

Material Safety Data Sheet

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Section 1: Product Identification

MSDS Code: 4900

Name: Lead Free Solder

Related Part Numbers: 4900-35G, 4900-112G, 4900-227G, 4900-454G

Use: Soldering

Section 2: Hazardous Ingredients

| CAS# | Chemical Name | Percentage by weight | ACGIH TWA | Osha Pel | Osha Stel |
|-----------|---------------|----------------------|------------------------|------------------------|-----------|
| 7440-50-8 | Copper | 0.3 – 0.7 | 0.2 mg/m ³ | 0.20 mg/m ³ | n/e |
| 7440-31-5 | Tin | 91 - 97 | 2.00 mg/m ³ | 2.00 mg/m ³ | n/e |
| 7440-22-4 | Silver | 2.7 – 4.2 | 0.10 mg/m ³ | 0.10 mg/m ³ | n/e |

Section 3: Hazards Identification

WHMIS Codes: n/a

NFPA Ratings: Health 2 Flammability 0 Reactivity 0

HMIS Ratings: Health 2 Flammability 0 Reactivity 0

Eyes: Fumes may cause eye irritation.

Skin: Fumes may cause skin irritation.

Inhalation: Inhalation of the fumes from this or other soldering products may cause headache, nausea, and muscular pain.

Ingestion: Ingestion of the fumes from this or other soldering products may cause headache, nausea, and muscular pain.

Chronic: Prolonged or repeated exposure due to ingestion may cause anemia, insomnia, weakness, constipation and abdominal pain.

Section 4: First Aid Measure

Eyes: **MOLTEN PRODUCT:** Cool burns with plenty of low-pressure water. Get immediate medical attention. **SOLID PRODUCT:** Remove any contact lenses. Immediately flush eyes with large quantities of water for at least 15 minutes. Get medical attention if irritation develops.

Skin: **MOLTEN PRODUCT:** Immediately cool skin burns with water and cold packs for at least 15 minutes. Do not put ice directly on the skin. Do not attempt to remove solidified product from the skin, as damage may result. Get immediate medical attention. **SOLID PRODUCT:** Immediately wash skin with soap and copious amounts of water. Use lotion to prevent dryness. Get medical attention if irritation develops.

Inhalation: If symptoms of overexposure are experienced, evacuate to fresh air. If symptoms persist, seek medical attention.

Ingestion: If person is conscious, immediately give 2 glasses of water. Do not induce vomiting. Get immediate medical attention.

Section 5: Fire Fighting Measures

Autoignition Temperature: n/a **Flash Point:** n/a **LEL / UEL:** n/e
Extinguishing Media: Alcohol foam, carbon dioxide, or dry chemical
General Information: Closed containers may explode when exposed to fire conditions.

Section 6: Accidental Release Measures

Spill Procedure: If the material is in its solid state, pick up and reuse. When molten, allow to solidify, and the reuse if it is not contaminated. If contaminated, refer to section 13 for disposal information.

Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Do not expose container to heat or flame.
Storage: Keep away from sources of ignition. Store in a cool, dry, well ventilated area, away from incompatible substances.

Section 8: Exposure Controls

Routes of entry: Eyes, ingestion, inhalation, and skin.
Ventilation: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.
Personal Protection: Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

Section 9: Physical and Chemical Properties

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|------------------------|--------|--------------------------|-----------|------------------------|-----|--------------------------|-----|------------|-----|
| Physical State: | solid | Odor: | none | Solubility: | n/a | Evaporation Rate: | n/e | | |
| Boiling Point: | 1380°C | Specific Gravity: | 5.9 – 7.0 | Vapor Pressure: | n/e | Vapor Density: | n/e | pH: | n/a |

Section 10: Stability and Reactivity

Stability: Stable under ordinary use and storage conditions.
Incompatibilities: Strong acids and strong oxidizers should be avoided
Polymerization: Will not occur under normal use and storage conditions.
Decomposition: May emit fumes of carbon monoxide and carbon dioxide.

Section 11: Toxicological Information

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| Sensitization: (effects of repeated exposure) | No |
| Carcinogenicity: (risk of cancer) | No |
| Teratogenicity: (risk of malformation in an unborn fetus) | No |
| Reproductive Toxicity: (risk of sterility) | No |
| Mutagenicity: (risk of inheritable genetic effects) | No |

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|--|------------------------------|-------------------------------|-------------------------|
| Lethal Exposure Concentrations: | Ingestion (LD50): n/e | Inhalation (LC50): n/e | Skin (LD50): n/e |
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Section 12: Ecological Information

General Information: No information on ecological toxicity or biodegradability is available at this time.

Environmental Impact Data: (percentage by weight)

CFC: 0

HFC: 0

Cl.Solv.: 0

VOC: 0

HCFC: 0

ODP: 0

Section 13: Disposal Information

General Information: Dispose of this material, contaminated absorbent material and other contaminated materials in an approved waste disposal facility, according to all applicable Federal, State / Provincial, and Local regulations. Recovery and reuse, rather than disposal, should be the ultimate goal in handling efforts.

Section 14: Transportation Information

Ground:

Non-regulated

Air:

Non-regulated

Sea:

Non-regulated

Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

Reportable ingredients: Silver CAS# 7440-22-4, Copper CAS# 7440-50-8

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed or exempt from listing.

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depletors.

This product does not contain any class 2 ozone depletors.

This product does not contain any chemicals listed as hazardous air pollutants.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

When used for soldering and similar applications chemicals may be produced which are known to some states to cause birth defects or other reproductive harm.

Health Canada

Labeling and containers used in this product are listed in compliance with Consumer Chemicals and Container regulations.

Environment Canada

Chemicals in this product are listed on the Domestic Substances List in the Canadian Environmental Protection Act

This product does not contain any ozone depleting substances.

Industry and Science Canada

Labeling, product identity, net quantity declaration, minimum printing type size heights, and packaging of this product is in compliance with the Consumer Packaging and Labeling Act and Regulations. This product is not slack filled in accordance to chapter 4 prohibitions.



RoHS (The restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2004).

This product is RoHS compliant.

Section 16: Other Information

Definitions: n/a = not applicable, n/e = not established

Disclaimer: This material safety data sheet is provided as an information resource only. M.G. Chemicals believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.