

Technical Data Sheet for 63sn/37pb Solder Alloy

Product Name:	63Sn37Pb Solder Alloy
Composition:	63% Tin (Sn), 37% Lead (Pb)
Melting Point:	Approximately 183°C (361.4°F)
Density:	8.4 g/cm ³
Tensile Strength:	30-45 MPa
Electrical Conductivity:	9.6×10^6 S/m
Thermal Conductivity:	47 W/m·K
Coefficient of Thermal Expansion:	23.5×10^{-6} /°C (25-150°C)
Flux Compatibility:	Good with most common flux types
RoHS Compliance:	Not RoHS compliant due to the presence of lead (Pb)

Product Description

63Sn/37Pb is a eutectic solder alloy composed of 63% tin and 37% lead. It is widely used in various soldering applications due to its excellent wetting properties and reliable joint strength. This alloy offers a low melting point, making it suitable for use in electronics assembly, plumbing, and other soldering operations.

Physical Properties

Melting Point: The melting point of 63Sn37Pb solder alloy is approximately 183°C (361.4°F), providing a relatively low temperature for soldering operations.

Mechanical Properties

Tensile Strength: The typical tensile strength of 63Sn37Pb solder alloy ranges from 30 to 45 MPa, indicating its ability to form strong and durable solder joints.

Electrical Conductivity: 63Sn37Pb exhibits a high electrical conductivity of 9.6×10^6 S/m, making it suitable for applications where good electrical connectivity is required.

Thermal Conductivity: The thermal conductivity of this solder alloy is approximately 47 W/m·K, allowing efficient heat transfer during soldering processes.

Coefficient of Thermal Expansion: 63Sn37Pb has a coefficient of thermal expansion of 23.5×10^{-6} /°C (25-150°C), ensuring compatibility with various materials and reducing the risk of thermal stress-induced damage.

Flux Compatibility

63Sn37Pb 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

It is important to note that 63Sn37Pb solder alloy is not RoHS compliant due to the presence of lead (Pb). Adequate safety measures should be taken during handling and disposal to prevent lead contamination and comply with local environmental 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.