1. Product and Company Identification

Trade Name: Silver Oxide  
Chemical Formula: Ag₂O  
Recommended Use: Commercial  
Manufacturer/Supplier: Modison Metals Ltd, Vapi, India 396195  
Tel #: +91 260 2431093

2. Hazards Identification

Hazard Classification:  
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.

3. Composition

Chemical Family: Silver salt  
Silver (Ag): 93.1%  
Ag₂O(%): >99%  
CAS #: 20667-12-3

4. First Aid Procedures

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

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, CO2
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.

### 6. Accidental Release Measures

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.

### 7. Handling and Storage

Handling Conditions: Wash thoroughly after handling.
Storage Conditions: Store in a cool dry place in a tightly sealed container.
Work/Hygiene 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.

### 8. Exposure Controls and Personal Protection

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.

### 9. Physical and Chemical Characteristics

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

### 10. Stability/Reactivity

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.

---

11. Toxicological Information

Potential Health Effects:

**Eyes:** Causes irritation

**Skin:** May cause irritation

**Inhalation:** Harmful if swallowed

**Chronic:** Not available

**Signs & Symptoms of Exposure:** Not available

**Medical Conditions Aggravated by Exposure:** Not available

**Median Lethal Dose:** Not available

---

12. Ecological Information

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.

---

13. Disposal Considerations

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

---

14. Transportation Data

Hazardous: May be Hazardous for transportation.

Proper Shipping Name: Silver Oxide

---

15. Regulatory Information

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

---

16: Other Information

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