

## FEATURES

PINKENBA, QUEENSLAND

Sibelco's Cruzor Ilmenite is produced at our CRL Processing Plant at Pinkenba, in Queensland.

Cruzor Ilmenite is tested and controlled to rigorous standards which ensure consistent chemical and physical properties resulting in predictable and repeatable performance. Sibelco Australia actively manages a Quality Management System certified to ISO9001:2008.

Cruzor Ilmenite typically finds use as feedstock for pigment manufacture, via both the sulphate route and the reduced ilmenite processes. It is also used in foundry applications and as a blasting abrasive. The following properties may help you to determine the suitability of this product to your application.

Pinkenba Cruzor Ilmenite (09/10)

### CHEMICAL ANALYSIS

These Do Not Represent A Specification

Percent by Weight		Guaranteed	Typical
		In - house	
Titanium Dioxide	(TiO <sub>2</sub> )	49.0min	50.0-51.0
Iron	(Fe)	32.0min	32.0-34.5
Alumina	(Al <sub>2</sub> O <sub>3</sub> )	0.70 max	0.40-0.65
Chromium Oxide	(Cr <sub>2</sub> O <sub>3</sub> )	0.40 max	0.20-0.35
Calcium Oxide	(CaO)		0.01-0.03
Iron II Oxide	(FeO)		30.0-33.0
Iron III Oxide	(Fe <sub>2</sub> O <sub>3</sub> )		12.0-15.0
Magnesium Oxide	(MgO)		0.85-1.00
Manganese Dioxide	(MnO <sub>2</sub> )		1.1-1.35
Niobium Oxide	(Nb <sub>2</sub> O <sub>5</sub> )		0.05-0.07
Silicon Dioxide	(SiO <sub>2</sub> )		0.25-0.60
Vanadium Oxide	(V <sub>2</sub> O <sub>5</sub> )		0.17-0.23
Zirconium Dioxide	(ZrO <sub>2</sub> )		0.09-0.12
U + Th		ppm	<25
Specific Activity	Bq/gm		<1
Moisture			0.05-0.15

### PARTICLE SIZE ANALYSIS

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	Mesh		Range
	mm	BS	
Typical Mean	0.180	85	5-20
% Retained on	0.150	100	10-25
Individual	0.125	120	10-25
Sieves	0.106	140	15-30
	0.090	170	10-25
	0.075	200	5-15
Passing	0.075	200	0-5
AFS			95-115
D50 (µm)			123
Specific Gravity		UAL 2.13	4.2-4.3
Bulk Density	g/cm <sup>3</sup>	UAL 2.10(a)	2.4-2.7
Angle of Repose			30°

### ORDERING INFORMATION

Shipping Point: Pinkenba (Brisbane Port), Queensland, Australia  
 Availability: Bulk Bags / Bulk  
 For Product Information and Customer Service: [www.sibelco.com.au/crl](http://www.sibelco.com.au/crl)

**DISCLAIMER:** Ranges and values of trial sample testing or on a Technical Information Sheet are typical or expected ranges and are not guaranteed ranges. You must satisfy yourself that the product is suitable for the purpose for which you intend to use it. Unimin makes no representations as to suitability, fitness or merchantability.

**HAZARD WARNING:** Avoid creating dust when handling, using or storing the product. Use only with adequate ventilation to keep exposure low. Undertake health and safety risk assessments on safe methods of handling and use appropriate to your workplace. To prevent inhalation of airborne dust, wear respiratory protection in accordance with Australian Standard AS1715 and AS1716. To prevent potential irritation to eyes, wear eye protection in accordance with Australian Standard AS1337.

Please refer to the relevant Sibelco Australia Limited Material Safety Data Sheet (MSDS) for health hazard information before opening or using this product and take care when disposing of the empty bag/container (as it may contain product residue). Material Safety Data Sheets are available at [www.sibelco.com.au/crl](http://www.sibelco.com.au/crl)



ABN 00 000 971 844



Mineral Sand Products

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## Material Safety Data Sheet

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Product Name **CRUZOR ILMENITE SAND**

Not classified as hazardous according to criteria of NOHSC

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** CRUZOR ILMENITE SAND  
**Company Name** SIBELCO AUSTRALIA LIMITED  
**Address** 49-55 Woodlands Drive Braeside  
 Vic 3195 Australia  
**Emergency Tel.** 1800 638 556  
**Telephone/Fax Number** Tel: (03)9586 5400  
 Fax: (03)9586 5413  
**Recommended Use** Raw material for manufacture of titanium dioxide pigments, titanium metal and welding rod electrodes.

### 2. HAZARDS IDENTIFICATION

**Hazard Classification** Not classified as hazardous according to criteria of NOHSC  
 NON-HAZARDOUS SUBSTANCE.  
 NON-DANGEROUS GOODS.  
 Hazard classification according to the criteria of NOHSC.  
 Dangerous goods classification according to the Australia Dangerous Goods Code.  
**Risk Phrase(s)** Not classified as hazardous according to criteria of NOHSC

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Information on Composition Ingredients** Contains <1% respirable crystalline silica in the form of quartz.

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
ILMENITE	12789-64-9	>97 %
Quartz	14808-60-7	<1 %
Other minerals	Mixture	<2 %
Uranium	7440-61-1	<10ppm
Thorium	7440-29-1	<10ppm

### 4. FIRST AID MEASURES

**Inhalation** If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms persist seek medical attention.  
**Ingestion** Do not induce vomiting. Wash out mouth thoroughly with water. If symptoms develop seek medical attention.  
**Skin** Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.  
**Eye** If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention.  
**First Aid Facilities** Eyewash and normal washroom facilities.  
**Advice to Doctor** Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media** Use appropriate fire extinguisher for surrounding environment.  
**Hazards from Combustion Products** Non combustible material.  
**Specific Hazards** This product is non combustible.

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**Precautions in connection with Fire** Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers.

### 6. ACCIDENTAL RELEASE MEASURES

**Emergency Procedures** Increase ventilation. Evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water authorities and EPA in accordance with local regulations.

### 7. HANDLING AND STORAGE

**Precautions for Safe Handling** Use only in a well ventilated area. Prevent the build up of dust in the work atmosphere. Avoid inhalation of dust, and skin or eye contact. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

**Conditions for Safe Storage** Store in a cool, dry, well-ventilated area, out of moisture. Store away from water and other incompatible materials.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No exposure value assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC), Australia. However, the available exposure limits for ingredients are listed below:

National Occupational Health And Safety Commission (NOHSC), Australia Exposure Standards:

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Quartz	-	0.1	-	-

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

**Biological Limit Values** No biological limits allocated.

**Engineering Controls** Provide sufficient ventilation to keep airborne levels below the exposure limits. Where dusts are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required.

**Respiratory Protection** If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

**Eye Protection** Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

**Hand Protection** Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

**Body Protection** Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist



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Product Name **CRUZOR ILMENITE SAND**

Not classified as hazardous according to criteria of NOHSC  
is recommended.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black sand.
Odour	Odourless
Melting Point	>2000°C
Boiling Point	Not available
Solubility in Water	Insoluble at 20°C.
Specific Gravity	4.2-4.3
pH Value	7.1-8.8
Vapour Pressure	Not available
Vapour Density (Air=1)	Not available
Flash Point	Not applicable
Flammability	Non-combustible
Auto-Ignition Temperature	Not applicable
Flammable Limits - Lower	Not applicable
Flammable Limits - Upper	Not applicable
Other Information	Bulk density: 2400-2700kg/m <sup>3</sup>

### 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Moisture
Incompatible Materials	Not available.
Hazardous Decomposition Products	Not known.
Hazardous Reactions	Not available
Hazardous Polymerization	Will not occur.

### 11. TOXICOLOGICAL INFORMATION

Toxicology Information	No toxicity data available for this product.
Inhalation	Inhalation of dusts may irritate the respiratory system.
Ingestion	Ingestion of this product may irritate the gastric tract causing nausea and vomiting.
Skin	May be irritating to skin. The symptoms may include redness, itching and swelling.
Eye	Eye contact may cause mechanical irritation. May result in mild abrasion.
Chronic Effects	<b>RADIATION:</b> In common with many naturally occurring mineral products, CRL Ilmenite contains extremely low levels of naturally occurring radioactive elements - principally uranium and thorium. The main radiological hazard from the product is internal exposure to alpha particles given off in small amounts

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Product Name **CRUZOR ILMENITE SAND**

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**Carcinogenicity**

by inhaled dust. Low level gamma radiation from bulk or bagged stockpiles of Ilmenite may present a lesser, external hazard. This product contains silicon dioxide (quartz). No exposure to free respirable crystalline silica is anticipated during normal use of this product. It should be noted, however, that respirable crystalline silica has been listed as a Group 1 human carcinogen by the IARC. Inhalation of respirable silica may cause silicosis or other serious delayed lung injury. Grinding or machining of coated materials may release silica. Use approved dust respirator when grinding or machining coating or coated items.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity** No ecological data are available for this material.  
**Persistence / Degradability** Not available  
**Mobility** Insoluble in water at 20°C.  
**Environ. Protection** Prevent this material entering waterways, drains and sewers.

### 13. DISPOSAL CONSIDERATIONS

**Disposal Considerations** Dispose of waste according to applicable local and national regulations.

### 14. TRANSPORT INFORMATION

**Transport Information** Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. ( 7th edition)

### 15. REGULATORY INFORMATION

**Regulatory Information** Not classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.  
 Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).  
**Poisons Schedule** Not Scheduled  
**Other Information** The regulations pertaining to radiological protection vary from country to country. It is the responsibility of the buyer to ensure that those regulations are met in accordance with his/her country's laws. Some of the regulating bodies for Australia are:  
 Federal Department of the Arts, Sports, Environment, Tourism and Territories  
 State Environmental Protection Authorities  
 State Departments of Mines  
 State Departments of Safety and Health

### 16. OTHER INFORMATION

**Date of preparation or last revision of MSDS** MSDS Prepared: September 2010  
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