

Technical Data Sheet for 50in/50pb Solder Alloy

Product Name:	50In50Pb Solder Alloy
Composition:	50% Indium (In), 50% Lead (Pb)
Melting Point:	Approximately 125°C (257°F)
Density:	11.3 g/cm ³
Tensile Strength:	8-12 MPa
Electrical Conductivity:	3.4×10^6 S/m
Thermal Conductivity:	14 W/m·K
Coefficient of Thermal Expansion:	30×10^{-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:

50In50Pb is a solder alloy composed of 50% indium and 50% lead. It is known for its low melting point and is often used in low-temperature soldering applications. This alloy offers good wetting properties and can be used for joining components with sensitive heat requirements.

Physical Properties:

Melting Point: The melting point of 50In50Pb solder alloy is approximately 125°C (257°F), making it suitable for low-temperature soldering operations.

Mechanical Properties:

Tensile Strength: The typical tensile strength of 50In50Pb solder alloy ranges from 8 to 12 MPa, indicating its ability to form solder joints with relatively low mechanical strength.

Electrical Conductivity: 50In50Pb exhibits an electrical conductivity of 3.4×10^6 S/m, making it suitable for applications that require moderate electrical conductivity.

Thermal Conductivity: The thermal conductivity of this solder alloy is approximately 14 W/m·K, allowing for efficient heat transfer during soldering processes.

Coefficient of Thermal Expansion: 50In50Pb has a coefficient of thermal expansion of 30×10^{-6} /°C (25-150°C), ensuring compatibility with various materials and reducing the risk of thermal stress-induced damage.

Flux Compatibility

50In50Pb 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 50In50Pb 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.