

4901

SN99 NO CLEAN SOLDER WIRE

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Identifier:** 4901**Other Means Of Identification:** Sn99 No Clean Solder Wire**Related Part #** 4901-112G, 4901-227G, 4901-454G, 4901-2LB

### Recommended Use and Restriction on Use

**Use:** Lead free solder wire**Uses Advised Against:** Do not use brazing soldering methods such as high temperature torch soldering/torch welding.

### Details of Manufacturer or Importer

**Manufacturer**

MG Chemicals  
1210 Corporate Drive  
Burlington, Ontario L7L 5R6  
CANADA



+1-800-340-0772

**FAX** +1-800-340-0773**E-MAIL** [support@mgchemicals.com](mailto:support@mgchemicals.com)**E-MAIL** [info@mgchemicals.com](mailto:info@mgchemicals.com)**WEB** [www.mgchemicals.com](http://www.mgchemicals.com)**E-MAIL** (Competent Person): [sds@mgchemicals.com](mailto:sds@mgchemicals.com)

### Emergency Phone Number

**For hazardous material incidents ONLY** (leaks, spills, fires, exposures or accidents)  
USA or CANADA—Call Verisk 3E at **+1-866-519-4752** or **+1-760-476-3962**  
(Service access code: 335388)

**For emergencies involving the transport of dangerous goods;** 24/7 service  
CANADA—Call CANUTEC collect at **+1-613-996-6666** or **\*666** on cellular phones

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**Section 2: Hazard(s) Identification****Classification of Hazardous Chemical****GHS Categories**

Based on available data, this product does not meet the HCS 2012 or WHMIS 2015 classification criteria.

**Label Elements**

<b>Signal Word</b>	<i>No signal word</i>
<b>Pictograms</b>	<b>Hazard Statements</b>
<i>None mandated</i>	None

**Hazards Not Otherwise Classified**

<b>Other Criteria</b>	<b>Hazard Statements/Precautionary Statement</b>	<b>Signal Word</b>	<b>Pictograms</b>
None	None	None	None

**Section 3: Composition/Information on Ingredients**

<b>CAS #</b>	<b>Chemical Name</b>	<b>%(weight)</b>
7440-31-5	tin	97%
65997-06-0	rosin, hydrogenated <sup>a)</sup>	2.2%
7440-50-8	copper	0.5%

a) Based on available data, not classified as hazardous under GHS

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**Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
<b>IF INHALED</b>	P304 + P340
<b>Immediate Symptoms</b>	<i>low toxicity: cough, irritation of the respiratory track</i>
<b>Response</b>	Remove person to fresh air and keep comfortable for breathing.
<b>IF IN EYES</b>	P305 + P351 + P338, P337 + P313
<b>Immediate Symptoms</b>	<i>low toxicity: redness, mild irritation</i>
<b>Response</b>	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  If eye irritation persists: Get medical advice or attention.
<b>IF ON SKIN</b>	P302 + P352
<b>Immediate Symptoms</b>	<i>low toxicity: mild irritation</i>
<b>Response</b>	Wash with plenty of water.
<b>IF SWALLOWED</b>	P301 + P330
<b>Immediate Symptoms</b>	<i>low toxicity: no symptoms known or expected</i>
<b>Response</b>	Rinse mouth.

**Section 5: Fire-Fighting Measures**

<b>Extinguishing Media</b>	In case of fire: Use extinguish media suitable for surrounding material.  In presence of molten metal, do NOT use water on fires.
<b>Specific Hazards</b>	In a fire, this product can release metal oxide fumes and irritating flux fumes.
<b>Combustion Products</b>	Produces CO and CO <sub>2</sub> , and tin oxide (SnO <sub>x</sub> ) fumes.
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

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**Section 6: Accidental Release Measures**

<b>Personal Protection</b>	See personal protection recommendations in Section 8.
<b>Precautions for Response</b>	Avoid breathing fumes. Remove or keep away all sources of extreme heat.
<b>Environmental Precautions</b>	Avoid releasing to the environment.
<b>Containment Methods</b>	Not applicable
<b>Cleaning Methods</b>	Collect waste in a waste container. Reuse molten material if it is not contaminated.
<b>Disposal Methods</b>	Dispose of spill waste according to Section 13.

**Section 7: Handling and Storage**

<b>Prevention</b>	Keep out of reach of children. Avoid breathing fumes. Do not eat, drink, or smoke when using this product.
<b>Handling</b>	Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Avoid release to the environment.
<b>Storage</b>	Not applicable.

**Section 8: Exposure Controls/Personal Protection****Substances with Occupational Exposure Limit Values**

<b>Chemical Name</b>	<b>Country</b>	<b>Long Term Exposure Limits (PEL)</b>	<b>Short Term Exposure Limits (STEL)</b>
tin	ACGIH	2 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	2 mg/m <sup>3</sup>	Not established
	Canada AB	2 mg/m <sup>3</sup>	Not established
	Canada BC	2 mg/m <sup>3</sup>	Not established
	Canada ON	2 mg/m <sup>3</sup>	Not established
	Canada QC	2 mg/m <sup>3</sup>	Not established

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Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
copper (dust and mist)	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	1.0 mg/m <sup>3</sup> 1.0 mg/m <sup>3</sup> 1.0 mg/m <sup>3</sup> 1.0 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 1 mg/m <sup>3</sup>	Not established Not established Not established Not established Not established Not established

*Note:* Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH<sup>1</sup>, OSHA, and Canadian provinces exposure limits were consulted. Limits from suppliers' SDS were also consulted. Short term exposure limits (STEL) are usually for 15 min and long term permissible exposure limits (PEL) for 8 h.

## Engineering Controls

### Ventilation

Keep airborne concentrations below the occupational exposure limits (OEL).

Soft soldering temperatures (<450 °C) are generally too low to generate significant amounts of metal vapors, however, metal oxide fumes/dust or flux decomposition fumes can occur.

**RECOMMENDATION:** For frequent or prolonged soldering processes, use of a local exhaust system to avoid exposure to thermal decomposition products. For example, use fume cabinet, a hood on a flexible arm, or tip-mounted fume extraction system on the soldering iron.

## Personal Protective Equipment

### Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles.

**RECOMMENDATION:** Ensure that glasses have side shields for lateral protection.

### Skin Protection

For incidental contacts, use nitrile or other chemically resistant gloves. If contact with molten metal is likely, wear thermally resistant gloves.

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**Respiratory Protection** If exposed to fumes or dust above the exposure limit, a suitable wear respirator meeting local/regional/national guidelines.

Generally, for emergencies and exposure above 0.01 mg/m<sup>3</sup>, use a self-contained breathing apparatus with full face piece operated in a pressure positive mode.

**RECOMMENDATION:** Consult your local safety supply store to ensure that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional.

### General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

### Section 9: Physical and Chemical Properties

<b>Physical State</b>	Solid	<b>Lower Flammability Limit</b>	Not applicable
<b>Appearance</b>	Silver grey	<b>Upper Flammability Limit</b>	Not applicable
<b>Odor</b>	None	<b>Vapor Pressure @20 °C</b>	Not available
<b>Odor Threshold</b>	Not available	<b>Vapor Density</b>	Not applicable
<b>pH</b>	Not available	<b>Relative Density @25 °C</b>	6.5
<b>Freezing/Melting Point</b>	227 °C [440 °F]	<b>Solubility in Water</b>	Negligible <sup>a)</sup>
<b>Initial Boiling Point</b>	Not available	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point</b>	Not applicable	<b>Auto-ignition Temperature</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Not applicable	<b>Viscosity @40°C</b>	Not applicable

a) Metal components are sparingly soluble

**4901****SN99 No CLEAN SOLDER WIRE****Section 10: Stability and Reactivity**

<b>Reactivity</b>	Tin may react violently in presence of disulfur dichloride and iodine bromide.
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Extreme temperatures above 450 °C, such as those due to welding
<b>Incompatibilities</b>	Oxidizing agents, strong acids
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

**Section 11: Toxicological Information****Summary of Effects and Symptoms by Routes of Exposure**

<b>Eyes</b>	Low toxicity: may cause redness and mild irritation.
<b>Skin</b>	Low toxicity: may cause mild irritation.
<b>Inhalation</b>	Low toxicity: may cause nose, throat and lung irritation; and coughing. Overexposure to dust or metal fumes may lead to pneumoconiosis (or Stannosis), anemia, and central nervous system effects.
<b>Ingestion</b>	Low toxicity: no symptoms known or expected. (See chronic effects)
<b>Chronic</b>	Not available

**Acute Toxicity (Lethal Exposure Concentrations)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
tin	>2 000 mg/kg Rat	>2 000 mg/kg Rabbit	4.75 mg/m <sup>3</sup> Rat 4 h
rosin, hydrogenated	>2 000 mg/kg Rat	>2 000 mg/kg Rabbit	Not available
copper	>5 000 mg/kg Mouse	Not available	>5.11 mg/L Rat 4 h

*Note:* Toxicity data from ECHA was consulted. The data from supplier SDSs' were also consulted.

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**4901****SN99 NO CLEAN SOLDER WIRE****Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met.
<b>Sensitization</b> (allergic reactions)	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b> (risk of cancer)	None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.
<b>Mutagenicity</b> (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity</b> (risk to sex functions)	Based on available data, the classification criteria are not met.
<b>Teratogenicity</b> (risk of fetus malformation)	Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Not applicable. This product doesn't contain any Cat 1 ingredients and is a solid.

**Section 12: Ecological Information**

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (<http://echa.europa.eu>), and other reliable sources.

Based on transformation/dissolution data published by ECHA registrants, the classification threshold is not met for massive copper.

Based on available data for tin and hydrogenated rosin, the GHS aqueous toxicity classification criteria are not met.

**Acute Ecotoxicity**

Non regulated: Based on available data, the classification criteria are not met.

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**4901****SN99 No CLEAN SOLDER WIRE****Chronic Ecotoxicity**

Non regulated: Based on available data, the classification criteria are not met.

**Biodegradability**

Not available

**Bioaccumulation**

Not available

**Other Effects**

Not available

**Section 13: Disposal Information**

Dispose of contents in accordance with all local, regional, national, and international regulations.

**Section 14: Transport Information****Ground****Refer to TDG regulations** (Canadian Transportation of Dangerous Goods regulations);  
**USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Non Regulated

**Air****Refer to ICAO-IATA Dangerous Goods Regulations.**

Non Regulated

**Sea****Refer to IMDG regulations.**

Non Regulated

**4901****SN99 No CLEAN SOLDER WIRE****Section 15: Regulatory Information****Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL.

**Hazardous Products Act (R.S.C., 1985, c. H-3)**

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

**USA****Other Classifications****HMIS<sup>®</sup> RATING**

<b>HEALTH:</b>	<b>1</b>
<b>FLAMMABILITY:</b>	<b>0</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

**NFPA<sup>®</sup> 704 CODES**

*Approximate HMIS and NFPA Risk Ratings Legend:*

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

**CAA** (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain substances that are listed as hazardous air pollutants.

**EPCRA** (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains copper (CAS# 7440-50-8; reportable quantity = 5 000 lb), which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

**TSCA** (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

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**4901****SN99 NO CLEAN SOLDER WIRE**

**California Proposition 65** (Chemicals known to cause cancer or reproductive toxicity, USA)

This product does not contain any of the listed substances.

### Europe

**RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

**WEEE** (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

### Section 16: Other Information

**SDS Prepared by** MG Chemicals' Regulatory Department

**Date of Review** 19 January 2024

**Supersedes** 06 March 2020

**Reason for Changes:** Update to the emergency phone number information.

### Reference

1) ACGIH 2023 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2023).

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**4901****SN99 No CLEAN SOLDER WIRE****Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
SDS	Safety Data Sheet
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

**Technical Queries** Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at [www.mgchemicals.com](http://www.mgchemicals.com).

Email: [support@mgchemicals.com](mailto:support@mgchemicals.com)

**Mailing Addresses** *Manufacturing & Support*  
1210 Corporate Drive  
Burlington, Ontario, Canada  
L7L 5R6

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