



235 Kilvert Street  
Warwick, RI 02886

A World-Class Quality Partner  
ISO 9001:2000  
Certified

**PRODUCT: SILVABRITE 100®  
LEAD-FREE SOLDER**

**DESCRIPTION:**

SILVABRITE 100® was developed to meet market demands for a safe and easy to use solder for drinking water systems and other applications.

**CHARACTERISTICS:**

SILVABRITE 100® is a lead-free and antimony-free, non-toxic solder which contains the same safe metals used in dental fillings. It offers a low melting point and wide melting range for excellent flow and control. SILVABRITE 100® also creates strong, corrosion resistant and leak-tight joints.

**ADVANTAGES:**

1. Lead-free composition
2. Easy to use
3. Excellent “capping off” ability
4. Excellent penetration and flow
5. Higher shear, creep and tensile strength than 50/50
6. Good appearance

**STANDARD FORMS:**

- **Wire** – Solid, Acid Core, Rosin Core and Organic Core available in a variety of standard and custom diameters
- **Preforms** – Custom manufactured rings, punchings or spheres
- **Bars** – Bulk alloys

**APPLICATIONS:**

SILVABRITE 100® is suitable for joining copper, steel, stainless steel, nickel metals and alloys. It is most often applied by torch heating or soldering iron, but can be used with all conventional heating methods. SILVABRITE 100® should be used with Wolverine General Purpose Soldering Flux or SILVABRITE 100® Water Soluble Flux. Its flow and wetting action are excellent.

	Composition			Initial Temp.	Recommended Temp. Range
	Tin	Copper	Silver		
SILVABRITE 100®	95.6%	4%	0.4%	440°F	440-500°F
SILVABRITE®	96%	---	4%	430°F	430-450°F
SILVABRITE S™	95%	--	5%	430°F	430-550°F

\*Total impurities are present in levels less than 0.0015 (0.15%)

SILVABRITE 100® is a registered trademark of Wolverine Joining Technologies.

SILVABRITE 100® is listed by IAPMO plumbing codes.

**PRODUCT: SILVABRITE 100<sup>®</sup> - CONTINUED**

Electrical Conductivity (% IACS)

SILVABRITE 100 <sup>®</sup>	12.0
60/40 Tin	11.5

Density (lbs./cu. in.)

SILVABRITE 100 <sup>®</sup>	.266
SILVABRITE <sup>®</sup>	.267
SILVABRITE S <sup>™</sup>	.267

Bulk Room Temperature Tensile Strength

SILVABRITE 100 <sup>®</sup>	6,900 psi
50/50 Tin-Lead	6,000 psi
95/5 Tin-Antimony	6,400 psi

**Pressure Rupture Test:**

Soldered joints using SILVABRITE 100<sup>®</sup> and L type copper tube (up to 1” diameter) at room temperature, 250°F and 300°F, withstood pressure to the extent that failure occurred in the copper tube and not the soldered joint.

**Stress Rupture Test (Creep Strength):**

Standard ½” copper couplings are soldered in this test and put under constant loads. The time in which the joint failed by breaking is indicated in the table below:

Solder	1,700 lbs.	1,500 lbs.	1,200 lbs.	700 lbs.	500 lbs.
SILVABRITE 100 <sup>®</sup>	5 days	7-8 days	144 days	--	--
50/50 Tin-Lead	<1 day	<1 day	<1 day	5-7 days	33 days

**Corrosion Test Data:**

Using **standard Tafel** electrochemical techniques and ASTM-Corrosive Water D1384, the following corrosion test data has been compiled.

SILVABRITE 100 <sup>®</sup>	0.31 mils/year
50/50 Tin-Lead	0.63 mils/year
95/5 Tin-Antimony	2.2 mils/year



**PRODUCT: SILVABRITE 100<sup>®</sup> - CONTINUED**

SILVABRITE 100<sup>®</sup> is twice as corrosion resistant as 50/50 Tin-Lead and seven times as corrosion resistant as 95/5 Tin-Antimony.

With less corrosive water the difference between these solders will drastically increase.

**LIABILITY-DISCLAIMER:**

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