Safety Data Sheet
29 CFR 1910.1200

Section 1: Company and Product Identification

Product Name: Silver (I) Carbonate

Product Code: 9003

Company: Colonial Metals, Inc.
Building 20
505 Blue Ball Road
Elkton, MD 21921 United States

Company Contact: EHS Director
Telephone Number: 410-398-7200
FAX Number: 410-398-2918
E-Mail: info@colonialmetals.com
Web Site: www.colonialmetals.com

Emergency Response: Supplier Emergency Contacts & Phone Number
Chemtrec: 800-424-9300
World Wide - Call COLLECT to U.S: 703-527-3887

Section 2: Hazards Identification

Hazard Pictograms:

![Hazard Pictograms]

Signal Word: Warning

Hazard Category:
Acute tox, oral Cat 5
Skin corrosion/irritation Cat 2
Serious eye damage/eye irritation Cat 3
Acute tox, inh. Cat 5

Hazard Statements:
H303: May be harmful if swallowed
H315: Causes skin irritation
H320: Causes eye irritation
H333: May be harmful if inhaled

Precautionary Statements:
P250: Do not breathe dust/fume/gas/mist/vapors/spray
P264: Wash thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area
P272: Contaminated work clothing should not be allowed out of the workplace
P280: Wear protective gloves/protective clothing/eye protection/face protection
P284: Wear respiratory protection

Hazards not otherwise classified:
Chronic/Carcinogenicity Effects:
Long term exposure to silver and silver salts can lead to the condition known as argyria—a general gray pigmentation of the skin and mucous membranes.

Conditions Aggravated By Exposure:
May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). May be irritating to skin, eyes and respiratory tract.

Conditions Aggravated By Overexposure:
To the best of our knowledge, the chemical, the physical, and toxicological properties of this compound have not been thoroughly investigated.
Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous substance (name)</th>
<th>Hazard Category</th>
<th>CAS#</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver (I) Carbonate</td>
<td>Irritant</td>
<td>534-16-7</td>
<td>99.9</td>
</tr>
</tbody>
</table>

Product Name: Silver (I) Carbonate  
Chemical Name: Carbonic Acid, Silver (I) Salt/Silver Carbonate  
Chemical Family: Group:1B Metal Salt  
Chemical Formula: Ag2CO3

Section 4: First Aid Measures

General Info: Consult a Physician. Show this safety data sheet to the doctor in attendance.

Notable Exposure: Irritation to skin, eyes and areas of contact.

Symptoms:
- If ingested: Rinse mouth. Seek immediate medical attention immediately. Clear the airway and administer artificial respiration if not breathing. If swallowed, do not induce vomiting unless directed to do so by medical personnel.
- If inhaled: Remove the victim from the contaminated area while protecting yourself from exposure by wearing an appropriate respirator. Put a similar respirator on the victim if possible. Get medical attention immediately.
- Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Get immediate medical attention.
- Skin contact: Flush area for 15 minutes with water and wash with soap and water. If discomfort persists, contact a physician immediately. Remove contaminated clothing and shoes and wash before reuse.

Section 5: Fire Fighting Measures

General Info: Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Do not direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire.

Extinguishing Method / Equipment:
- Use water spray, carbon dioxide, dry chemical powder, or appropriate foam.

Decomposition Info: Can decompose to emit toxic fumes under fire conditions.

Section 6: Accidental Release Measures

Personal Precautions: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment: respiratory protective equipment and clothing during clean-up. Avoid breathing dust. Ventilate area if easy to do so. Contact local authorities if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Containment: Large Spills: Contain actively spilling material if safe and easy to do so. Do not let product enter drains. Sweep up and placed in a proper vessel for recovery or disposal. Avoid raising dust. Ventilate Procedures: and wash spill site after cleanup is complete.

Small Spills: Sweep or soak up and place in sealed container. Taking care to avoid dusting.

Cleanup Procedures: Contain spillage and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations.

Section 7: Handling and Storage

Safe Handling: Do not handle until all safety precautions have been read and understood. Keep containers tightly closed. Ensure adequate ventilation. Avoid creating and breathing dust/vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment and wash thoroughly after handling. Keep away from ignition sources.

Precautions: Store in cool, dry area in a tightly closed product container away from sources of ignition or flame.

Recommendations: Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Incompatibilities: Light Sensitive, Strong oxidizing agents
Section 8: Exposure Control / Personal Protection

General / Ventilation: Local Exhaust. Required in handling area
Engineering Mechanical: Desirable to insure concentration of material below TLV/TWA levels
Controls: Other: Closed Ventilation system - Dust (Laboratory Fume Hood)

Work Clothing: Protective work clothing which covers skin and prevents exposures.
Eye/face protection: Wear safety glasses with side shields or goggles or face shield.
Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: NIOSH approved chemical cartridge respirator for particulates and dust or self-contained breathing apparatus with full face shield.
Additional Information: Observe good chemical hygiene practices. Do not smoke or eat while using this product. Wash hands after using the product.

Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Solid</td>
</tr>
<tr>
<td>Melting Point</td>
<td>428 °F 220 °C (decomposes)</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Color</td>
<td>Light Yellow to Greenish</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>1550 °C</td>
</tr>
<tr>
<td>pH</td>
<td>1-2</td>
</tr>
<tr>
<td>Molecular Wt.</td>
<td>275.77</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Slightly Soluble in cold water</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>6.08</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Part. Coeff (n-octanol/water)</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper Flam Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower Flam Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper Flam Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower Flam Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>1 mmHg</td>
</tr>
<tr>
<td>Density</td>
<td>1 mmHg</td>
</tr>
</tbody>
</table>

Section 10: Stability and Reactivity

General: This product is stable and non-reactive under normal conditions of use. Product is not subject to hazardous polymerization. Avoid open flame and ignition sources.
Stability: Stable
Conditions to Avoid: Elevated temperatures, exposure to light, and moisture
Incompatible materials: Strong oxidizing agents
Decomposition products: Carbon monoxide, carbon dioxide, silver/silver oxides
Section 11: Toxicological Information

General Information: To the best of our knowledge the chemical, physical, and toxicological effects of this compound have not been thoroughly investigated.

Toxicological Acute Studies
Information Oral (product): Rat
3731 mg/kg
LD50
Remarks: Lungs, Thorax, or Respiration: Cyanosis.

Intraperitoneal
Rat
156 MG/KG
LD50

Oral
Mouse
2168 mg/kg
LD50
Gastrointestinal: Hypermotility, diarrhea.

Intraperitoneal
Mouse
39 MG/KG
LD50

Oral
Guinea pig
835 mg/kg
LD50
Remarks: Lungs, Thorax, or Respiration: Cyanosis.
Behavioral: Tetany.
Gastrointestinal: Hypermotility, diarrhea.

Likely Routes of Exposure:
Eye Contact
Skin Contact
Inhalation
Ingestion - possible, but considered unlikely.

Section 12: Ecological Information

General information: No data available
Aquatic toxicity: No specific data available.
Degradation / Mobility info: No specific data available.
Bioaccumulative potential: No specific data available.

Section 13: Disposal Information

Product disposal: Place in a sealed container. Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation
NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.

Container disposal: Treat empty containers with extra care. Consult waste contractor.

Other considerations: No further information.
Section 14: Transport Information

DOT: Proper Shipping Name
Environmentally Hazardous Substance, Solid, N.O.S.

Hazard Class
9

DOT Identification Number
3077

DOT Shipping Label
Environmentally Hazardous Substance, Solid, N.O.S.

Packaging Requirements
Group III

IMO/IMDG: No data available

IATA: Same as DOT 49 CFR regulations. Consult IATA before shipping

Comments: None

Section 15: Regulatory Information

TSCA: This product is TSCA listed.

SARA: SARA Section 313 Notification: This product is subject to SARA section 313 reporting requirements- silver compounds

Canadian DSL: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: Yes

European Union Symbol of Danger: Xi

Indication of Danger: Irritant.

Risk Statements: Irritating to eyes, respiratory system and skin.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

Section 16: Other Information

**NFPA Rating**
- Health: 2
- Fire: 0
- Reactivity: 1

**HMIS Rating**
- Health: 2
- Fire: 0
- Reactivity: 1

**Precautionary Label:** Irritant

**Precautionary Label:**

**Disclaimer:** In compliance with the OSHA Hazard communication Standard, 2.9 C.F.R 1910.1200, we are providing you with a Materials Safety Data Sheet (MSDS) for the hazardous material you are purchasing.

It is your responsibility to educate your employees on the safe use of the hazardous material. With this in mind, a copy should be forwarded to the supervisor of the user or to the user themselves, and copy should be retained in your files for future reference.

colonial Metals, Inc. makes no presentation as to the accuracy of the information in the MSDS. The information is believe to be correct; however, you (the customer), should perform your own investigation and independent verification. If you resell the product, you are responsible to forward the information in the MSDS to your customer.

Colonial Metals, Inc.

**SDS Author:** John Kerchner

**Version Date:** 7/30/2015