

Technical Data Sheet for 95sn/5sb Solder Alloy

Product Name:	95Sn/5Sb Solder Alloy
Composition:	95% Tin (Sn), 5% Antimony (Sb)
Melting Point:	Approximately 240-250°C (464-482°F)
Density:	7.4 g/cm ³
Tensile Strength:	30-40 MPa
Electrical Conductivity:	9.5×10^6 S/m
Thermal Conductivity:	35 W/m·K
Coefficient of Thermal Expansion:	23×10^{-6} /°C (25-150°C)
Flux Compatibility:	Good with most common flux types
RoHS Compliance:	RoHS compliant, lead-free alloy

Product Description

95Sn/5Sb is a lead-free solder alloy composed of 95% tin and 5% antimony. It is commonly used in applications where a high melting point is required, such as plumbing, electrical connections, and certain industrial soldering operations. This alloy provides good mechanical strength and reliable joint integrity.

Physical Properties

Melting Point: The melting point of 95Sn/5Sb solder alloy ranges from approximately 240 to 250°C (464-482°F), providing a higher temperature range suitable for specific soldering applications.

Mechanical Properties

Tensile Strength: The typical tensile strength of 95Sn/5Sb solder alloy ranges from 30 to 40 MPa, indicating its ability to form solder joints with sufficient mechanical strength.

Electrical Conductivity: 95Sn/5Sb exhibits an electrical conductivity of 9.5×10^6 S/m, making it suitable for applications that require good electrical conductivity.

Thermal Conductivity: The thermal conductivity of this solder alloy is approximately 35 W/m·K, allowing for efficient heat transfer during soldering processes.

Coefficient of Thermal Expansion: 95Sn/5Sb has a coefficient of thermal expansion of $23 \times 10^{-6} / ^\circ\text{C}$ (25-150°C), ensuring compatibility with various materials and reducing the risk of thermal stress-induced damage.

Flux Compatibility

95Sn/5Sb solder alloy demonstrates good compatibility with most common flux types. It readily interacts with fluxes to remove oxide layers and facilitate the wetting and bonding of solder joints.

Safety and Compliance

95Sn/5Sb solder alloy is RoHS compliant, meeting the requirements of the Restriction of Hazardous Substances directive. It is a lead-free alternative to traditional tin-lead alloys, making it environmentally friendly and suitable for applications that demand compliance with RoHS regulations.

Note:

This technical data sheet is provided for informational purposes only and should not replace specific product documentation or testing. Users should consult the manufacturer's guidelines and perform their own evaluations to ensure suitability for their intended applications.