



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

Product identifier **Gold Copper Palladium**

Other means of identification

SDS number WCL

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Materion Electronic Materials

Address 6070 Parkland Boulevard  
Mayfield Heights, OH 44124  
United States

Telephone EH&S 1.216.383.4019

Website www.materion.com

E-mail ehs@materion.com

Contact person Theodore Knudson

Emergency phone number See Section 16.

## 2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Acute toxicity, oral Category 4

Acute toxicity, inhalation Category 3

Serious eye damage/eye irritation Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol 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 waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information For further information, please contact the Product Stewardship Department at +1.800.862.4118.

## 3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Gold		7440-57-5	60 - 70
Copper		7440-50-8	15 - 25
Palladium		7440-05-3	10 - 20

## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Under normal conditions of intended use, this material does not pose a risk to health.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Powder. Dry sand.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	This product is not flammable.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment.
<b>Fire fighting equipment/instructions</b>	Use water spray to cool unopened containers.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.</p> <p>Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.</p> <p>Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.</p>
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store in a well-ventilated place.

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Copper (CAS 7440-50-8)	PEL	1 mg/m <sup>3</sup>	Dust and mist.
		0.1 mg/m <sup>3</sup>	Fume.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0.2 mg/m <sup>3</sup>	Fume.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0.1 mg/m <sup>3</sup>	Fume.

**US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	PEL	1 mg/m <sup>3</sup>	Dust and mist.
		0.1 mg/m <sup>3</sup>	Fume.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate dust, mist or fume.

**Skin protection****Hand protection**

Wear gloves to prevent metal cuts and skin abrasions during handling.

**Other**

Wear suitable protective clothing.

**Respiratory protection**

In case of inadequate ventilation, use respiratory protection.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

**9. Physical and chemical properties****Appearance****Physical state**

Solid.

**Form**

Solid.

**Color**

Gold.

**Odor**

None.

**Odor threshold**

Not applicable.

**pH**

Not applicable.

**Melting point/freezing point**

1948.57 °F (1064.76 °C) estimated / Not applicable.

**Initial boiling point and boiling range**

Not applicable.

**Flash point**

Not applicable.

**Evaporation rate**

Not applicable.

**Flammability (solid, gas)**

None known.

**Upper/lower flammability or explosive limits****Flammability limit - lower (%)**

Not applicable.

<b>Flammability limit - lower (%) temperature</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Flammability limit - upper (%) temperature</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>Relative density</b>	Not applicable.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.
<b>Other information</b>	
<b>Density</b>	15.78 g/cm <sup>3</sup> estimated
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical 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>	Strong oxidizing agents.
<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 relevant, 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 related to the physical, chemical and toxicological characteristics**      None known.

### Information on toxicological effects

<b>Acute toxicity</b>	None known.
<b>Skin corrosion/irritation</b>	Not classified.

<b>Serious eye damage/eye irritation</b>	None known.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	Not a skin sensitizer.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<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>	None known.

**12. Ecological information**

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Copper (CAS 7440-50-8)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Blue crab ( <i>Callinectes sapidus</i> )	0.0031 mg/l
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	0.0219 - 0.0446 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse 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>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

## 15. Regulatory information

**US federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Toxic Substances Control Act (TSCA)

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Copper (CAS 7440-50-8) Listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Acute toxicity (any route of exposure)  
Serious eye damage or eye irritation

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Copper	7440-50-8	15 - 25

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### California Proposition 65

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Copper (CAS 7440-50-8)

## 16. Other information, including date of preparation or last revision

**Issue date** 06-21-2022

**Version #** 01

**Further information**

Transportation Emergency  
Call Chemtrec at:  
US: 800.424.9300  
International: 703.741.5970  
Spain: 900.868.538  
Switzerland: 0800.564.402  
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059  
South Korea Toll-free Number – 080-880-0468

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