

1. IDENTIFICATION OF MATERIAL SUPPLIER

Product Names: Mine Tailings, Tailings
 Other Names: Tails
 Uses: Material remaining after mineral extraction.
 Company: Keysbrook Leucoxene Pty Ltd
 ABN 49 137 091 297
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2. HAZARDS IDENTIFICATION

Tailings dust contains a small amount of respirable crystalline silica which is classified as hazardous according to criteria of Australian Safety and Compensation Council (ASCC).

Classified as Non-Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail

Risk Phrases: R48/20 - Danger of serious damage to health by prolonged exposure through inhalation

Safety Phrases: S22 - Do not breath dust

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients (typical)	CAS Number	Weight
Quartz	14808-60-7	58-68%
Rutile	1317-80-2	14-18%
Kaolinite	1318-74-7	10-14%
Ilmenite	12168-52-4	3-5%
Zircon	14940-68-2	3-5%
Uranium (U)	7440-61-1	30-40ppm
Thorium (Th)	7440-29-1	370-400ppm

4. FIRST AID MEASURES

Swallowed: First aid is unlikely to be required, but if necessary wash mouth out with water ensuring the mouthwash is not swallowed. Give one or two glasses of water to drink. Seek medical attention if a large quantity has been swallowed.

Inhaled: Blow nose to remove particulates from nose. Move to area with fresh air. Seek medical attention if adverse reaction develops.

Skin: Remove contaminated clothing gently to avoid creating dust. Wash skin. If skin becomes irritated, seek medical attention. Launder affected clothing before re-use.

Eye: Hold eyelid open and flush with clean water. Continue until grit is removed. Seek medical attention if irritation or soreness persists.

Acute

Swallowed:	Non-toxic. No known detrimental effect from accident ingestion as may occur during normal handling. Ingestion of large amounts may cause irritation to the gastro-intestinal system due to abrasiveness.
Inhaled:	Mainly regarded as nuisance dust but may be irritating if inhaled at high concentrations. May cause coughing and/or sneezing.
Skin:	Low hazard.
Eye:	Solid and dust can be moderately irritating due to abrasiveness.

Chronic

Radiation:	Tailings contains naturally occurring radioactive elements of the uranium and thorium series. The tailings produced by Keysbrook Leucoxene Pty Ltd contains low concentrations of these impurities, with typical specific activities of approximately 1.5-1.7 Bq/g (thorium-232) and 0.3 to 0.6 Bq/g (uranium-238). Daughter products are present, usually at equilibrium concentrations. The main radiological hazard is internal dust. As a guide, continuous worker exposure to respirable dust levels above 3.5mg/m ³ could give rise to annual internal exposures above 1 mSv. External exposure is from gamma radiation. Continuous exposure (2000 hours per year) within 2 metres of bulk tailings could give rise to an annual external dose above 1 mSv.
Silica:	Crystalline silica is a known cause of lung fibrosis (silicosis). It has also been classified as a human carcinogen. Tailings contains small amounts of respirable free quartz and precautions should be taken to avoid inhaling the dust.

FIRST AID FACILITIES Eye Wash Station**DOCTOR** Treat symptomatically**5. FIRE FIGHTING MEASURES**

Non-flammable, non-combustible

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	Not relevant
Containment and Clean-up:	Wear safety equipment for normal handling. Avoid generating dust. Vacuum up if possible, otherwise sweep up and recycle. If the spilled product is not suitable for re-use, dispose of to an approved landfill site and cover with clean fill.

7. HANDLING AND STORAGE

Handling:	Dust generation should be minimised when handling. Wash thoroughly after handling.
Storage:	Storage areas should be ventilated.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards:	Crystalline silica (quartz) 0.1mg/m ³ TWA as respirable dust, 10mg/m ³ TWA as inhalable general nuisance dust.
Biological Limit Values:	No information
Engineering Controls:	Ventilation requirements will depend on handling methods and the amounts in use but should be sufficient to maintain dust levels below exposure limits.

Personal Protective Equipment: Safety glasses or goggles.

Where engineering and handling controls are not sufficient to minimise exposure to total dust and to respirable crystalline silica, personal respiratory protection may be required. The type of respirator depends on dust levels and exposure time. For low level dust a P1 or P2 mask is sufficient. When dust approaches the National Exposure Standards limits then a more efficient cartridge type or powered respirator should be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Cream coloured free running sand
Odour:	Odourless
pH:	Neutral
Vapour Pressure:	Not applicable
Boiling Point/Range:	Not applicable
Melting Point:	Rutile 1850°C, Quartz 1700°C, Zircon 2200°C
Solubility:	Insoluble
Bulk Density:	1.3-1.4
Flash Point:	Not applicable
Flammability Limits:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity:	Inert
Chemical Stability:	Stable
Incompatible Materials:	None in normal or expected use
Decomposition Products:	Decomposition will not occur

11. TOXICOLOGICAL INFORMATION

Long Term Effects of Inhalation:

Long term inhalation of respirable silica dust at levels over the NES guidelines carries the risk of causing serious and irreversible lung disease such as bronchitis and silicosis.

12. ECOLOGICAL INFORMATION

Very low risk of environmental damage. Insoluble in water and unlikely to contaminate waterways or food chains.

13. DISPOSAL CONSIDERATIONS

If not reusable, dispose of at approved landfill site. Disposal must be in accordance with Commonwealth, State and local government regulations.

14. TRANSPORT INFORMATION

Transport may be regulated in some countries although the product is classified as Non-Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Trucks however should be covered when transporting dry bulk product to prevent dust creation.

15. REGULATORY INFORMATION

Poisons Schedule: None allocated

16. OTHER INFORMATION

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Replaces Issue: April 16, 2018

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END OF SAFETY DATA SHEET

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