



SAFETY DATA SHEET

CRUZOR PREMIUM ZIRCON SAND

Infosafe No.: GEN0Y
ISSUED Date : 29/07/2016
ISSUED by: SIBELCO AUSTRALIA LIMITED

1. IDENTIFICATION

GHS Product Identifier

CRUZOR PREMIUM ZIRCON SAND

Company Name

SIBELCO AUSTRALIA LIMITED

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Recommended use of the chemical and restrictions on use

Raw material for steel making refractories

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Signal Word (s)

DANGER

Hazard Statement (s)

May cause cancer by inhalation. Causes damage to organs through prolonged or repeated exposure by inhalation.

Pictogram (s)

Health hazard

**Precautionary statement – Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash contaminated skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response

Get medical advice/attention if you feel unwell. IF exposed or concerned: Get medical advice/attention.

Precautionary statement – Storage

Store locked up.

Precautionary statement – Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Information

HMIS rating: Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Name	CAS	Proportion
Zirconium Oxide	1314- 23- 4	> 60- <100 %
Quartz [Silica Crystalline]	14808- 60- 7	30- <60 %
Hafnium	7440- 58- 6	1- <2 %
Aluminium	7429- 90- 5	0. 1- <1 %
Titanium Dioxide	13463- 67- 7	0. 1- <1 %
Yttrium	7440- 65- 5	0. 1- <1 %
Ingredients determined not to be hazardous		Balance

Other Information

Contains less than 0.1 % respirable crystalline silica.

4. FIRST-AID MEASURES**Inhalation**

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

Skin

Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities

Eyewash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Indication of immediate medical attention and special treatment needed if necessary

No further relevant information available.

Most important symptoms/effects, acute and delayed

No further relevant information available.

Other Information

For advice in an emergency, contact a Poisons Information Centre or a doctor at once.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use appropriate fire extinguisher for surrounding environment.

Unsuitable Extinguishing Media

Not available

Hazards from Combustion Products

Non combustible material.

Specific Hazards Arising From The Chemical

This product is non combustible. However heating can cause expansion or decomposition leading to violent rupture of containers.

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location. Water spray may be used to cool down heat-exposed containers.

Other Information

NFPA rating: Not available

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. Wash surfaces well with soap and water. Seal all wastes in labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid inhalation of dust, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Maintain high standards of personal hygiene i.e. washing hands prior to eating, drinking, smoking or using toilet facilities.

Avoid exposure. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

Substance	Regulations	Exposure Duration	Exposure Limit	Units	Notes
Zirconium Oxide		TWA	5	mg/m ³	Zirconium compounds (as Zr)
Zirconium Oxide		STEL	10	mg/m ³	Zirconium compounds (as Zr)
Quartz [Silica Crystalline]		TWA	0.1	mg/m ³	
Hafnium		TWA	0.5	mg/m ³	

Yttrium		TWA	1	mg/m3	
Titanium Dioxide		TWA	10	mg/m3	Inspirable
Aluminium		TWA	10	mg/m3	Metal dust

Biological Limit Values

No biological limits allocated.

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing solid/dust away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of particulates below the exposure standards, suitable respiratory protection must be worn.

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. Refer to relevant regulations for further information concerning respiratory protective requirements.

Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.

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. Occupational protective gloves should conform to relevant regulations.

Body Protection

Suitable protective work wear, e.g. cotton overalls or overalls of anti-static, flame retardant material, buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Other Information

No exposure standards have been established for the mixture.

However, the recommended exposure standards for Particles (Insoluble or Poorly soluble) not otherwise specified, Inhalable Particles is: 10mg/m³

However, the recommended exposure standards for Particles (Insoluble or Poorly soluble) not otherwise specified, Respirable Particles is: 3mg/m³

American Conference of Industrial Hygienists (ACGIH)

However, the recommended exposure standards for Inert or Nuisance Dust, Respirable Fraction is: 5mg/m³

However, the recommended exposure standards for Inert or Nuisance Dust, Total Dust is: 15mg/m³

OSHA Table Z-3 (29 CFR 1910.1000)

Quartz [Silica Crystalline] , respirable: (250/(%SiO₂+5)) mppcf, 10mg/m³/(%SiO₂+2)

Crystalline silica (Quartz) , total(dust): 30mg/m³/(%SiO₂+2)

OSHA Table Z-3 (29 CFR 1910.1000)

As with all chemicals, exposure should be kept to the lowest possible levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Solid

Appearance

Brownish sand

Colour

Brownish sand

Odour

Odourless

Decomposition Temperature

Not available

Melting Point

2200°C
(3992°F)

Boiling Point

Not available

Solubility in Water

Insoluble (20°C)
(68°F)

Solubility in Organic Solvents

Not available

Specific Gravity

4.6-4.7

pH

7.1-8.8

Vapour Pressure

Not available

Vapour Density (Air=1)

Not available

Evaporation Rate

Not available

Odour Threshold

Not available

Viscosity

Refer to Section 9: Kinematic Viscosity and Dynamic Viscosity

Volatile Component

Not available

Partition Coefficient: n-octanol/water

Not available

Density

Bulk density : 2600-2900 kg/m³

Flash Point

Not applicable

Flammability

Not combustible

Auto-Ignition Temperature

Not applicable

Explosion Limit - Upper

Not applicable

Explosion Limit - Lower

Not applicable

Explosion Properties

Not applicable

Oxidising Properties

Not available

Kinematic Viscosity

Not available

Dynamic Viscosity

Not available

10. STABILITY AND REACTIVITY

Reactivity

Refer to Section 10: Possibility of hazardous reactions

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

Moisture, extremes of temperature and direct sunlight.

Incompatible materials

Not available

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes

Possibility of hazardous reactions

Not available

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this material.

Ingestion

Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation

Inhalation of dusts may irritate the respiratory system. Repeated exposure to respirable crystalline silica dust may lead to silicosis, or other serious delayed lung injury. The onset of silicosis is usually slow and lung damage may occur even when no symptoms or signs of ill-health have occurred. Silicosis can develop to a more serious degree even after exposure has ceased, and may also lead to other diseases including heart disease and scleroderma. Exposure by inhalation may aggravate pre-existing upper respiratory and lung disorders such as bronchitis, emphysema and asthma.

Skin

May be irritating to skin. The symptoms may include redness, itching and swelling.

Eye

May be irritating to eyes. The symptoms may include redness, itching and tearing.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

May cause cancer by inhalation. Respirable crystalline silica is classified by International Agency for Research on Cancer (IARC) as carcinogenic to humans by inhalation (Group 1).

Titanium dioxide is listed as a Group 2B: Possibly carcinogenic to humans according to International Agency for Research on Cancer (IARC).

Crystalline silica (Quartz) is listed as A2 – Suspected Human Carcinogen according to American Conference of Industrial Hygienists (ACGIH)

Aluminium metal and insoluble compounds is listed as A4 – Not Classifiable as a Human Carcinogen according to American Conference of Industrial Hygienists (ACGIH)

Zirconium and compounds is listed as A4 – Not Classifiable as a Human Carcinogen according to American Conference of Industrial Hygienists (ACGIH)

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Causes damage to organs through prolonged exposure if inhaled.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

RADIATION: In common with many naturally occurring mineral products, CRL Zircon Sand 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 by inhaled dust. Low level gamma radiation from bulk or bagged stockpiles of Zircon Sand may present a lesser, external hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No ecological data available for this material.

Persistence and degradability

Not available

Mobility

Insoluble in water (20°C)

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

14. TRANSPORT INFORMATION

Transport Information

Not classified as Dangerous Goods by the criteria of the Department of Transport (DOT)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

U.N. Number

None Allocated

Transport hazard class(es)

None Allocated

IMDG Marine pollutant

No

Transport in Bulk

Product does not meet the conditions to be considered 'harmful to the marine environment' under the revised MARPOL annex V.

Special Precautions for User

Not available

15. REGULATORY INFORMATION

California Proposition 65

Listed

SARA (313) Chemicals

Not Listed

Reportable Quantity

Not applicable

16. OTHER INFORMATION

Date of preparation or last revision of SDS

SDS Reviewed: July 2016, Supersedes: May 2015

References

ANSI Z400.1/Z129.1-2010. American National Standard for Hazardous Workplace Chemicals – Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

OSHA Table Z-1 Limits for Air Contaminants (June 30, 1993)(29 CFR 1910.1000)(1971 Permissible Exposure Limits (PELs))

OSHA Table Z-3 (29 CFR 1910.1000)

Other InformationNot available

END OF SDS

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