ZINC CARBONATE

SECTION 1. IDENTIFICATION

Product Identifier: ZINC CARBONATE
Other Means of Identification: Inorganic zinc salt
Product Family: H2S Scavenger
Recommended Use: Drilling Fluid Additive.
Supplier Identifier: Bri-Chem Supply Ltd., Bay 4, 5510 - 3rd Street SE, Calgary, Alberta, T2H 1J9, Bri-Chem Supply, 403-252-5904, www.brichemsupply.com
Emergency Phone No.: ChemTrec, (800) 424-9300, 24/7

SECTION 2. HAZARD IDENTIFICATION

Classification: Skin irritation - Category 3; Eye irritation - Category 2B

Label Elements:
- Signal Word: WARNING!
- Hazard Statement(s):
  - Causes mild skin irritation.
  - Causes eye irritation.
- Precautionary Statement(s):
  - Prevention: Wash hands and skin thoroughly after handling.
  - Response:
    - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
    - If skin irritation occurs: Get medical advice or attention.
    - If eye irritation persists: Get medical advice or attention.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>%</th>
<th>Other Identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc carbonate, basic</td>
<td>3486-35-9</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation
Move to fresh air. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), call a Poison Centre or doctor.

Skin Contact
Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. If irritation develops or persists, seek medical attention. Launder contaminated clothing before re-use.
Eye Contact
Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If adverse symptoms persist, seek medical attention.

Ingestion
If conscious give 2 to 4 glasses of water to drink but DO NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing victim. Get prompt medical attention.

First-aid Comments
If exposed or concerned, get medical advice or attention.

Immediate Medical Attention and Special Treatment

   Special Instructions
   Advise of zinc carbonate exposure.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

   Suitable Extinguishing Media
   Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Specific Hazards Arising from the Product
Can ignite if strongly heated. May burn with surrounding fire.
Decomposes at melting point (300°C) to oxides of zinc and carbon.

Special Protective Equipment and Precautions for Fire-fighters
Use water spray from a safe distance to cool fire-exposed containers.
Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures
Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions
Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up
Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for re-use or disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid ingestion. Avoid skin and eye contact. Practice reasonable caution and personal cleanliness.
It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

Conditions for Safe Storage
Store in a cool, dry, well-ventilated place. Keep container tightly closed and away from incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate Engineering Controls
Provide mechanical ventilation to prevent dust concentrations and to reduce potential exposure.

Individual Protection Measures
   Eye/Face Protection
   Wear chemical safety goggles.
   Skin Protection
   Wear chemical protective clothing e.g. gloves, aprons, boots.
   Respiratory Protection
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White powder. Particle Size: Not available</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>300 ºC (melting); Not applicable (freezing)</td>
</tr>
<tr>
<td>Initial Boiling Point/Range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper/Lower Flammability or Explosive Limit</td>
<td>Not available (upper); Not available (lower)</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Density (air = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density (water = 1)</td>
<td>4.398</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water; Moderately soluble in acids (e.g. acetic acid)</td>
</tr>
<tr>
<td>Partition Coefficient, n-Octanol/Water (Log Kow)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>300 ºC</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available (kinematic)</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>3Zn(OH)2•2ZnCO3</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>549</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Surface Tension</td>
<td>Not available</td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Pressure at 50 deg C</td>
<td>Not available</td>
</tr>
<tr>
<td>Saturated Vapour Concentration</td>
<td>Not available</td>
</tr>
</tbody>
</table>

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

None known.

Incompatible Materials

Acids react giving off heat.

Hazardous Decomposition Products

Decomposition creates oxides of zinc, which causes "brass chills" or "brass founder auge"; may cause damage to mucous membranes.
SECTION 11. TOXICOLOGICAL INFORMATION

This product may cause a slight general irritancy and mild effects of acute/chronic exposure.

**Skin Corrosion/Irritation**
Prolonged exposure may cause irritation.

**Serious Eye Damage/Irritation**
May cause some irritation and/or redness.

**STOT (Specific Target Organ Toxicity) - Single Exposure**
- **Inhalation**
  May cause some respiratory irritation.
- **Ingestion**
  May cause nausea and vomiting. Large doses are self-purging.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**
No information available.

**Respiratory and/or Skin Sensitization**
Not a known sensitizer.

**Carcinogenicity**
Not considered a carcinogen by IARC, NTP and OSHA.

**Reproductive Toxicity**
- **Development of Offspring**
  Not a known teratogen.
- **Sexual Function and Fertility**
  (Zinc carbonate) animal studies show effects on sexual function and/or fertility. Oral (mice): TDLo 2,800 mg/kg abnormalities (skin and skin appendages).

**Germ Cell Mutagenicity**
Not a known mutagen.

SECTION 12. ECOLOGICAL INFORMATION

No ecotoxicity or environmental fate data available. It is good practice to prevent releases into the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**
Dispose in accordance with federal, provincial and local government regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government guidelines.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

**Special Precautions**
Please note: No special requirements.

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable

SECTION 15. REGULATORY INFORMATION

**Safety, Health and Environmental Regulations**

**Canada**

**WHMIS 1988 Classification**
Not a WHMIS controlled product.

**Additional Canadian Regulatory Lists**
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16. OTHER INFORMATION

SDS Prepared By: Bri-Chem Supply Ltd
Phone No.: (403) 252-5904
Date of Preparation: April 04, 2016

Disclaimer: This Health and Safety information is correct to the best of our knowledge and belief at the date of its publication, but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as guidance for safe handling, storage, and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment. Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet.