



MATERIAL SAFETY DATA SHEET  
COMPLIES WITH 29 CFR 1910.1200.  
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 03-00

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## CHEMICAL IDENTITY

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LABEL IDENTITY	<b>Gold Germanium Alloy</b>
FORMULA	<b>Au/Ge (88/12)</b>
CHEMICAL FAMILY	<b>Metal</b>
CAS REGISTRY NUMBER	<b>Au: 7440-57-5      Ge: 7440-56-4</b>
	<b>Ag: 7440-22-4</b>

**The main content of these products is Gold. Additional components may include one or more of the above.**

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## PHYSICAL AND CHEMICAL PROPERTIES

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COLOR, FORM AND ODOR	<b>Red/brown to Silver/gray, no odor</b>
BOILING POINT	<b>Unknown</b>
DENSITY (gm/cc)	<b>Varies</b>
VAPOR PRESSURE @ 20°	<b>Varies</b>
% VOLATILE BY VOLUME (%)	<b>Essentially zero</b>
REACTION WITH WATER	<b>ND</b>
EVAPORATION RATE (H <sub>2</sub> O=1)	<b>0</b>
SOLUBILITY IN WATER	<b>Insoluble</b>
MELTING POINT	<b>1064° (100% Gold)</b>
SPECIFIC GRAVITY	<b>Varies</b>

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## FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT	<b>Non-flammable as a solid</b>
EXTINGUISHING MEDIA	<b>This material is non-combustible. Use appropriate extinguishing agent for surrounding fires. Do not use water to extinguish fires around operations involving molten metal, due to the potential for steam explosion.</b>
SPECIAL FIRE FIGHTING PROCEDURES	<b>Self contained breathing apparatus should be worn when fighting metal dust fires. High levels of dust or fine particles in the air may ignite or explode</b>



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### HEALTH HAZARD INFORMATION

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#### **PRIMARY ROUTES OF ENTRY:**

Inhalation, Skin Contact

#### **HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:**

Germanium: Considered to be of low toxicity by all routes.

Gold: Skin; May cause dermatitis

Silver: Excessive or chronic exposure, skin contact or inhalation, may lead to a condition called Argyrosis. A local or generalized discoloration of the eyes, skin and mucous membrane, where gray/blue patches of pigmentation are formed.

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

Individuals who may have had allergic reactions to metals or sensitivity, may encounter skin rash or dermatitis, if skin contact with the product occurs. Persons with impaired pulmonary functions, may incur further impairment if dust or fumes are inhaled.

#### **CARCINOGENIC REFERENCES:**

Components are not listed in the Annual Report on Carcinogens as prepared by the National Toxicology Program (NTP). as well as the International Agency for Research On Cancer (IARC). Monograph Series

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### FIRST AID MEASURES

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**FIRST AID FOR EYES:** Dust or powder should be flushed from the eyes with running water for 15 minutes. If irritation persists obtain medical assistance.

**FIRST AID FOR SKIN:** Skin cuts and abrasions can be treated by standard first aid. Skin contamination with dust or power can be removed with soap and water. If irritation persists obtain medical assistance.

**FIRST AID FOR INHALATION:** Breathing difficulty, caused by inhalation of dust or fume requires removal to fresh air. If breathing has stopped perform artificial respiration and seek medical assistance at once.

**FIRST AID FOR INGESTION:** Obtain medical assistance at once.



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### REACTIVITY DATA

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**STABILITY:** This is a stable material.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**INCOMPATIBILITIES:** Acetylene, Ammonia and Strong Oxidizers.

**DECOMPOSITION PRODUCTS:** None under proper usage conditions.

**CONDITIONS TO AVOID:** Conditions which create dust or fumes.

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### ENVIRONMENTAL INFORMATION

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** In solid form this material poses no special clean-up problems. Use normal clean-up procedures; wet sweeping or HEPA vacuum, for clean-up of dust or powder. Do not use compressed air for cleaning.

**WASTE DISPOSAL METHOD:** Consult federal, state and local regulations for disposal.

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### EXPOSURE CONTROL / PROTECTION INFORMATION

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**Eye Protection Requirements:** Safety glasses are recommended

**Skin Protection Requirements:** Protective gloves are recommended, to prevent mechanical irritation.

**Respiratory Protection:** Use an appropriate NIOSH approved respirator if airborne dust concentration exceed the PEL or TLV.

**Exposure Limits:** Not established for product as whole. Refer to Section 2.

**Ventilation Requirements:**

**Local Exhaust:** Recommended, when cutting, grinding or melting or any other Operation where dust fumes are created.

**General:** Recommended

**Environmental Surveillance:** If the operation generates dust or fumes, exposure to airborne materials should be determined by having air samples taken in the employees breathing zone and work area.

**Other Protective Equipment:** Eye wash fountain should be readily available in areas of use and handling.

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### SPECIAL PRECAUTIONS

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**PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:** In solid form this material poses no special problems. Store metal in a dry area. Do not store adjacent to acids.



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### TRANSPORTATION INFORMATION

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<b>D.O.T. Shipping Name:</b>	Not regulated	<b>Technical Shipping Name:</b>	Metal Alloy
<b>D.O.T. Hazard Class:</b>	None	<b>UN/NA Number:</b>	None
<b>Product RQ:</b>	None		

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### REGULATORY INFORMATION

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**OSHA Status:** No specific regulations.  
The Hazard Communication Standard of the Occupational Safety and Health Administration, 29 CFR 1910.1200. considers components of this product a Hazardous Substance.

**TSCA Status:**  
These products are a mixture. Components of these products are listed on the TSCA Chemical Substance Inventory of Existing Chemical Substances.

**RCRA Status:** N/A

**SARA TITLE III:**  
The constituents of this alloy contain hazardous substances, above on (1) percent, and are Subject to the reporting requirements under SARA Title III Section 313.

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