

50/50

(Solderite™ 50/50)

NOMINAL COMPOSITION

Tin	49.5%-51.5%	Antimony	0.5% Max	Arsenic	0.025% Max
Lead	Remainder	Cadmium	0.001% Max	Iron	0.02% Max
Copper	0.08% Max	Aluminum	0.005% Max	Zinc	0.005% Max
Silver	0.015% Max	Bismuth	0.25% Max		

PHYSICAL PROPERTIES

Color	White
Melting Point (Solidus)	361°F (183°C)
Flow Point (Liquidus)	421°F (216°C)
Specific Gravity	8.89
Density (lbs /in ³)	0.321
Electrical Conductivity (%IACS)	10.9
Electrical Resistivity (Microhm-cm)	15.8

*IACS = International Annealed Copper Standard

SOLDERING CHARACTERISTICS

50/50 is a general purpose solder used in applications involving soldering of copper and copper alloys and/or ferrous base alloys. This alloy offers satisfactory corrosion resistance properties.

This alloy should not be used in soldering of potable water systems due to its high lead content. A lead free alloy should be used instead. For water potable systems LM recommends Silver/Copper/Tin system such as Silvabrite 100, or Tin/Silver systems such as Silvabrite and/or Silvabrite S.

50/50 solder should not be used in applications where soldered joints are subject to high stress or vibrations, since this alloy lacks the necessary ductility. Additionally, lead-bearing solders may not be used in potable water systems.

PROPERTIES OF SOLDER JOINTS

The properties of a soldered joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal.

AVAILABLE 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

SPECIFICATIONS

50/50 alloy conforms to the following specifications:

- American Society for Testing and Materials (ASTM) B32 Sn50

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: A00000077, Legacy Codes: 63-500, 30486.

Distribution P/N: 53137, 58464 (Acid Core), 58463 (Rosin Core).

SAFETY INFORMATION

The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting". For more complete information refer to the Material Safety Data Sheet for 50/50.

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