

# Zinc Carbonate

sc-296859



The Power is Question

## Material Safety Data Sheet

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

Zinc Carbonate

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

"As CAS RN 3486-35-9",  $ZnCO_3$ , "carbonic acid zinc salt", Zincspar, Smithsonite, "As CAS RN 12539-71-8",  $ZnCO_3 \cdot 2ZnO \cdot 3H_2O$ ,  $CO_5Zn_3 \cdot 3H_2O$ , "zinc carbonate basic", "zinc carbonate hydroxide", "zinc subcarbonate", Hydrozincite

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability:	0	
Toxicity:	0	
Body Contact:	2	
Reactivity:	0	
Chronic:	0	

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4

### CANADIAN WHMIS SYMBOLS

None

### EMERGENCY OVERVIEW

### RISK

### POTENTIAL HEALTH EFFECTS

### ACUTE HEALTH EFFECTS

## SWALLOWED

- The material has NOT been classified as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
- Soluble zinc salts produces irritation and corrosion of the alimentary tract with pain, and vomiting. Death can occur due to insufficiency of food intake due to severe narrowing of the esophagus and pylorus.

## EYE

- Although the material is not thought to be an irritant, direct contact with the eye may cause transient discomfort characterized by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.

## SKIN

- The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

## INHALED

- The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
- There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
- Not normally a hazard due to non-volatile nature of product.

## CHRONIC HEALTH EFFECTS

- Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified using animal models); nevertheless exposure by all routes should be minimized as a matter of course. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Welding or flame cutting of metals with zinc or zinc dust coatings may result in inhalation of zinc oxide fume; high concentrations of zinc oxide fume may result in "metal fume fever"; also known as "brass chills", an industrial disease of short duration. [I.L.O] Symptoms include malaise, fever, weakness, nausea and may appear quickly if operations occur in enclosed or poorly ventilated areas.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
zinc carbonate	3486-35-9	>99

## Section 4 - FIRST AID MEASURES

### SWALLOWED

· Immediately give a glass of water. · First aid is not generally required. If in doubt, contact a Poisons Information Center or a doctor.

### EYE

- If this product comes in contact with eyes: · Wash out immediately with water. · If irritation continues, seek medical attention.

### SKIN

- If skin or hair contact occurs: · Flush skin and hair with running water (and soap if available). · Seek medical attention in event of irritation.

### INHALED

· If dust is inhaled, remove from contaminated area. · Encourage patient to blow nose to ensure clear passage of breathing. · If irritation or discomfort persists seek medical attention.

### NOTES TO PHYSICIAN

- Treat symptomatically.
- Absorption of zinc compounds occurs in the small intestine.
- The metal is heavily protein bound.

## Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Not applicable.
Upper Explosive Limit (%):	Not applicable
Specific Gravity (water=1):	4.4
Lower Explosive Limit (%):	Not applicable

### EXTINGUISHING MEDIA

· There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

### FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.

- Wear breathing apparatus plus protective gloves for fire only.

**GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS**

- Non combustible.
- Not considered to be a significant fire risk, however containers may burn.

Decomposition may produce toxic fumes of: metal oxides.

May emit corrosive fumes.

**FIRE INCOMPATIBILITY**

- None known.

**PERSONAL PROTECTION**

Glasses:

Chemical goggles.

Gloves:

Respirator:

Particulate

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**MINOR SPILLS**

- Clean up all spills immediately.
- Avoid breathing dust and contact with skin and eyes.

**MAJOR SPILLS**

- Moderate hazard.
- CAUTION: Advise personnel in area.
- Alert Emergency Responders and tell them location and nature of hazard.

**Section 7 - HANDLING AND STORAGE**

**PROCEDURE FOR HANDLING**

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

**RECOMMENDED STORAGE METHODS**

- Lined metal can, Lined metal pail/drum
- Plastic pail.

**STORAGE REQUIREMENTS**

- Store in original containers.
- Keep containers securely sealed.

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

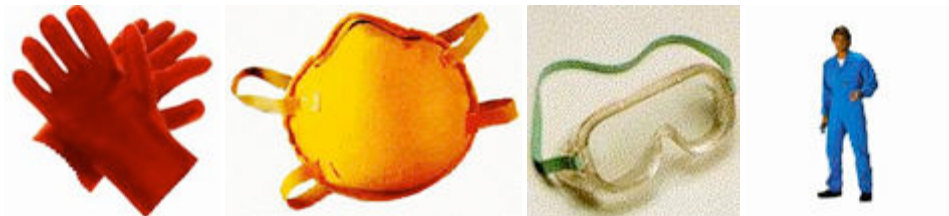
**EXPOSURE CONTROLS**

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
Canada - British Columbia Occupational Exposure Limits	zinc carbonate (Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC))		10 (N)						
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	zinc carbonate (Particulates not otherwise regulated (PNOR)(f)-Respirable fraction)		5						
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	zinc carbonate (Particulates not otherwise regulated Respirable fraction)		5						

US - California Permissible Exposure Limits for Chemical Contaminants	zinc carbonate (Particulates not otherwise regulated Respirable fraction)	-	5	(n)
US - Oregon Permissible Exposure Limits (Z-1)	zinc carbonate (Particulates not otherwise regulated (PNOR) (f) Total Dust)	-	10	<b>Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means “particles not otherwise regulated.”</b>
US - Michigan Exposure Limits for Air Contaminants	zinc carbonate (Particulates not otherwise regulated, Respirable dust)	-	5	
Canada - Prince Edward Island Occupational Exposure Limits	zinc carbonate (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)	-	10	See Appendix B current TLV/BEI Book
US - Oregon Permissible Exposure Limits (Z-1)	zinc carbonate (Particulates not otherwise regulated (PNOR) (f) Respirable Fraction)	-	5	<b>Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means “particles not otherwise regulated.”</b>

ENDOELTABLE

**PERSONAL PROTECTION**



**RESPIRATOR**

Particulate  
Consult your EHS staff for recommendations

**EYE**

- Safety glasses with side shields.
- Chemical goggles.

**HANDS/FEET**

- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
  - frequency and duration of contact,
  - chemical resistance of glove material,
  - glove thickness and
  - dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluoroelastomer
- polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

#### **OTHER**

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

#### **ENGINEERING CONTROLS**

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

## **Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

### **PHYSICAL PROPERTIES**

Solid.

Does not mix with water.

Sinks in water.

State	Divided solid	Molecular Weight	125.38
Melting Range (°F)	Not available	Viscosity	Not Applicable
Boiling Range (°F)	Not applicable.	Solubility in water (g/L)	Insoluble
Flash Point (°F)	Not Applicable	pH (1% solution)	Not applicable.
Decomposition Temp (°F)	Not available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not applicable	Vapour Pressure (mmHG)	Not applicable.
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	4.4
Lower Explosive Limit (%)	Not applicable	Relative Vapor Density (air=1)	Not applicable.
Volatile Component (%vol)	Not Applicable	Evaporation Rate	Not applicable

### **APPEARANCE**

White powder. Soluble in acids with evolution of carbon dioxide gas. Solubility in water < 0.1%. Decomposes on heating to 300C Also available as Basic Zinc Carbonate.

## **Section 10 - CHEMICAL STABILITY**

### **CONDITIONS CONTRIBUTING TO INSTABILITY**

- Product is considered stable and hazardous polymerization will not occur.

### **STORAGE INCOMPATIBILITY**

- **WARNING:** Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive. For example transition metal complexes of alkyl hydroperoxides may decompose explosively.
- The pi-complexes formed between chromium(0), vanadium(0) and other transition metals (haloarene-metal complexes) and mono- or poly-fluorobenzene show extreme sensitivity to heat and are explosive.
- Avoid reaction with borohydrides or cyanoborohydrides.
- Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
- These trifluorides are hypergolic oxidisers. They ignite on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.
- The state of subdivision may affect the results.

For incompatible materials - refer to Section 7 - Handling and Storage.

## **Section 11 - TOXICOLOGICAL INFORMATION**

zinc carbonate

## TOXICITY AND IRRITATION

### ZINC CARBONATE:

- No significant acute toxicological data identified in literature search.

## Section 12 - ECOLOGICAL INFORMATION

No data

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

‡ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.

## Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

### zinc carbonate (CAS: 3486-35-9,12539-71-8) is found on the following regulatory lists;

"Canada Domestic Substances List (DSL)", "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)", "US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List", "US - Massachusetts Oil & Hazardous Material List", "US - New Jersey Right to Know Hazardous Substances", "US - Pennsylvania - Hazardous Substance List", "US CWA (Clean Water Act) - List of Hazardous Substances", "US CWA (Clean Water Act) - Reportable Quantities of Designated Hazardous Substances", "US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides", "US DOE Temporary Emergency Exposure Limits (TEELs)", "US Food Additive Database", "US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act", "US Toxic Substances Control Act (TSCA) - Inventory"

## Section 16 - OTHER INFORMATION

### Ingredients with multiple CAS Nos

Ingredient Name CAS zinc carbonate 3486-35-9, 12539-71-8

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- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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