



# SAFETY DATA SHEET

**MATERION**

## 1. Product and company identification

**Name of the chemical** Gold Tin Targets

**Other means of identification**  
**SDS number** G17

**Recommended use of the chemical and restrictions on use**

**Recommended use** Manufacture of computer, electronic and optical products, electrical equipment  
Scientific research and development  
Other: Manufacture of medical and defense equipment

**Recommended restrictions** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
Consumer uses: Private households (= general public = consumers)

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## 2. Hazards identification

**Hazard classification**

**Physical hazards** Not classified.

**Health hazards** Not classified.

**Environmental hazards** Not classified.

**Label elements**

**Symbols** None.

**Signal word** None.

**Hazard statement** The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.

**Precautionary statement**

**Prevention** Observe good industrial hygiene practices.

**Response** Wash hands after handling.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards** None known.

**Supplemental information** For further information, please contact the Product Stewardship Department at +1.216.383.4019.

## 3. Composition/information on ingredients

Mixture

Chemical properties	CAS Number	Concentration (%)
Gold	7440-57-5	50 - 95
Tin	7440-31-5	5 - 50

## 4. First aid measures

**First aid measures for different exposure routes**

**Inhalation** Call a physician if symptoms develop or persist.

**Skin contact** Get medical attention if irritation develops and persists.

**Eye contact** Get medical attention if irritation develops and persists.

**Ingestion** Get medical advice/attention if you feel unwell.

<b>Most important symptoms and effects</b>	None known.
<b>Personal protection for first-aid responders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Notes to physician</b>	Treat symptomatically.

## 5. Fire-fighting measures

<b>Extinguishing media</b>	Powder. Dry sand. Use methods for the surrounding fire.
<b>Extinguishing media to avoid</b>	None known.
<b>Specific hazards during fire fighting</b>	This product is not flammable.
<b>Special fire fighting procedures</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Protection of fire-fighters</b>	Wear suitable protective equipment.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures

<b>Personal precautions</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Environmental precautions</b>	Collect spillage.
<b>Spill cleanup methods</b>	Collect spillage. For waste disposal, see section 13 of the SDS.

## 7. Handling and storage

<b>Handling</b>	Observe good industrial hygiene practices.
<b>Storage</b>	Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Exposure limits

**Taiwan. OELs (Standards of Permissible Exposure Limits at Workplace, OSHA No. 10302007931), as amended**

Components	Type	Value
Tin (CAS 7440-31-5)	STEL	4 mg/m <sup>3</sup>

**Taiwan. OELs. (Standards of Permissible Exposure Limits at Workplace)**

Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 mg/m <sup>3</sup>

**US. ACGIH Threshold Limit Values**

Components	Type	Value
Tin (CAS 7440-31-5)	TWA	2 mg/m <sup>3</sup>

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Exposure guidelines</b>	This material does not have established exposure limits.
<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear gloves to prevent metal cuts and skin abrasions during handling.
<b>Other</b>	Use personal protective equipment as required.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Use good industrial hygiene practices in handling this material.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Yellowish
<b>Odor</b>	None.

<b>Odor threshold</b>	Not applicable.
<b>Melting point/freezing point</b>	518 - 1832 °F (270 - 1000 °C) / Not applicable.
<b>pH</b>	Not applicable.
<b>Boiling point, initial boiling point, and boiling range</b>	Not applicable.
<b>Flammability (solid, gas)</b>	None known.
<b>Flash point</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - lower (%) temperature</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Explosive limit - upper (%) temperature</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Density</b>	10.50 - 17.90 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Other data</b>	
<b>Oxidizing properties</b>	Not oxidizing.
<b>Viscosity</b>	Not applicable.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Chlorine.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Not likely, due to the form of the product.
<b>Skin contact</b>	Not likely, due to the form of the product.
<b>Eye contact</b>	Not likely, due to the form of the product.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms** None known.

### Information on toxicological effects

<b>Acute toxicity</b>	Not available.
<b>Skin corrosion/irritation</b>	Not relevant, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	Not likely, due to the form of the product.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	Not a skin sensitizer.

<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classified.
<b>Reproductive toxicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	No data recorded.
<b>Other information</b>	This product has no known adverse effect on human health.

## 12. Ecological information

<b>Ecotoxicity</b>	No ecotoxicity data noted for the ingredient(s).
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in soil</b>	The product is immiscible with water and will spread on the water surface.
<b>Other hazardous effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Not available.
<b>Residual waste</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	No special precautions.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.

## 14. Transport information

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

### Applicable regulations

#### Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste

Not listed.

#### Standards on Workplace Atmosphere of Dangerous and Hazardous Materials

Tin (CAS 7440-31-5)

Listed.

#### GHS Classification List: GHS implementation phase 1, 2 and 3 (CLA No. 0980145063, 0990146707, and 1020146801)

Tin (CAS 7440-31-5)

### International regulations

#### Stockholm Convention

Not applicable.

#### Rotterdam Convention

Not applicable.

#### Montreal Protocol

Not applicable.

#### Kyoto protocol

Not applicable.

#### Basel Convention

Not applicable.

## 16. Other information

### References

ACGIH  
EPA: AQUIRE database  
NLM: Hazardous Substances Data Base  
US. IARC Monographs on Occupational Exposures to Chemical Agents  
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)  
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)  
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)  
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)  
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)

### Issued by

Not available.

### Prepared by

Not available.

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