1. Product And Company Identification

Supplier
DF Goldsmith Chemical and Metal
909 Pitner Avenue
Evanston, IL 60202, USA

Telephone Number: 847-869-7800
FAX Number: 847-869-2531
E-mail: goldchem@aol.com
Web Site: www.dfgoldsmith.com

Manufacturer
DF Goldsmith Chemical and Metal
909 Pitner Avenue
Evanston, IL 60202, USA

Telephone Number: 847-869-7800
FAX Number: 847-869-2531
E-mail: goldchem@aol.com
Web Site: www.dfgoldsmith.com

Supplier Emergency Contacts & Phone Number
Chemtrac: 800-424-9300

Manufacturer Emergency Contacts & Phone Number
Chemtrac: 800-424-9300

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: 47-370
Product Code: 47-370

Synonyms
Silver (II) Oxide, Argentic Oxide Silver Peroxide

2. Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent Of Total Weight</th>
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</thead>
<tbody>
<tr>
<td>Silver (II) Oxide</td>
<td>1301-96-8</td>
<td>99.9</td>
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</tbody>
</table>

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.
### 3. Hazards Identification

#### Primary Routes(s) Of Entry

<table>
<thead>
<tr>
<th>Route</th>
<th>Likelihood</th>
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</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Likely</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Likely</td>
</tr>
<tr>
<td>Skin</td>
<td>Likely</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Likely</td>
</tr>
</tbody>
</table>

#### 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 arquaria or arqurosis Not known to be health threatening.

### 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 immediately.
4. First Aid Measures (cont)

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

<table>
<thead>
<tr>
<th>Fire Fighting (Pictograms)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="ABC" /></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Handling and Storage (Pictograms)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="no-wheat" /> <img src="image" alt="no-eye-box" /> <img src="image" alt="no-flame" /> <img src="image" alt="vent" /></td>
</tr>
</tbody>
</table>

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.
7. Handling And Storage (cont)

Other Precautions

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

This product will decompose @ 130 degree C.
10. Stability And Reactivity

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Conditions To Avoid (Stability)**
- Incompatible materials, combustible
- Elevated temperature, exposure to light.

**Incompatible Materials**
- Alkalies, ammonia, hydrogen peroxide, hydrogen, and organic matter.

**Hazardous Decomposition Products**
- NA

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Place in 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.

**RCRA Information**
- EPA HW NO: D011 (Ag CAS NO.: (7440-22-4) 74)

14. Transport Information

**Proper Shipping Name**
- Oxidizing Solid, N.O.S (Silver Oxide)

**Hazard Class**
- 5.1

**Secondary Hazard Class**
- NA

**DOT Identification Number**
- 1479

**DOT Shipping Label**
- Oxidizer

**Freight Class**
- See 49 CFR

**Packaging Exceptions**
- See 49 CFR

**Packaging Requirements**
- PG -II

**Additional Shipping Paper Description**
- IATA: Same as DOT regulations. Consult IATA regulations before shipping.
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. Conact with combustible material my cause fire.

*S: 17, 26, 37/39

*Safety Phrase:* Keep away from combustible material. Inc ase of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.
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: DF Goldsmith Chemical and Metal
MSDS Preparer Phone Number: 847-869-7800
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.

DF Goldsmith Chemical and Metal 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.