



## Dakshinak

Plot No.11, 4th Floor, The Mahaveer Water Mark, Kondapur, Ranga Reddy District,  
Hyderabad 500084, Telangana State, India.

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# **ZIRCON SAND – MSDS**

(Materials Safety Data Sheet)

### **SECTION: I – IDENTIFICATION**

Product Name : Zircon  
Grade Name & Use : Zircon A Grade & Zircon B Grade  
Manufacture's Name : Dakshinak Minerals LLP  
Telephone :  
E-Mail : [sales@dakshinak.com](mailto:sales@dakshinak.com)  
Website : [www.dakshinak.com](http://www.dakshinak.com)

### **SECTION: II – MINERALS COMPOSITION**

Zircon is a natural mineral sand and it was collected from inland and seashore area. Its purity and other mixed trace minerals and it's mainly used for ceramic and foundry applications / industry.

Minerals / Chemical Composition	CAS. NO.	Proportion By Weight
Zircon ( $ZrO_2+HfO_2$ )	14940-68-2	> 99.30 %
Rutile ( $TiO_2$ )	1317-80-2	< 00.25 %
Silimanite ( $Al_2O_3$ )	12141-45-6	< 00.25 %
Other Minerals	14808-60-7	< 00.20 %

### **SECTION: III - HAZARDS INFORMATION**

Non-hazardous and non-dangerous cargo according to criterion NOHSC: 1008(2004). Because it is natural minerals.

### **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. Absorb the 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.

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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	-	2200 °C to 2300 °C
Specific gravity	-	4.2 to 4.7
Bulk density	-	2.7
Solubility in water	-	Insoluble
Acid solubility	-	< 0.5 %
Appearance & Odour	-	White, Pink, Red
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	-	< 25 ppm
Conductivity	-	< 15 mS/m
Moisture	-	< 0.20 % (Dry solid)
Grade Shape	-	Sub-angular
Grain Size	-	90 micron to 1700 micron



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### **b) Composition:-**

Zirconium	-	64.5 - 66.5 %
Silica	-	32 - 33 %
Aluminium	-	0.3 - 1.0 %
Iron	-	0.05 - 0.2 %
Titanium	-	0.10 - 0.30%
Magnesium	-	0.01-0.05 %
Calcium oxide	-	0.01 – 0.05 %
Phosphorus	-	0.06 – 0.15 %
Chromium	-	< 40 ppm
Arsenic	-	< 90 ppm
Lead	-	< 100 ppm
Uranium	-	100 -200 ppm
Thorium	-	100 - 150 ppm

### **SECTION: VIII – PERSONAL PROTECTION**

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

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



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	Meet dust TLV	None
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**Protection Gloves:** Leather gloves, cabs 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 INFORMATION**

IATA : NIL  
ADR : NIL  
IMO : NIL  
UN.NO. : NIL

### **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 intended to give general health and safety guidance on the storage and transport of the substance or product to which it relates, and it 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. The requirement or recommendation of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product shall take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

End of MSDS