

SN99 NO CLEAN SOLDER WIRE

4901

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Sn99 No Clean Solder Wire

SDS Code: 4901

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


MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

 +1-800-340-0772

FAX +1-800-340-0773

E-MAIL support@mgchemicals.com

WEB www.mgchemicals.com

 +1-905-331-1396

FAX +1-905-331-2682

E-MAIL info@mgchemicals.com

E-MAIL (Competent Person): sds@mgchemicals.com

Emergency Phone Number

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents) USA or CANADA—Call CHEMTREC at **+1-800-424-9300**

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

SN99 NO CLEAN SOLDER WIRE
4901
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

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

Hazards Not Otherwise Classified

| Other Criteria | Hazard Statements/Precautionary Statement | Signal Word | Pictograms |
|-----------------------|--|--------------------|-------------------|
| None | None | None | None |

Section 3: Composition/Information on Ingredients

| CAS # | Chemical Name | %(weight) |
|--------------|-----------------------------------|------------------|
| 7440-31-5 | tin | 97% |
| 65997-13-9 | rosin, hydrogenated ^{a)} | 2.2% |
| 7440-50-8 | copper | 0.5% |

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

SN99 NO CLEAN SOLDER WIRE
4901
Section 4: First-Aid Measures

| <i>Exposure Condition</i> | <i>GHS Code/Symptoms/Precautionary Statements</i> |
|---------------------------|---|
| IF INHALED | P304 + P340 |
| Immediate Symptoms | <i>low toxicity: cough, irritation of the respiratory track</i> |
| Response | Remove person to fresh air and keep comfortable for breathing. |
| IF IN EYES | P305 + P351 + P338, P337 + P313 |
| Immediate Symptoms | <i>low toxicity: redness, mild irritation</i> |
| Response | 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/attention. |
| IF ON SKIN | P302 + P352 |
| Immediate Symptoms | <i>low toxicity: mild irritation</i> |
| Response | Wash with plenty of water. |
| IF SWALLOWED | P301 + P330 |
| Immediate Symptoms | <i>low toxicity: no symptoms known or expected</i> |
| Response | Rinse mouth. |

Section 5: Fire-Fighting Measures

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

SN99 NO CLEAN SOLDER WIRE

4901

Section 6: Accidental Release Measures

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

Section 7: Handling and Storage

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

Section 8: Exposure Controls/Personal Protection

Substances with Occupational Exposure Limit Values

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

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SN99 NO CLEAN SOLDER WIRE

4901

Continued...

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

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH¹, OSHA, and Canadian provinces exposure limits were consulted. Limits from the RTECS database² and data 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.

Section continued on the next page

SN99 NO CLEAN SOLDER WIRE

4901

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/m³, 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

| | | | |
|----------------------------------|-----------------|----------------------------------|--------------------------|
| Physical State | Solid | Lower Flammability Limit | Not applicable |
| Appearance | Silver grey | Upper Flammability Limit | Not applicable |
| Odor | None | Vapor Pressure @20 °C | Not available |
| Odor Threshold | Not available | Vapor Density | Not applicable |
| pH | Not available | Specific Gravity @25 °C | 7.4 |
| Freezing/Melting Point | 228 °C [442 °F] | Solubility in Water | Negligible ^{a)} |
| Boiling Point | Not available | Partition Coefficient | Not available |
| Flash Point | Not applicable | Auto-ignition Temperature | Not available |
| Evaporation Rate | Not available | Decomposition Temperature | Not available |
| Flammability (solid, gas) | Not applicable | Viscosity @40°C | Not applicable |

a) Metal components are sparingly soluble

SN99 NO CLEAN SOLDER WIRE
4901
Section 10: Stability and Reactivity

| | |
|----------------------------|--|
| Reactivity | Tin may react violently in presence of disulfur dichloride and iodine bromide. |
| Chemical Stability | Chemically stable at normal temperatures and pressures |
| Conditions to Avoid | Extreme temperatures above 450 °C, such as those due to welding |
| Incompatibilities | Oxidizing agents, strong acids |
| Polymerization | Will not occur |
| Decomposition | 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

| | |
|-------------------|---|
| Eyes | Low toxicity: may cause redness and mild irritation. |
| Skin | Low toxicity: may cause mild irritation. |
| Inhalation | 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. |
| Ingestion | Low toxicity: no symptoms known or expected. (See chronic effects) |
| Chronic | Not available |

Acute Toxicity (Lethal Exposure Concentrations)

| Chemical Name | LD50 oral | LD50 dermal | LC50 inhalation |
|---------------------|-----------------------|------------------------|-----------------------------------|
| tin | >2 000 mg/kg Rat | >2 000 mg/kg Rabbit | 4.75 mg/m ³ 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 the RTECS² and ECHA were consulted. The data from supplier (M)SDS were also consulted.

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

| | |
|--|--|
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. |
| Serious eye damage/irritation | Based on available data, the classification criteria are not met. |
| Sensitization (allergic reactions) | Based on available data, the classification criteria are not met. |
| Carcinogenicity (risk of cancer) | None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP. |
| Mutagenicity (risk of heritable genetic effects) | Based on available data, the classification criteria are not met. |
| Reproductive Toxicity (risk to sex functions) | Based on available data, the classification criteria are not met. |
| Teratogenicity (risk of fetus malformation) | Based on available data, the classification criteria are not met. |
| STOT-single exposure | Based on available data, the classification criteria are not met. |
| STOT-repeated exposure | Based on available data, the classification criteria are not met. |
| Aspiration hazard | 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.

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.

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

Section 15: Regulatory Information**Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL.

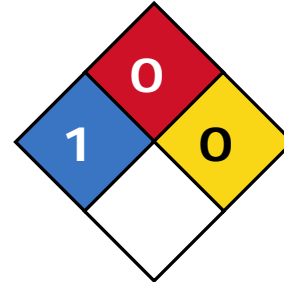
Hazardous Products Act (R.S.C., 1985, c. H-3)

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

Section continued on the next page

SN99 NO CLEAN SOLDER WIRE**4901****USA****Other Classifications****HMIS® RATING**

| | |
|-----------------------------|----------|
| HEALTH: | 1 |
| FLAMMABILITY: | 0 |
| PHYSICAL HAZARD: | 0 |
| PERSONAL PROTECTION: | |

NFPA® 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.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, June 06, 2014 revision, 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.

SN99 NO CLEAN SOLDER WIRE**4901****Section 16: Other Information**

SDS Prepared by Michel Hachey
Date of Review 02 August 2017
Supersedes 20 April 2015
Reason for Changes: Change to the product name.

Reference

- 1) ACGIH *2017 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 (2017).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

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 |

Section continued on the next page

SN99 NO CLEAN SOLDER WIRE**4901**

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.

Email: support@mgchemicals.com

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