



SAFETY DATA SHEET

Identity: Gold

Formula: Au

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 196.97

CAS #	OSHA PEL	ACGIH TLV	%
7440-57-5	NE	NE	0.0-100.0%

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 2808.00°C

Vapor Pressure (vs. air or mmHg): 1mm at 1869.0°C

Melting Point: 1064.2°C

Specific Gravity: 19.32 g/cc

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble

Appearance and odor: Yellow, ductile metal or powder, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media: Use suitable extinguishing agent for surrounding material and type of fire

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards:

Extremely inactive; not attacked by acids, air or oxygen.

Superficially attacked by aqueous halogen at room temperature.

React with aqua regia, with mixtures containing chlorides, bromides, or iodides if they can generate nascent halogens.



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Reacts with many oxidizing mixtures especially those containing halogens.

Reacts with alkali cyanides, solutions of thiocyanates and double cyanides.

Does not corrode in air but is tarnished by sulfur.

Finely divided gold with hydrogen peroxide may explode.

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): None

Incompatibility: Mixtures containing chlorides, bromides or iodides; alkali cyanides; thiocyanate solutions; double cyanides; hydrogen peroxide; halogens; ammonia

Hazardous Decomposition or Byproducts: Fumes of gold, nascent halogens, carbon monoxide, carbon dioxide

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other? No

Gold poisoning is rare. The few recorded cases of fatalities are the result of therapeutic overdose. Human systemic effects are similar to those of arsenic exposure and include: violent diarrhea, gastritis, colitis, dermatitis, blood dyscrasias, leukopenia, agnucytosis and a plastic anemia. The therapeutic use of gold compounds has been associated with serious effects at the kidney, liver, and other vital organs. Generally, gold compounds are poorly absorbed when ingested. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause a red, dry throat, sneezing and difficulty breathing. **INGESTION:** May cause nausea and vomiting.

Ingestion: No data available

Skin: May cause redness, dryness and itching.

Eye: May cause redness, burning, inflammation and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause irritation to mucous membranes.

Chronic: Long exposure time may cause dyspnea, hyperventilation on exertion, cough, sputum and chronic bronchitis.

Ingestion:

Acute: May cause gastrointestinal tract irritation.

Chronic: No chronic health effects recorded.

Skin:

Acute: May cause abrasive irritation. May cause an allergic reaction.

Chronic: May cause dermatitis.

Eye:



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Acute: May cause irritation.

Chronic: May cause conjunctivitis.

Target Organs: No target organs recorded.

Carcinogenicity: NTP? No IARC Monographs? No

OSHA Regulated? No

Medical Conditions Aggravated by Exposure: None recorded

Emergency and First Aid Procedures:

Inhalation: Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention

Ingestion: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person

Skin: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

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

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Good general ventilation should be sufficient to control airborne levels.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established