SN100E WATER SOLUBLE SOLDER WIRE **49500WS**

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: SN100e Water Soluble Solder Wire

SDS Code: 49500WS

Related Part # 49500WS-454G

Recommended Use and Restriction on Use

Use: Lead free solder wire

Uses Advised Against: Brazing (torch welding/soldering)

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
WEB www.mgchemicals.com

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

☎ +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 ☎: ***+1-800-424-9300***

For emergencies involving dangerous goods; Collect 24/7
CANADA: Call CANUTEC ☎: ***+1-613-996-6666*** or ****666*** on cellular phones

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Not classified as hazardous according to GHS criteria

Label Elements

Signal Word	*None Mandated*
Pictograms	**Hazard Statements**
None mandated	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	95–99%
7440-50-8	copper	0.5-1%

Note: Also contains 3.3% non hazardous organic acid flux

Section 4: First-Aid Measures

Exposure Condition	*GHS Code/Symptoms/Precautionary Statements*
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	*mild irritation, redness*
Response	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN	P302 + P364
Immediate Symptoms	*mild skin irritation*
Response	Wash with plenty of water.
IF INHALED	P304 + P340
Immediate Symptoms	*fume inhalation may cause cough, irritation*
Response	Remove person to fresh air (out of the contaminated zone) and keep comfortable for breathing.
IF SWALLOWED	P301 + P330
Immediate Symptoms	*headache, nausea, muscular pain.*
Response	Rinse mouth.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Do Not use water on fires where molten metal is present.
Specific Hazards	In a fire, this product can release metal oxide fumes and irritation flux fumes.
Combustion Products	Produces carbon oxides (CO and CO_2) and tin oxides (SnO_x)
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Avoid breathing fumes/vapors. Remove or keep away all sources of extreme heat or open flames.
Environmental Precautions	Avoid releasing to the environment.
Containment Methods	Not applicable—not readily flowable.
Cleaning Methods	Solidified waste may be collected in a waste container. Avoid creating dust.
Disposal Methods	Dispose of spill waste according to Section 13. If product is not contaminated, it may be reused.

Section 7: Handling and Storage

Prevention	Keep out of reach of children.
	Do not breathe 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	Keep cool.

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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Continued…

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^3 1.0 mg/m^3 1.0 mg/m^3 1.0 mg/m^3 1 mg/m^3 1 mg/m^3	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[1], OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS database[2] and 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).

Note: Because soft soldering temperatures are generally too low to generate metal fumes, the risks of metal or metal compound generation are negligible. However, the use of a local exhaust system is highly recommended. The iron soldering temperatures are high enough to generate potentially toxic fumes due to the volatilization or degradation of the flux and of the coating material on the soldered surface.

Personal Protective Equipment

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles.

Skin Protection

Use of protective gloves if skin contact is likely.

Respiratory Protection

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

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. Ensure vapor cartridges are stored in sealed plastic bags when not being used

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 available
Appearance	Wire, Silver Grey	**Upper Flammability Limit**	Not available
Odor	Odorless	**Vapor Pressure @20 °C**	Not available
Odor Threshold	Not applicable	**Vapor Density**	Not available
pH	Not applicable	**Specific Gravity @25 °C**	>6.9
Freezing/Melting Point	227 °C [441 °F]	**Solubility in Water** [a)]	Partially soluble
Boiling Point	1 380 °C [2 516 °F]	**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 available	**Viscosity @40 °C**	Not applicable

a) Metal components are sparingly soluble

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	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

Routes of Exposure

Ingestion, Inhalation

Symptoms Summary

Eyes	Fumes may cause eye irritation.
Skin	May cause mild skin irritation.
Inhalation	Fumes may cause nose, throat and lung irritation.
	Overexposure to dust or metal fumes may lead to pneumoconiosis (or Stannosis
Ingestion	May cause headache, nausea, or muscular pain.
Chronic	No known effects

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/m^3 Rat

Note: Toxicity data from the RTECS[2] and ECHA databases were consulted. The data from supplier (M)SDS were also consulted.

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Other Toxicological Effects

Skin corrosion/irritation	Mild irritant
Serious eye damage/irritation	Based on available data, classification criteria are not met.
Sensitization (allergic reactions)	Based on available data, classification criteria are not met.
Carcinogenicity (risk of cancer)	Not classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.
Mutagenicity (risk of heritable genetic effects)	Based on available data, classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	Based on available data, classification criteria are not met.
Teratogenicity (risk of fetus malformation)	Based on available data, classification criteria are not met.
STOT-single exposure	Based on available data, classification criteria are not met.
STOT-repeated exposure	Based on available data, classification criteria are not met.
Aspiration hazard	There are no category 1 components, and the kinematic viscosity is >20.5 mm^2/s at 40 °C.

Section 12: Ecological Information

In massive form, the available evidence does not meet classification thresholds on ecological toxicity.

Acute Ecotoxicity

Not available

Chronic Ecotoxicity

Not available

Biodegradability

Non biodegrable.

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) and **US DOT 49 CFR** (Parts 100 to 185) **Regulations**.
Not Regulated

Air

Refer to ICAO-IATA Dangerous Goods Regulations.
Not Regulated

Sea

Refer to IMDG Dangerous Goods Regulations.
Not Regulated

Section 15: Regulatory Information

Canada

Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL/NDSL.

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.

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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# 7440-22-4; reportable quantity = 5 000 lb, which is 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.

Section 16: Other Information

MSDS Prepared by	Michel Hachey
Date of Issue	30 May 2017
Supersedes	09 September 2014
Reason for Changes:	Format update in compliance with HCS2012 and WHMIS 2015.

Reference

1) ACGIH *2013 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 (2013).

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
NOELR	No observable effect loading ratio
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

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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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