

## Safety Data Sheet: Silver oxide (Ag<sub>2</sub>O)

### 1. Product and Company Identification

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Trade Name: Silver Oxide  
Chemical Formula: Ag<sub>2</sub>O  
Recommended Use: Commercial  
Manufacturer/Supplier: Modison Metals Ltd, Vapi, India 396195  
Tel #: +91 260 2431093

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### 2. Hazards Identification

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Hazard Classification:  
Hazardous according to criteria of 2012 OSHA Hazard Communication Standard (29CFR 1910.1200)  
Hazardous and/or Dangerous Nature:  
Causes serious eye damage/irritation --- category 1

#### Safety Phrases:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell seek medical advice immediately.  
This material and its container must be disposed of as hazardous waste.  
Avoid release to the environment. Refer to special instructions/safety data sheet.

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### 3. Composition

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Chemical Family: Silver salt  
Silver (Ag): 93.1%  
Ag<sub>2</sub>O(%) : >99%  
CAS #: 20667-12-3

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### 4. First Aid Procedures

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General Treatment: Seek medical attention if symptoms persist.  
Special Treatment: Treat symptomatically  
Important Symptoms: Causes Eye burns  
Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.  
Ingestion: Rinse mouth thoroughly. Give one to two glasses of water. Do not induce vomiting if swallowed.  
Never give anything by mouth to an unconscious person.  
Skin: Wash affected area thoroughly with plenty of running water. Remove contaminated clothing and wash before reuse. If symptoms develop seek medical attention.  
Eyes: Flush eyes with water, blinking often for ten minutes.

### 5. Fire and Explosion Hazards Data

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Flammability: Strong oxidizer. Contact with other material may cause fire  
Flash Point: Not available



Autoignition Temperature: not available

Extinguishing Media: Do not use water for metal fires. Use special powder, sand, CO<sub>2</sub>

Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

**Explosion:** Reacts with ammonia to form an explosive fulminate when wet or dry.

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## 6. Accidental Release Measures

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If Material Is Released/Spilled: Wear protective equipment. Clean up in a way that doesn't disperse the powder into the air. If it is released into water, add dilute Hydrogen Peroxide to form less harmful Silver Powder.

**Special Note:** Disposal of Silver Oxide in waste systems connected to a septic tank is guaranteed to destroy the septic bacteria and require pumping out, flushing and seeding with fresh bacteria.

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## 7. Handling and Storage

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Handling Conditions: Wash thoroughly after handling.

Storage Conditions: Store in a cool dry place in a tightly sealed container.

Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Ventilation: Provide sufficient ventilation to maintain concentration at or below TLV.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits: NA

Threshold Limit Value: NA

Special Equipment: None

Respiratory Protection: Should comply with AS1716 and be selected in accordance with AS1715. In event of emergency a full-face piece SCBA should be used

Protective Gloves: Should comply with AS2161. Excellent gloves made from NR Latex, vinyl or neoprene.

Good glove made from Nitrile can also be used

Eye Protection: Face shield, chemical goggles or safety glasses with side shields.

Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color: Black/Brown

Form: Fine powder

Odor: Odorless

Solubility: 0.0002g/L of water. Readily soluble in nitric acid

pH:

Taste: metallic taste

Melting Point: ~280°C

Density: ~7.14 g/cc

Molecular weight: 231.74

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## 10. Stability/Reactivity

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Stability: Stable at room temperature



Reactivity:

**Incompatibilities:** Ammonia - forms explosive Silver Nitride when wet or dry.

**Incompatibilities:** Hydrogen Peroxide - can release Oxygen in an explosive way, especially when concentrated.

**Incompatibilities:** Ignites Sulfur, Red Phosphorous, Sulfides of Antimony and Arsenic.

**Incompatibilities:** Cotton, paper towels, rags, skin, proteins, etc

**Conditions to Avoid:** Do not allow Silver Oxide and Ammonia to combine

**Hazardous Decomposition Products:** Oxygen.

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## 11. Toxicological Information

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Potential Health Effects:

Eyes: Causes irritation

Skin: May cause irritation

Ingestion: Harmful if swallowed

Inhalation: May cause irritation

Chronic: Not available

Signs & Symptoms of Exposure: Not available

Medical Conditions

Aggravated by Exposure: Not available

Median Lethal Dose: Not available

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## 12. Ecological Information

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Ecotoxicity: May be toxic for aquatic organisms. May cause long term adverse effects in the aquatic environment. Persistence & degradability: NA

Bioaccumulative Potential: Highly bioaccumulative

Environmental Protection: Do not let the product enter waters, waste water or soil.

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## 13. Disposal Considerations

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Dispose of in accordance with local, state and federal regulations.

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## 14. Transportation Data

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Hazardous: May be Hazardous for transportation.

Proper Shipping Name: Silver Oxide

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## 15. Regulatory Information

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Listed in International inventories : TSCA, DSL, NDSL, ELINCS, NLP, PICCS, ENCS, AICS, IECSC & KECL

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## 16: Other Information

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The information and recommendations are taken from sources believed to be accurate.