

# TECHNIC, INC.

## SAFETY DATA SHEET

### SECTION 1. IDENTIFICATION

**Product Name:** SILVER OXIDE

**Product Code:** 91-000

**Recommended use:** For industrial use only.

**Supplier:**

Technic Inc.

1 Spectacle Street

Cranston, RI 02910 USA

**Telephone no:** 401-781-6100

**Current SDS preparation date:** October 24, 2016

**Original SDS preparation date:** January 17, 2014

**Emergency no:** ChemTrec 800-424-9300, Outside the USA and Canada 703-527-3887

### SECTION 2. HAZARD IDENTIFICATION

**Classification:**

Eye Damage/Irritation, Category 1

Oxidizing Solids, Category 1

Acute Aquatic Toxicity, Category 1

Chronic Aquatic Toxicity, Category 1

**Label elements and precautionary statements:**

**Signal word:** Danger

**Pictogram(s):**



**Hazards not otherwise classified:**

**Hazard statement(s):**

Causes serious eye damage

May cause fire or explosion; strong oxidizer

Very toxic to aquatic life with long lasting effects

**Precautionary statement(s):**

Wear protective gloves, clothing and eye and face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center or doctor/physician.

Keep away from heat, sparks, open flames and hot surfaces. No smoking.

Keep away from clothing and other combustible materials.

Take any precautions to avoid mixing with combustible materials.

Wear fire/flame resistant/retardant clothing.

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothing.

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In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

In case of fire: Use water to extinguish.

Avoid release to the environment.

Collect spillage.

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

### SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical name	CAS Number	EINECS Number	Concentration
Silver oxide	20667-12-3	243-957-1	100 %

### SECTION 4. FIRST AID MEASURES

**Inhalation:**

Remove patient to fresh air. Support breathing if required. Obtain medical treatment for dizziness, unconsciousness or irritation or difficulty in breathing.

**Skin contact:**

Remove contaminated clothing and wash affected area thoroughly with soap and water. Launder clothing before rewearing. Seek medical attention for prolonged skin irritation.

**Eye contact:**

Flush with water, including under lids, for fifteen minutes. Obtain immediate medical attention.

**Ingestion:**

If patient is conscious, rinse mouth and drink at least two large glasses of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

### SECTION 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Use media appropriate for surrounding fire such as foam, extinguishing powder, carbon dioxide or water spray. In case of fire, cool endangered containers with water spray.

**Unsuitable extinguishing media:** High pressure water jet.

**Specific hazards in case of fire:** None reported.

**Special protective equipment and precaution for fire fighters:** For fires in enclosed areas, wear self-contained breathing apparatus and full protective gear. Do not inhale combustion gases.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures:**

Wear appropriate skin, eye and respiratory protection. Do not eat, drink or smoke while cleaning up. Ensure adequate ventilation.

### **Methods and materials for containment and cleaning up:**

Wear appropriate personal protective gear including eye, skin and respiratory protection. Contain spilled material and collect by wet sweeping or other suitable method for silver recovery without raising dust. Flush spill area with water. Do not allow this material or its rinsings to enter storm or sanitary sewers or other waterways. (See also Section 13).

### **Environmental precautions:**

Prevent spills and rinsings from entering storm or sanitary sewers or other waterways and contact with soil.

## SECTION 7. HANDLING AND STORAGE

### **Precautions for safe handling:**

Avoid contact with eyes. Avoid prolonged repeated skin contact and breathing mists or vapors. Use in well-ventilated area. Do not empty waste into sanitary drains.

### **Conditions for safe storage, including incompatibilities:**

Store in a cool, dry area. Use with adequate ventilation. Keep container tightly closed when not in use. Store only in the original container.

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### **Exposure Limits:**

<u>Ingredient</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>Other Limits</u>
Silver oxide	0.01 mg/m <sup>3</sup> (Ag) TWA	0.01 mg/m <sup>3</sup> (Ag)	0.01 mg/m <sup>3</sup> (Ag) NIOSH REL

### **Appropriate engineering controls:**

Use in well-ventilated area with local exhaust.

### **Respiratory protection:**

Wear appropriate, approved respiratory protection when ventilation is inadequate to meet exposure limits.

### **Eye protection:**

Chemical splash goggles or safety glasses with side shields must be worn.

### **Skin protection:**

Wear rubber or neoprene gloves. Wear rubber apron and long sleeves to prevent skin contact. Wash hands thoroughly with soap and water after handling and before eating or smoking.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Solid, powder  
**Color:** Dark gray to brown  
**Odor:** None  
**Odor threshold:** Not available  
**pH:** Not applicable  
**Melting/freezing point:** Decomposes  
**Initial boiling point:** Not applicable  
**Flash point:** Not applicable  
**Evaporation rate:** Not available  
**Flammability (solid, gas):** Not applicable  
**Upper/lower explosion limits:** Non-explosive  
**Vapor pressure:** Not determined  
**Vapor density:** Not determined  
**Relative density (H<sub>2</sub>O = 1) @25 °C:** Not applicable  
**Solubility:** Negligible in water at 20 °C  
**Partition coefficient octanol/water:** Not determined  
**Auto-ignition temperature:** Not applicable  
**Decomposition temperature:** 230 °C (446 °F)  
**Viscosity:** Not applicable

## SECTION 10. STABILITY AND REACTIVITY

**Reactivity:** Stable, non-reactive when stored and used according to recommendations.  
**Chemical stability:** No decomposition if used according to specifications.  
**Possibility of hazardous reactions:** None are known.  
**Conditions to avoid:** None reported.  
**Incompatible materials:** Organic and combustible materials and reducing agents. Incompatible with hydrazines, amines, sulfur and metal sulfides.  
**Hazardous decomposition products:** Thermal decomposition may release fumes of silver oxide.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Routes of Exposure and Symptoms

**Inhalation:** Causes severe irritation of nasal and respiratory passages.  
**Ingestion:** Causes severe gastroenteritis with nausea, vomiting, diarrhea and burns.  
**Skin Contact:** Will cause irritation and possible burns.  
**Eye Contact:** Causes serious eye irritation and possible burns if left untreated.

### Acute and Chronic Effects from Short- and Long-term Exposure:

See Routes of Exposure and Symptoms above.

**Acute Oral Toxicity:** LD50: 1027 mg/kg (mouse, silver oxide)  
LDLo: 2820 mg/kg (rat, silver oxide)

**Acute Dermal Toxicity:** No applicable information available.

**Acute Inhalation Toxicity:** No applicable information available.

**Acute Eye Irritation:** No applicable information available.

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**Dermal Irritation:** Prolonged exposure can lead to argyria, a generalized grayish pigmentation of the skin and mucous membranes. Such symptoms usually occur after at least two years of exposure. There are no systemic effects, other symptoms or physical disabilities known to be associated with this condition.

**Carcinogen Listings:**

**IARC:** No                      **NTP:** No                      **OSHA:** No

**Reproductive Effects:** No applicable information available.

**Target Organ Effects:** No applicable information available.

## SECTION 12. ECOLOGICAL INFORMATION

**Aquatic Toxicity:** There are no data reported for this material; however, silver compounds are highly toxic to aquatic life.

**Persistence and degradability:** There are no data reported for this material; however, this product is harmful to aquatic life. Inorganic compounds do not undergo biodegradation.

**Bio-accumulative potential:** There are no data reported for this material.

**Mobility in soil:** Accidental spillage may lead to penetration in the soil and groundwater. Improper handling and disposal of this material may cause environmental damage.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Waste Disposal:**

Disposal of this material is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

## SECTION 14. TRANSPORT INFORMATION

**Classification for shipment by road or rail, sea (IMDG) and air (IATA/ICAO):**

**UN proper shipping name:** Oxidizing Solid, N.O.S. (Contains Silver Oxide)  
**UN number:** UN1479  
**Transport hazard class:** 5.1  
**Packing group:** II

**Marine Pollutant:** No

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## SECTION 15. REGULATORY INFORMATION

**Inventory Status:**

All components are on TSCA, EINECS/ELINCS, AICS, and DSL.

**U.S. Regulations:**

**U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:**

**SARA (311/312) HAZARD CATEGORIES:**

None  Immediate  Delayed  Fire  Reactive  Pressure generating

**SARA 313:** This product contains the following SARA 313 Toxic Release Chemicals.

<b>Chemical Name</b>	<b>CAS Number</b>	<b>Concentration</b>
Silver oxide	20667-12-3	100%

The following product components are cited on the lists below:

<b>Chemical Name</b>	<b>CAS Number</b>	<b>List Citations</b>
None		California Proposition 65 List

## SECTION 16. OTHER INFORMATION

**VOC (Volatile Organic Compounds):** None

**HMIS Ratings:**

**Health:** 2 **Flammability:** 0 **Reactivity:** 0 **Personal Protection:** C

**Prepared by:** Allan H. Reed

**SDS Preparation date:** October 24, 2016 **Supersedes previous version:** January 17, 2014.

This SDS contains revisions in the following section(s): 2, 9 & 16.

The information contained herein is accurate to the best of our knowledge. Technic Inc. makes no warranty of any kind, express or implied, concerning the safe use of this material in any process or in combination with other substances.

End of Safety Data Sheet