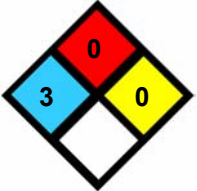




# MATERIAL SAFETY DATA SHEET

## Silver (II) Oxide

<p><b>NFPA</b></p> 	<p><b>HMIS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00b0f0; color: white;">HEALTH</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: #ff0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #ffff00;">REACTIVITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td style="text-align: center;">J</td> </tr> </table>	HEALTH	3	FLAMMABILITY	0	REACTIVITY	0	PERSONAL PROTECTION	J
HEALTH	3								
FLAMMABILITY	0								
REACTIVITY	0								
PERSONAL PROTECTION	J								

### 1. Product And Company Identification

<p><b>Supplier</b> Colonial Metals, Inc. Building 20 505 Blue Ball Road Elkton, MD 21921 United States</p> <p><b>Company Contact:</b> Wayne Sher <b>Telephone Number:</b> 410-398-7200 <b>FAX Number:</b> 410-398-2918 <b>E-Mail:</b> wsher@colonialmetals.com <b>Web Site:</b> colonialmetals.com</p>	<p><b>Manufacturer</b> Colonial Metals, Inc. Building 20 505 Blue Ball Road Elkton, MD 21921 United States</p> <p><b>Company Contact:</b> Wayne Sher <b>Telephone Number:</b> 410-398-7200 <b>FAX Number:</b> 410-398-2918 <b>E-Mail:</b> wsher@colonialmetals.com <b>Web Site:</b> colonialmetals.com</p>
<p><b>Supplier Emergency Contacts &amp; Phone Number</b> Chemtrac: 800-424-9300 World Wide - Call COLLECT to U.S: 703-527-3887</p>	<p><b>Manufacturer Emergency Contacts &amp; Phone Number</b> Chemtrac: 800-424-9300 World Wide - Call COLLECT to U.S: 703-527-3887</p>

**Issue Date:** 04/25/2005

**Product Name:** Silver (II) Oxide  
**Chemical Name:** Silver (II) Oxide, Argentic Oxide Silver Peroxide  
**CAS Number:** 1301-96-8  
**Chemical Family:** Group 1B Metal Salts  
**Chemical Formula:** AgO  
**MSDS Number:** 9009  
**Product Code:** 9009

**Synonyms**  
Silver (II) Oxide, Argentic Oxide Silver Peroxide

### 2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Silver (II) Oxide	1301-96-8	99.9

### EMERGENCY OVERVIEW

To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated. Avoid elevated temperature and exposure to light. Incompatible with hydrogen peroxide, carbon monoxide, strong acids, ammonia, acetylene, and most metals and organic matter. This product is a strong oxidizer. Avoid contact with material that may cause a fire.



# MATERIAL SAFETY DATA SHEET

## Silver (II) Oxide

### Hazards Identification (Pictograms)



### 3. Hazards Identification

#### Primary Routes(s) Of Entry

**Eye:** Likely  
**Inhalation:** Likely  
**Skin:** Likely  
**Ingestion:** Likely

#### Eye Hazards

Causes eye burns. Contact with eyes may cause severe irritation, and possible eye burns.

#### Skin Hazards

Causes skin burns and irritation. Avoid contact with skin; skin may darken (turn gray).

#### Ingestion Hazards

May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. Ingestion of soluble silver salts may cause "argyria" characterized by permanent blue-gray pigmentation of the skin, mucous membranes, and eyes.

#### Inhalation Hazards

Causes respiratory tract irritation.

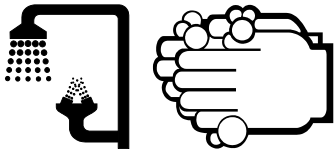
#### Conditions Aggravated By Exposure

May cause irritation of the respiratory system. Maintain housekeeping and personal hygiene to minimize exposure and prevent sensitization.

#### Conditions Aggravated By Overexposure

Prolonged respiratory absorption can lead to grayish blue discoloration of skin, known as argyria or argyrosis. Not known to be health threatening.

### First Aid (Pictograms)



### 4. First Aid Measures

#### Eye

Flush for 15 minutes with plenty of water. If discomfort occurs or persists, contact a physician.

#### Skin

Flush area for 15 minutes with water and wash with soap and water. If discomfort occurs or persists, contact a physician. Remove contaminated clothing and shoes and wash before reuse.

#### Ingestion

If swallowed, do not induce vomiting unless directed...Never give anything by mouth to an unconscious victim. Call a physician or a poison control center



# MATERIAL SAFETY DATA SHEET

## Silver (II) Oxide

### 4. First Aid Measures - Continued

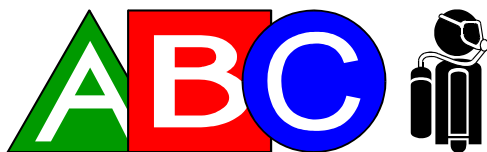
**Ingestion - Continued**

immediately.

**Inhalation**

Remove to fresh air immediately. If discomfort occurs or persists, contact a physician.

**Fire Fighting (Pictograms)**



### 5. Fire Fighting Measures

**Flash Point Method:** NA

**Flammability Class:** NA

**Fire And Explosion Hazards**

Use proper safety equipment. Can decompose to emit oxygen at high temperatures (supports combustion).

**Extinguishing Media**

Use water spray, foam, dry chemical, carbon dioxide or medium for primary source.

**Fire Fighting Instructions**

Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

### 6. Accidental Release Measures

Sweep or soak up and place in sealed container, taking care to avoid dusting. Person protected with full face shield and proper respirator for dust.

**Handling & Storage (Pictograms)**



### 7. Handling And Storage

**Handling And Storage Precautions**

Avoid contact with eyes, prolonged or repeated contact with skin. Avoid breathing dust. Use compatible chemical-resistant gloves. Wash hands thoroughly after handling.

**Handling Precautions**

Avoid creating dust. Avoid contact with skin and clothing. Keep away from heat, sparks, flame, and other sources of ignition...Use only with adequate ventilation. Wash hands before eating, drinking, or smoking.

**Storage Precautions**

Do not store on side. Do not store directly on ground. Keep away from heat, sparks, flame, and other sources of ignition.... Store in a dry place.

**Work/Hygienic Practices**

Use good personal hygiene. Wash thoroughly after handling. Wash thoroughly with soap and water after handling.

**Other Precautions**



# MATERIAL SAFETY DATA SHEET

## Silver (II) Oxide

### 7. Handling And Storage - Continued

#### Work/Hygienic Practices - Continued

0.01 ppm high efficiency particular respirator/supplied air respirator/self-contained breathing apparatus; 0.2 ppm same as above with full face piece; 1 ppm powdered air purifying respirator with high efficiency filter/type C supplied air respirator operated in pressure demand mode. Store in a sealed container, plastic or plastic liner, in a cool, well ventilated, dry area away from oxidizers.

#### Protective Clothing (Pictograms)



### 8. Exposure Controls/Personal Protection

#### Engineering Controls

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

#### Eye/Face Protection

ANSI approved safety glasses/goggles

#### Skin Protection

Rubber/Neoprene (use compatible chemical-resistant gloves).

#### Respiratory Protection

Chemical cartridge respirator for dust/mist/fume/radionuclide or self-contained breathing apparatus with full face shield.

#### Other/General Protection

Lab coat/apron, flame and chemical resistant protective clothing, eye wash, safety shower, and hygiene facilities for washing.

### 9. Physical And Chemical Properties

#### Appearance

Charcoal Gray

#### Odor

Odorless

**Chemical Type:** Mixture

**Physical State:** Solid

**Melting Point:** >100 °C

**Specific Gravity:** 7.143

**Molecular Weight:** 123.87

**Vapor Pressure:** NA

**Vapor Density:** NA

**pH Factor:** NA

**Solubility:** Insoluble

**Evaporation Rate:** NA



# MATERIAL SAFETY DATA SHEET

## Silver (II) Oxide

<p><b>9. Physical And Chemical Properties - Continued</b></p> <p><b><u>Odor - Continued</u></b>          This product will decompose @ 130 degree C.</p>
<p><b>10. Stability And Reactivity</b></p> <p><b>Stability:</b> Stable  <b>Hazardous Polymerization:</b> Will not occur</p> <p><b><u>Conditions To Avoid (Stability)</u></b>          Incompatible materials, combustible Elevated temperature, exposure to light.</p> <p><b><u>Incompatible Materials</u></b>          Alkalies, ammonia, hydrogen peroxide, hydrogen, and organic matter.</p> <p><b><u>Hazardous Decomposition Products</u></b>          NA</p>
<p><b>11. Toxicological Information</b></p> <p>No Data Available...</p>
<p><b>12. Ecological Information</b></p> <p>No Data Available...</p>
<p><b>13. Disposal Considerations</b></p> <p>Place in sealed container. Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation</p> <p>NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.</p> <p><b><u>RCRA Information</u></b>          EPA HW NO: D011 (Ag CAS NO.: (7440-22-4) 74)</p>
<p><b>14. Transport Information</b></p> <p><b><u>Proper Shipping Name</u></b>          Oxidizing Solid, N.O.S (Silver Oxide)</p> <p><b><u>Hazard Class</u></b>          5.1</p> <p><b><u>Secondary Hazard Class</u></b>          NA</p> <p><b><u>DOT Identification Number</u></b>          1479</p> <p><b><u>DOT Shipping Label</u></b>          Oxidizer</p> <p><b><u>Freight Class</u></b>          See 49 CFR</p> <p><b><u>Packaging Exceptions</u></b>          See 49 CFR</p>



# MATERIAL SAFETY DATA SHEET

## Silver (II) Oxide

### 14. Transport Information - Continued

#### Packaging Requirements

PG -II

#### Additional Shipping Paper Description

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

#### DOT (Pictograms)



#### TDG - Canada (Pictograms)



### 15. Regulatory Information

#### U.S. Regulatory Information

This product is TSCA Listed.

#### SARA Hazard Classes

Acute Health Hazard

#### SARA Section 313 Notification

This chemical is not at a high enough concentration to be reportable under Section 313.

#### State Regulations

CAS# 13014-96-8 is not listed on any state lists.

#### Canadian Regulatory Information

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.

This product has a WHMIS classification of C, D2B.

#### European Union (EU) Regulatory Information

**Symbol of Hazards:** O,C

**Indications of Hazards:** Oxidizer, corrosive

**R:** 34, 8

**Risk Phrase:** Causes burns. Contact with combustible material may cause fire.

**S:** 17, 26, 37/39

**Safety Phrase:** Keep away from combustible material. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.



# MATERIAL SAFETY DATA SHEET

## Silver (II) Oxide

### WHMIS - Canada (Pictograms)



### DSCL - Europe (Pictograms)



### 16. Other Information

#### NFPA Rating

Health: 3

Fire: 0

Reactivity: 0

#### HMIS Rating

Health: 3

Fire: 0

Reactivity: 0

Personal Protection: J

#### Precautionary Label

Oxidizer

#### Revision/Preparer Information

MSDS Preparer: Wayne Sher

MSDS Preparer Phone Number: 410-398-7200

This MSDS Supersedes A Previous MSDS Dated: 08/09/2001

### Disclaimer

In compliance with the OSHA Hazard Communication Standard, 29 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 believed 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.