inhalation of dust may cause irritation to the mucous membranes and upper respiratory tract. Movement of exposed individual to fresh air is recommended.
Skin	May cause irritation to individuals with sensitive skin. Wash skin with soap and water. Launder heavily contaminated clothing before reuse. If prolonged irritation occurs, seek medical advice.
Eye	May cause mechanical irritation in contact with eyes. Remove small solid particles and rinse with water for a minimum of 15 minutes. In all cases of eye contamination it is a sensible precaution to seek medical advice.
Ingestion	Not hazardous. Not a likely source of exposure. If ingested, give plenty of fluid to assist passage through system. Seek medical attention if irritation occurs.

5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Water, carbon dioxide, powder extinguishers, foam extinguishers
Hazards from Combustion Products	In case of combustion, the same gases are produced as with burning rubber. The following may be produced in case of fire: Carbon monoxide; carbon dioxide; sulphur oxides; nitrous gases (NO _x); irritating/caustic, combustible as well as poisonous carbonisation gases.
Precautions for Firefighters and Special Protective Equipment	Breathing apparatus and eye protection must be worn to protect from dust, fumes and burning rubber.

6 - ACCIDENTAL RELEASE MEASURES

MATERIAL SAFETY DATA SHEET

KLINGERSIL C-4500

Page 3 of 7

Emergency Procedures

Fire: See Section 5
Personal: See Section 4
Environmental: No known environmental hazards exist.

Methods and Materials for Containment and Cleanup

Approved vacuum cleaners with high efficiency filters (HEPA) conforming to AS3544 or equivalent must be used to clean areas.

Additional

In the case of improper use (see Section 8) fine dust may result. Adequate suction and filtering of the exhaust air should be ensured.

7 - HANDLING AND STORAGE

Handling

No special precautions necessary when handling the material in its finished form as the synthetic mineral fibres are encapsulated in a rubber matrix. However, whenever further processing of sheets/gaskets is undertaken, the potential for the release of fibres exists. See Section 8.

Storage

Store in a cool, dry, well ventilated area removed from foodstuffs. Ensure ventilation is adequate to disperse vapours emitted from the binding material. Vapours may include traces of carbon monoxide, carbon dioxide, oxides of nitrogen and formaldehyde. Material should not be stored in the vicinity of heat sources. Material is only flammable through the effects of intensive heat. Excessive heat or humidity in the storage area may diminish the product's performance in its intended application.

THIS MATERIAL MUST NOT BE DRILLED, SAWED, GROUND, SANDED OR SUBJECTED TO ANY OTHER DUST PRODUCING PROCESS.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards (Time-Weighted Averages)

Precipitated Silica:	10mg/m ³ ES-TWA
Nitrile Butadiene Rubber:	50ppm ES-TWA
Alumina Silicate:	10mg/m ³ ES-TWA
Carbon Fibre	0.5fibre/mL ES-TWA
Aramid Fibre:	0.5fibre/mL ES-TWA

(Recommended - Note that Aramid and Carbon

MATERIAL SAFETY DATA SHEET

KLINGERSIL C-4500

Page 4 of 7

fibres have no current assigned exposure standard, however as a general safety precaution the above guideline may be used.)

Biological Limit Value

No Biological Limit Value allocated.

Engineering Controls

Ensure adequate ventilation exists to maintain air concentrations below exposure standards. Do not inhale dust/fibres. Use localised extraction or wet methods of work to control dust levels.

Personal Protective Equipment

No special precautions necessary when handling the material in its finished form as the synthetic mineral fibres are encapsulated in a rubber matrix. However, whenever further processing of sheets/gaskets is undertaken, the potential for the release of particulates exists. In the case of particle generation exceeding the above-noted National Exposure Standards, recommended PPE are rubber/PVC gloves, coveralls, safety glasses and a P2 particulate (AS1716 or equivalent) respirator. When removing embrittled or spent material or when high levels or dust exist a full-face class H particulate cartridge respirator or full-face positive pressure demand airline respirator (AS1716 or equivalent) is recommended. Good hygiene practices must always be maintained.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: Sheets or cut gaskets
Colour: Black both sides

Odour

May smell slightly of rubber

pH

Not applicable

Vapour Pressure

Not applicable

Vapour Density

Not applicable

Boiling Point/Range

Not applicable

MATERIAL SAFETY DATA SHEET

KLINGERSIL C-4500

Page 5 of 7

Freezing/Melting Point	Not applicable
Flashpoint	Not applicable
Solubility (water)	Insoluble
Specific Gravity/Density	1.4g/cc
Additional	Elastomer carbonisation and decomposition occurs at high temperatures.

10 - STABILITY AND REACTIVITY

Chemical stability	Stable under intended operating conditions.
Conditions to Avoid	Not known
Incompatible Materials	Not known
Hazardous Decomposition Products	Decomposition of rubber at high temperatures.

11 - TOXICOLOGICAL INFORMATION

The material in its finished form presents no known health hazard. Synthetic mineral fibres (SMF) is a collective term used internationally to describe fibres such as fiberglass, rockwool and ceramic fibres. The release of SMF into the air is a health risk hence the adoption of an exposure standard of 0.5f/mL (TWA), for respirable fibres according to the National Commission – Worksafe Australia. For non-respirable SMF a secondary (complementary) exposure standard of 2mg/m³ is proposed by Worksafe Australia. This proposed secondary standard is established to minimise upper respiratory tract irritation from non-respirable fibres. It does not take precedence over the respirable fibre standard. Worksafe has determined not to classify SMF as a suspected carcinogen due to the lack of supporting evidence.

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12 - ECOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET

KLINGERSIL C-4500

Page 6 of 7

Ecotoxicity	Not known. Insoluble in water, precipitates.
Persistence and Degradability	Not known. Not biologically degradable (self-classification).
Mobility	Not known

13 - DISPOSAL CONSIDERATIONS

Disposal Methods	No special requirements exist. Dump on industrial depositories. Seal waste dust in heavy duty plastic bags (200 microns minimum). Do not dispose of in an incineration system under any circumstance. Local, state and federal statutory regulations must be observed.
Special Precautions	Not applicable

14 - TRANSPORT INFORMATION

UN Number	None allocated
UN Proper Shipping Name	None allocated
Class and Subsidiary Risks	Not relevant
Packing Group	Not relevant
Special Precautions for User	Do not transport with Explosives, Oxidising agents, Organic peroxides and foodstuffs. In sheet and cut gasket form there is no risk associated with the product under normal transport conditions. Not defined as a Dangerous Good by the Australian Code for the Transport of Dangerous Goods by Road and Rail.
Hazchem Code	None allocated

15 - REGULATORY INFORMATION

MATERIAL SAFETY DATA SHEET

KLINGERSIL C-4500

Page 7 of 7

Regulations for dangerous materials not applicable.

16 - OTHER INFORMATION

The information presented is based on the present level of knowledge and experience.

All information and recommendations contained in this publication are to the best of our knowledge. Since the conditions of use are beyond our control, users must satisfy themselves that products are suitable for the intended processes and applications. No warranty is given or implied in respect of information and recommendations or that any use of the products will not infringe rights belonging to other parties. In any event or occurrence, our liability is limited to our invoice value of the goods delivered and properties without notice.

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