SN60PB40 NO CLEAN SOLDER WIRE **4870-4877**

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Sn60Pb40 No Clean Solder Wire

Other Means of Identification: 4870–4877

Related Part # 4870-18G, 4875-227G, 4875-454G, 4876-227G, 4877-227G

Recommended Use and Restriction on Use

Use: leaded solder wire

Uses Advised Against: Do NOT use to make joints and fittings in private or public potable water supply (prohibited by the Federal Hazardous Substance Act).

Do not use brazing soldering methods such as high temperature torch soldering or torch welding.

Details of Manufacturer or Importer

Manufacturer
MG Chemicals
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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 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

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Criteria	Category	Signal Word	Pictograms
Specific Target Organ Toxicity Repeated Exposure	1	Danger	Health
Reproductive Toxicity	1	Danger	Health
Carcinogenicity	2	Warning	Health
Lactation Effect	*additional*	*none*	*none*

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H360: May damage fertility or the unborn child H372: Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure by ingestion or inhalation H351: Suspected of causing cancer
No symbol	H362: May cause harm to breast-fed children
Prevention	**Precautionary Statements**
P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust or fumes.
P263	Avoid contact during pregnancy and while nursing.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves, protective clothing, and eye protection.
P264	Wash hands thoroughly after handling.

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Response	**Precautionary Statements**
P308 + P313	IF exposed or concerned: Get medical advice or attention.
Storage	**Precautionary Statements**
P405	Store locked up.
Disposal	**Precautionary Statements**
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

Hazards Not Otherwise Classified

Other Criteria	**Hazard Statements/Precautionary Statement**	**Signal Word**	**Pictograms**
Child proofing measures	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.	None	None

Section 3: Composition/Information on Ingredients

CAS #	**Chemical Name**	**%(weight)**
7440-31-5	tin	59%
7439-92-1	lead	39%
65997-05-9	rosin, polymerized [a)]	2%

a) Based on available data, this substance is not classified as dangerous

Section 4: First-Aid Measures

Exposure Condition	*GHS Code/Symptoms/Precautionary Statements*
IF INHALED	P304 + P340, P308 + P313
Immediate Symptoms	*cough, irritation of the respiratory track (in extreme exposure cases: metallic taste, nausea, vomiting, and muscle cramps)*
Response	Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice or attention.
IF SWALLOWED	P301 + P330, P308 + P313
Immediate Symptoms	*abdominal pain, muscle cramps, joint pain, headaches, mood swings, nausea, vomitting*
Delayed Symptoms	*Developmental delays, high blood pressure, anemia, memory loss*
Response	Rinse mouth. IF exposed or concerned: Get medical advice or attention.
IF ON SKIN	P302 + P352, P333 + P313
Immediate Symptoms	*low toxicity: mild irritation*
Response	Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	*low toxicity: redness, mild irritation*
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 or attention.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use extinguish media suitable for surrounding materials. In presence of molten metal, do NOT use water on fire.
Specific Hazards	In a fire, this product can release metal oxide fumes and irritating flux fumes.
Combustion Products	Produces CO and CO_2, tin oxides (SnO_x), lead oxides (PbO_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	Do NOT breathe the dust or 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 sealable 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.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

To prevent the formation of exposure to lead vapors, do not use soldering methods that exceed 450 °C [842 °F].

Do not breathe fumes or dust.

Do not eat, drink, or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas. Avoid contact during pregnancy and while nursing.

Handling

Wear protective gloves, protective clothing, and eye protection. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace.

Wash hands thoroughly after handling.

Storage

Store locked up.

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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Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
lead	ACGIH	0.05 mg/m^3	Not established
	U.S.A. OSHA PEL	0.05 mg/m^3	Not established
	Canada AB	0.05 mg/m^3	Not established
	Canada BC	0.05 mg/m^3	Not established
	Canada ON	0.05 mg/m^3	Not established
	Canada QC	0.15 mg/m^3	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' SDSs 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. Thermal resistant gloves should be worn instead if contact with molten metal is expected.

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

Generally, for emergencies and exposure above 0.5 mg/m^3, 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. 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 applicable
Appearance	Silver grey	**Upper Flammability Limit**	Not applicable
Odor	None	**Vapor Pressure @20 °C**	~1.3 hPa [a)] [~1 mmHg]
Odor Threshold	Not available	**Vapor Density**	Not applicable
pH	Not available	**Relative Density @25 °C**	8.5
Freezing/Melting Point	183 °C [361 °F]	**Solubility in Water**	Negligible [b)]
Initial Boiling Point	1 380 °C [2 516 °F]	**Partition Coefficient n-octanol/water**	Not available
Flash Point	Not applicable	**Auto-ignition Temperature**	Not available
Evaporation Rate	Not available	**Decomposition Temperature**	Not available
Flammability	Non Flammable	**Viscosity @25 °C**	Not applicable

a) For hydrogenated rosin only
b) Massive metal components are sparingly soluble

Section 10: Stability and Reactivity

Reactivity	Not available
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	May cause redness and mild irritation
Skin	May cause mild irritation.
Inhalation	May cause coughing and irritation of the nose, throat, and lungs. Overexposure to dust or metal fumes may lead to metallic taste, nausea, vomiting, muscle cramps, pneumoconiosis (or Stannosis), anemia, central nervous system effects.
Ingestion	May cause abdominal pain, muscle cramps, joint pain, high blood pressure, headaches, and mood swings. (See chronic effects)
Chronic	Prolonged and repeated exposure to lead may cause hemeatological effects, high blood pressure, and adverse central and peripheral nervous systems effects. Symptoms of lead poisoning include metallic taste, colic, nausea, vomiting, muscle cramps, memory loss, and learning problems. Ingestion or inhalation have fertility, developmental, and lactation effects.

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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
lead	>2 000 mg/kg Rat	>2 000 mg/kg Rat	5.05 mg/m^3 Rat 4 h
rosin, polymerized	>5 000 mg/kg Rat	>2 000 mg/kg Rat	Not available

Note: Toxicity data from RTECS[2] and ECHA were consulted. The data from supplier SDSs' were also consulted.

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)
Carcinogen based on animal studies and North American guidelines and regulation.

Lead [CAS# 7439-92-1]

IARC (Supl. 7, 1987) Group 2B: Possibly carcinogenic to humans

ACGIH A3: Confirmed animal carcinogen with unknown relevance to human

CA Prop 65: Listed as a carcinogen

NTP (2011 Report): Reasonably anticipated to be a human carcinogen

Mutagenicity
(risk of heritable genetic effects)
Based on available data, the classification criteria are not met

Reproductive Toxicity
(risk to sex functions)
Lead is believed to decrease fertility in males and females.

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Teratogenicity (risk of fetus malformation)	Lead presents a reproductive and developmental hazard based on epidemiological and animal studies.
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Epidemiological and animal studies confirmed neurodevelopmental, neurodegenerative, peripheral nervous system, haematological, cardiovascular, kidney and renal effects.
Aspiration hazard	Not applicable. This product doesn't contain any Category 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 lead.

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

Acute Ecotoxicity

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

Chronic Ecotoxicity

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

Biodegradability

Not available

Bioaccumulation

Lead bioaccumulates

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.**
Not Regulated

Air

Refer to ICAO-IATA Dangerous Goods Regulations.
Not Regulated

Sea

Refer to IMDG 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.

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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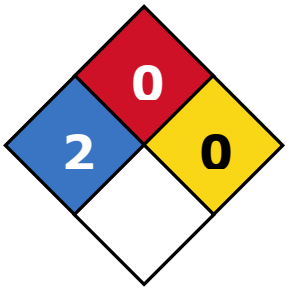
USA

Other Classifications

HMIS® RATING

HEALTH:	* 2
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 lead (CAS# 7439-92-1; reportable quantity = 10 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, USA).

This product contains lead, which is listed as a carcinogen and a reproductive toxicant.

Europe

RoHS (Restriction of Hazardous Substances Directive)

This product contains lead and is therefore subject to restricted uses with respect to the RoHS directive.

It does not contain any cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP.

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

Prepared by the Regulatory Affairs Department

Date of Review 06 March 2020

Supersedes 26 September 2019

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

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)
BBP	Butyl benzyl phthalate
DBP	Dibutyl phthalate
DEHP	Bis(2-ethylhexyl) phthalate
DIBP	Diisobutyl phthalate
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

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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.

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