



MATERIAL SAFETY DATA SHEET – Zeolite Filter Media

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PRODUCT NAME: Natural Zeolite Filter Media
Sold as Product grade; FM8/16, /FM8/30, FM16/30, FM16/50, FM3/1, FM2.2 Plus
UN Number: None Allocated
HazChem Code: None Allocated
Dangerous Goods Class & Sub-Risk: None Allocated
Poisons Schedule: None Allocated
Australian Harmonized Export Commodity Classification (AHECC): 2530 9093, "Other Types of Rock Media"

IDENTIFICATION

Product Form: Fine pink gravel
Origin: Hard Rock Natural Ash Fall Tuff Deposit.
Minerals Present: Main - Mordenite, Clinoptilolite
Minor - Quartz, Feldspar, Montmorillonite.
Composition: Sodium/Potassium/Calcium Alumino-silicates.
Product Size: Nominally greater than 1mm.
Particle Shape: Cubic to Blocky.
Bulk Density: Circa 1400 kilograms/cubic metre.

CHEMICAL CHARACTERISTICS

Chemical Formula: Typically $(\text{Na},\text{K})_6(\text{Al}_6\text{Si}_{30}\text{O}_{72})\cdot 20\text{H}_2\text{O}$ to $\text{Na}_3\text{KC}_2(\text{Al}_8\text{Si}_{40}\text{O}_{96})\cdot 28\text{H}_2\text{O}$.
Chemical Stability: Excellent.
Melting Point: <1000°C (may tend to froth and bubble at temperatures in excess of 200°C).
Solubility in Water: Virtually Insoluble.
Vapour Pressure: Not Applicable.
Vapour Density: Not Applicable.
Volatiles: Nil.
Flash Point: Not Applicable.
Flammability: Non-flammable.
Explosive Limits: Non-explosive.
Auto ignition Temp: Not Applicable.
Form: Powdered Solid.

HEALTH HAZARD INFORMATION

Human Contact

Eyes: Very prolonged contact in high dust area may cause some irritation.
Skin: Prolonged contact may cause some irritation due to drying action.
Inhalation: No known effects, however, product is a fine dust and lung injury (silicosis) could be possible from excessive inhalation over an extended period.
Swallowed: No Known adverse affects. Product is used as animal feed supplement however it is not recommended for human consumption.

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HEALTH HAZARD INFORMATION (Continued)**Precautions**

- Eyes:** Wear protective goggles if intrusion into high dust area is necessary.
- Skin:** Wash hands with soap and water. Use suitable skin protection cream.
- Inhalation:** Avoid dusty areas unless wearing suitable respirator. Stand on windward side of any temporary spills.
- Swallowed:** Wash hands well with detergent and water before consumption of food. Do not use as a medicine.

First Aid

- Eyes:** Flush with clean water for 5 to 10 minutes. If irritation persists seek immediate medical attention.
- Skin:** Wash affected area with soap and water and apply suitable skin protection cream. If irritation or rash persists seek medical advice.
- Inhalation:** Remove patient from affected area. Seek medical advice if symptoms persist.
- Swallowed:** If adverse effects occur seek medical advice.

Advice to Doctor

Base Material is non-toxic and chemically inert. It is however highly absorbent and could have a dehydrating effect if large amounts are ingested rapidly.

Electron photomicrographs have shown that particle shape is generally blocky and sub-rounded rather than sharp and shardy. Implications are that inhaled material would be less irritant than silica dust.

Precautions for Use

Exposure Limits: Crystalline alumino-silicate that could be classified as a nuisance dust with an exposure standard of 10mg/m³ (same as Type GP Cement).

Engineering Controls: Use suitable means of dust collection/suppression so that airborne dust limits do not exceed the exposure limits. If respirable dust levels exceed industrial limit, use respirators suitable for inert crystalline dust.

Personal Protection:

Avoid prolonged breathing of dust or prolonged contact of dust with skin. Persons with a history of respiratory illness or reduced pulmonary function should avoid areas with high dust levels.

Flammability

No applicable.

Environment

Other than respirable dust limitations no environmental hazards are known for this zeolite.

SAFE HANDLING INFORMATION**Storage and Transport**

ROAD TRANSPORT:	Not classified as a Dangerous Goods
SEA TRANSPORT:	Not classified.
STORAGE:	Protect from moisture.

Packaging and Labelling

No special requirements other than to prevent dust emission.

Spills and Disposal

Avoid excessive exposure to dust. If dust grade material is spilt use respirator during dry clean up or alternatively hose down with water.

Reactivate Data

Will react with HCL acid. Possible mild reaction during contact with very strong oxidising agents.

Fire/Explosion Hazard

Non flammable and non explosive.

No warranty express or implied is made. This Product Safety Data Sheet is not a substitute for expert advice of development of engineering and safe handling practise.

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