



Dakshinak Minerals LLP

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Hyderabad 500084, Telangana State, India.

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MATERIAL SAFETY DATA SHEET

SECTION: I – IDENTIFICATION

Product Name : Rutile Sand
Use : To produce TiO₂, Pigments, Welding Electrodes.
Producer Name : Dakshinak Minerals LLP
Telephone :
E-mail : sales@dakshinak.com
Website : www.dakshinak.com

SECTION: II – MINERALS COMPOSITION

Rutile is a natural mixture of Rutile and it was collected from inland and seashore area. Rutile purity and other mixed trace minerals.

Minerals Composition	Proportion By Weight
Rutile	98.50 %
Zircon	00.50 %
Leucoxene	01.00 %
Shell	Nil

SECTION: III - HAZARDS INFORMATION

Rutile sand is non-hazardous and non-dangerous cargo according to criterion NOHSC: 1008(2004) since it is a natural mineral.

SECTION: IV - HEALTH HAZARDS & FIRST AID PROCEDURES

Swallowed: Non toxic. There are no known health hazard effects resulting from accidental ingestion as that may occur while the workers normal handling. Absorbing larger amounts may cause irritation due to abrasiveness. First aid is unlikely to be required, but if necessary wash mouth with water, ensuring the rinse is not swallowed. Contact medical consultant, if any problems develop.

Eye: Materials and dust contact can cause eye irritation due to abrasiveness. Hold the eyelid open and flush with clean water for at least 10 minutes or until the abrasive is removed. Also can contact medical consultant, if any problems develop.

Skin: There are no known health effects from skin contact that may happen during normal handling. Contact

medical consultant, if any problems develop. Also while blasting the material, contact with skin under pressure will damage skin. Gently remove the contamination clothing to avoid dust, then wash the skin. If irritation persists, seek medical advice.

Inhaled: Normally regarded as general nuisance dust, but can be irritating if inhaled in high concentrations and may cause lung irritation. Shift to fresh air and blow nose to remove particulates from nasal passages. Contact medical consultant, if any problems found.

SECTION: V - STABILITY & REACTIVITY DATA

Stability	-	Stable
Polymerization	-	Cannot occur
Incompatibility	-	None Known
Hazardous Reactions	-	None Known
Decomposition	-	Not applicable

SECTION: VI - FIRE AND EXPLOSION HAZARD DATA

Flammability	-	Non-flammable solid
Flash Point	-	Not applicable
General Hazard	-	Non-flammable and does not support burning
LEL	-	Not applicable
UEL	-	Not applicable
Extinguishing Media	-	Use appropriate extinguishing media for the surrounding fire.

SECTION – VII – PHYSICAL & CHEMICAL CHARACTERISTICS

a) Physical Characteristics: -

Melting point	-	1320 °C to 1370 °C
Specific gravity	-	4.0 to 4.5
Bulk density	-	2.7 g/cc
Solubility in water	-	Insoluble
Acid solubility	-	< 0.5 %
Appearance & Odour	-	Black & Brown
Physical state	-	Solid
Viscosity	-	Not Applicable
Boiling point	-	Not Applicable
Vapour Pressure	-	Not Applicable
pH	-	Neutral
Hardness	-	> 7 Moh's Scale
Free metal	-	< 0.01 %
Water Soluble Chloride	-	< 30 ppm
4 Conductivity	-	< 14 mS/m
Moisture	-	< 0.20 % (Dry solid)
Grade Shape	-	Sub-angular
Grain Size	-	60 mesh to 180 mesh

b) Composition:-

Minerals / Chemical Composition	CAS. NO.	Proportion By Weight
Titanium Oxide	13463-67-3	95.10 %
Total Iron	1309-37-1	0.36 %
Chromium Oxide	1333-82-0	0.19 %
Aluminium Oxide	1344-28-1	0.22 %
Silica Oxide	14808-60-7	0.640 %
Zirconium Oxide	14940-68-2	1.56 %
Vanadium Oxide	1314-62-1	0.47 %
Calcium Oxide	-	0.03 %
Magnesium Oxide	-	0.02 %
Manganese Oxide	-	0.01 %
Sulphur	7704-34-9	0.02 %
Uranium	7440-61-1	81 ppm
Thorium	7440-29-1	140 ppm

SECTION – VIII – PERSONAL PROTECTION

Crystalline silica	-	0.10 mg/m ³
Repairable dust	-	5 mg/m ³
Nuisance dust	-	15 mg/m ³

If these levels are exceeded respiratory protection must be applied.

Personal Protection: Safety glasses, gloves and nose mask. Maintain a clean and safe work place and monitor effectiveness.

Engineering Controls: Dust collector and ventilation requirements will depend on handling methods and the amount in use, but should be sufficient maintain dust levels exposure limit. Points of dust generation such as conveyor and hopper discharges should be equipped with an effective extraction system.

SECTION: IX – HANDLING AND STORAGE

Adopt good housekeeping practices to reduce dust. Use approved hand, eye and respiratory protection devices while the material handling. No special safety measures required. Storage place should be ventilated and dust generation minimized when handling.

SECTION: X – CONTROL MEASURES

Respiratory Protection (Specify type)

NIOSH / MSHA – Approved filters and air supplied goods for blasters.

Ventilation	Local Exhaust	Special
Yes	Use when blast cleaning	None
	Mechanical (General)	Other
	Meet dust TLV	None

Protection Gloves: Leather gloves, caps and paper mask.

Eye Protection: Safety glasses with side shields approved by central.

Other Protective clothing or Equipment: Normal safety protection is adopted.

Work / Hygienic Practices: Keep a clean and safe workplace and monitor work practices.

SECTION: XI – TRANSPORT

No special precautions, it is suggested to keep bags closed and covered using tarpaulin or any sheet while the transporting to avoid dust generation.

SECTION: XII – DISPOSAL PROCEDURES

As per the local, state and central rules for the disposal of inert solid waste. Material contaminated in use may require special handling and disposal.

SECTION: XIII - REGULATORY INFORMATION

This product is natural and dry mineral and the material collected from inland and seashore. It is non-hazardous and non-dangerous cargo and does not require any special precautions.

SECTION: XIV – ENVIRONMENTAL INFORMATION

This material is a natural mineral with no known ecotoxicity. It is insoluble in water, because it is very heavy material and it should not contaminate waterways and food materials. Also it is not dangerous to animals and plants.

SECTION: XV – TOXIC INFORMATION

This product is non-toxic with no known sensitive health effects relating to human exposure.

SECTION: XVI – SPECIAL COMMENTS & PRECAUTIONS

The above information is believed to be accurate, but is not warranted with respect to the accuracy of the information or recommendations. As per the work safety rule, each and every user should reconsider the above information while using the product in the warehouse or manufacturing unit.
