

# Material Safety Data Sheet

## Zirconium Carbonate

### Section 1: Chemical Product and Company Identification

**Product Name:** Zirconium Carbonate  
**Chemical Name:** Zirconium Carbonate  
**CAS No.:** 12671-00-0  
**EINECS No.:**  
**Customs Tariff No. :** 28369990  
**Synonym Name:** Zirconium basic carbonate  
**Chemical Formula:**  
ZrOCO<sub>3</sub>.nH<sub>2</sub>O

#### Contact Information:

**Chemtrade International**  
Rm. 201, Unit 3, Building 8, Shijia Garden, No. 93,  
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### Section 2: Composition and Information on Ingredients

#### Composition:

Name	CAS No.	EINECS No.	by weight%
Zirconium Carbonate	12671-00-0		100

### Section 3: Hazards Identification

NOT Hazardous according to criteria of NOHSC/ASCC.

**Risk Phrases** No data available.

**Safety Phrases** No data available.

**ERMA New Zealand Approval Code** No data available.

**HSNO Hazard Classification** No data available.

### Section 4: First Aid Measures

Description of necessary measures according to routes of exposure.

**Swallowed** Rinse mouth with water. Give water to drink. Do NOT induce vomiting. Seek medical attention if large amounts ingested.

**Eye** Flush with copious amounts of water holding eyelids open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.

**Skin** Remove contaminated clothing and wash affected area with soap and water. If irritation persists, seek medical attention.

**Inhaled** Remove from exposure to fresh air. If rapid recovery does not occur, seek medical attention.

#### Advice to Doctor

Treat symptomatically based on individual reactions of patient and judgement of doctor.

#### Aggravated medical conditions caused by exposure

No information available on medical conditions aggravated by exposure to this product. Prolonged or repeated skin contact may cause irritation.

### Section 5: Fire and Explosion Data

### **Extinguishing Media**

In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions.

### **Hazards from Combustion Products**

No data available.

### **Special Protective Precautions and Equipment for Fire Fighters**

Fire fighters should wear a self contained breathing apparatus and full protective clothing along with protective equipment.

### **Flammability Conditions**

Product is non-flammable.

### **Hazchem Code**

N/A

## **Section 6: Accidental Release Measures**

### **Emergency Procedures**

Personnel involved in the clean up should wear full protective clothing. Avoid raising dust. Ensure adequate ventilation. Do not allow large quantities of this product to enter drains, sewers or waterways. If large quantities of this product enter waterways, contact the Environmental Protection Authority, or your local Waste Management Authority.

### **Methods and Materials for Containment and Clean Up**

Sweep or vacuum spilled product avoiding dust generation, or dampen spilled product with water to suppress airborne dusts. Caution should be taken when using water to suppress dust as floors may become slippery. Transfer to a suitable, labelled container for disposal.

## **Section 7: Handling and Storage**

### **Precautions for Safe Handling**

Ensure an eye bath and safety shower are available and ready for use. Ensure a high level of personal hygiene is maintained when using this product. Always wash hands before eating, drinking, smoking or using the toilet.

### **Conditions for Safe Storage (Including Any Incompatibles)**

Store in a cool, dry, well-ventilated area. Product will not deteriorate with prolonged storage. Store in suitable, labelled containers. Keep containers tightly sealed when not in use.

### **Container Type**

No information available on container types for this product.

## **Section 8: Exposure Controls/Personal Protection**

### **National Exposure Standards**

No exposure standard has been established for this product by the Australian National Occupational Health and Safety Commission (NOHSC). However, the exposure standard for dust not otherwise specified is 10mg/m<sup>3</sup> (for inspirable dust) and 3mg/m<sup>3</sup> (for respirable dust).

### **Biological Limit Values**

No information available on biological limit values for this product.

### **Engineering Controls**

Natural ventilation should be sufficient, however where dust is generated the use of a local exhaust ventilation system (which draws dust away from workers breathing zone) is recommended.

### **Personal Protection**

**RESPIRATOR:** If engineering controls are not effective in controlling airborne exposure, then an approved P1 Particulate respirator should be used. **EYES:** The use of safety glasses with side shields is recommended. **HANDS:**

The use of Nitrile or Neoprene gloves is recommended. CLOTHING: Standard work uniform/clothing.

### Section 9: Physical and Chemical Properties

**Appearance** White to faintly yellow powder with slight acidic odour.  
**Formula** ZrOCO<sub>3</sub>  
**Odour** acidic odour.  
**Vapour Pressure** Not applicable.  
**Vapour Density** Not applicable.  
**Boiling Point** 5000°C deg C  
**Melting Point** 2700°C deg C  
**Solubility in Water** Insoluble.  
**Specific Gravity** 0.7 (Water = 1)  
**Flash Point** Not applicable.  
**pH** 3-6 ( 10% Solution)  
**Lower Explosion Limit** Not applicable.  
**Upper Explosion Limit** Not applicable.  
**Ignition Temperature** Not applicable.  
**Specific Heat Value** Not applicable.  
**Particle Size** Not applicable.  
**Flame Propagation/Burning Rate of Solid Materials** Not applicable.  
**Properties of Materials That May Initiate or Contribute to Fire Intensity** Not applicable.  
**Potential for Dust Explosion** Not applicable.  
**Reactions that Release Flammable Gases** Not applicable.  
**Fast of Intensely Burning Characteristics** Not applicable.  
**Non-flammables That Could Contribute Unusual Hazards to a Fire** Not applicable.  
**Release of Invisible Flammable Vapours and Gases** No data available.  
**Decomposition Temperature** No data available.  
**Additional Information** Solubility in organic solvents: <0.01%

### Section 10: Stability and Reactivity Data

**Chemical Stability** Stable under normal conditions of use and storage.  
**Conditions to Avoid** Avoid direct sunlight and extreme heat.  
**Incompatible Materials** Avoid strong oxidizing agents and ignition sources. Reacts with mineral and some organic acids liberating carbon dioxide.  
**Hazardous Decomposition Products** Upon decomposition, product will emit carbon dioxide and ZrO<sub>2</sub>.  
**Hazardous Reactions** Hazardous polymerization will not occur.

### Section 11: Toxicological Information

**Toxicity Data**  
Oral LD<sub>50</sub> Rat: >10,000mg/Kg.  
**Health Effects – Acute**  
**Swallowed**  
Zirconium has a low order of acute toxicity. Ingestion may result in irritation of the gastro-intestinal tract.  
**Eye**  
May cause lachrymation and redness.  
**Skin**  
May cause mild irritation in susceptible individuals.  
**Inhaled**  
May cause mechanical irritation to the upper respiratory tract.

### Section 12: Ecological Information

**Ecotoxicity**

No data available.

**Persistence and Degardability**

No information available on Persistence/Degradability for this product.

**Mobility**

No information available on mobility for this product.

**Environmental Fate (Exposure)**

No information available on environmental fate for this product.

**Bioaccumulative Potential**

No information available on bioaccumulation potential for this product.

**Section 13: Disposal Considerations****Disposal**

Dispose of in accordance with all local, state and federal regulations.

**Special Precautions for Land Fill or Incineration**

No information available on landfill/incineration methods for this product.

**Section 14: Transport Information****UN Number**

Not applicable.

**Shipping Name**

ZIRCONIUM CARBONATE

**Dangerous Goods Class**

Not applicable.

**Subsidiary Risk**

Not applicable.

**Pack Group**

Not applicable.

**Precaution for User**

No data available.

**Hazchem Code**

N/A

**Section 15: Other Regulatory Information**

No data available.

**Poisons Schedule**

N/A

**EPG**

N/A

**AICS Name**

ZIRCONIUM, [.MU.-(CARBONATO(2-)-O:O')]DIHYDROXYDIOXODI-

**NZ Toxic Substance**

N

**Section 16: Other Information**

**MSDS Creation Date:** 9/02/2001

**Revision #5 Date:** 10/03/2006

The information above is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning

composition, properties or performance. Users should make their own investigations to determine the suitability of the information for their particular purposes.