

Description

The 4925–4926 SAC305 RA Solder Wire is an electronic grade, lead-free solder wire. It uses the predominant lead-free alloy composition and exceeds J-STD-006C and meets ASTM B 32 purity specifications. It is complemented with a rosin activated, medium activity flux that is classified as ROM1 according to J-STD-004B. This solder is a great alternative to leaded solders.

The 4925–4926 non-leaded solder series achieve a consistent solder and flux percentage through a state-of-the-art, extrusion, wire-drawing machine. This machine continually monitors the wire to prevent voids and ensure consistency, providing a top-grade solder wire.

Benefits & Features

- **Lead free & rosin activated flux**
- **Alloy exceeds J-STD-006C and meets ASTM B 32 purity requirements**
- **Flux meets J-STD-004B**
- **Fast wetting**
- **Fast flowing**
- **Non-corrosive**
- **Non-conductive residue**

COMPLIANCE

- ✓ Dobb-Frank ([DRC conflict free](#))
- ✓ REACH ([compliant](#))
- ✓ RoHS ([compliant](#))

Wire Sizes Availability

<i>Cat No.</i>	<i>Std. Wire Gauge</i>	<i>Diameter</i>		<i>Packaging</i>	<i>Sizes</i>
4925	21	0.81 mm	0.032 in	Spool	¼ or 1 lb
4926	19	1.02 mm	0.040 in	Spool	¼ or 1 lb

General Flux Parameters

<i>Properties</i>	<i>Value</i>
Residue Removal	Not required
Flux Percentage	2.2%
Flux Feature	Fast wetting, fast flowing, non-conductive
Shelf Life	5 y

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Thermal Properties	Value
Melting Point, Solidus	217 °C [423 °F]
Melting Point, Liquidus	221 °C [430 °F]
Tip Temperature Upper Limit	Do not exceed 350 °C [662 °F]
Coefficient of Thermal Expansion (CTE) ^{c)}	23.5 ppm/°C
Thermal Conductivity	58.7 W/(m·K)

NOTE: This table present typical literature values for SAC305 alloys.

a) N/mm² = mPa; lb/in² = psi;

b) International Annealed Copper Standard: 100% give 5.8×10^7 S/m.

c) CTE unit conversions: ppm/°C = $\mu\text{m}/(\text{m}\cdot\text{K}) = \text{in}/\text{in}/\text{°C} \times 10^{-6} = \text{unit}/\text{unit}/\text{°C} \times 10^{-6}$

Solder Alloy Composition

Properties	Value	Properties	J-STD-006C	4925–4926
<i>MAIN INGREDIENTS</i>		<i>IMPURITIES</i> ^{a)}	<i>REQUIREMENTS</i>	<i>SPECIFICATIONS</i>
Sn	96.2 to 96.8%	Sb	≤0.20% Max	≤0.05% Max
Ag	2.8 to 3.2%	Bi	≤0.10% Max	≤0.05% Max
Cu	0.4 to 0.6%	In	≤0.10% Max	≤0.05% Max
		Pb	≤0.07% Max	≤0.05% Max
		Au	≤0.05% Max	≤0.002% Max
		As	≤0.03% Max	≤0.01% Max
		Fe	≤0.02% Max	≤0.01% Max
		Ni	≤0.01% Max	≤0.005% Max
		Al	≤0.005% Max	≤0.001% Max
		Zn	≤0.003% Max	≤0.001% Max
		Cd	≤0.002% Max	≤0.001% Max

a) Exceeds the requirements of J-STD-006C and meets ASTM B 32.

Storage

Protect from direct heat or sunlight. Store between 18 to 27 °C [65 to 80 °F].

Cleaning

The flux residue does not need to be removed for typical applications. If removal is desired, a solvent system like the *MG 4140* can be used. For best results, warm the cleaning solution to about 40 °C [104 °F].

Health and Safety

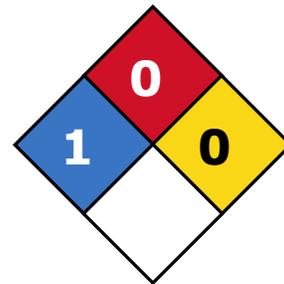
Please see the 4925x (where x = 5, 6) **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

Health and Safety: Avoid breathing fumes. Wash hands thoroughly after use. Do not ingest.

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)

Packaging and Supporting Products

<i>Cat. No.</i>	<i>Form</i>	<i>Package</i>	<i>Net Weight</i>	
4925-112G	Solid wire	Spool	113 g	0.25 lb
4925-454G	Solid wire	Spool	454 g	1.0 lb
4926-112G	Solid wire	Spool	113 g	0.25 lb
4926-454G	Solid wire	Spool	454 g	1.0 lb

a) Box of 25 pocket packs



SAC305 RA Solder Wire 4925–4926 Technical Data Sheet

ISO 9001:2008 Registered Quality System. Burlington, Ontario, CANADA SAI Global File: 004008

4925–4926

Technical Support

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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Warranty

M.G. Chemicals Ltd. warrants this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

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