Sn63Pb37 Solder Alloy

Product Description

Sn63Pb37 is one of the most common eutectic SnPb alloy used in different soldering processes before lead free implementation. SnPb alloy possess excellent wettability to various substrates and hence assures superior solderability. It can be used in dipping application. It is available in the forms of solder bars and solder wires.

Application

Sn63Pb37 can be used for wave soldering, dipping, HASL and auto-topping processes. The operating temperature should be set >240 ˚C, depending on applications.

Conveyor speed can be set up to a maximum of 1.8 m/min for single-sided boards and recommended to set at between 1.2m/min to 1.6m/min for double-sided boards. Recommended preheat temperature is 90 – 120 ˚C on-board, dependent on flux activation temperature, machine design and board complexity.

Top-up Solder

Sn63Pb37 is recommended as top-up solder.

Storage

Store the solder bar in a cool, dry and non-corrosive environment. Wrap up the solder bar when not in use to reduce exposure to environment. Solder bar can be kept for 5 years if proper storage conditions are observed.

Health & Safety

The product when use or handling maybe hazardous to health or environment. Please refer to Material Safety Data Sheet for more information.

Packaging

Solder Bar: 25kg per box, Solid Wire: 20kg per roll. For any other packing requirements, please refer to the sales department.

Specification

Item	Result
Alloy Melting Point DSC at 5 ºC/min	183 ˚C
Density Water Displacement Method	8.42 g/cm^3

Spread Factor

JIS Z 3197 8.3.1.1

245˚C	> 80%

Wettability

IPC-TM-650 2.4.14.2

JIS Z 3197 8.3.1.2

245˚C	5.54 mN, 0.33 sec

Mechanical Properties (As-Cast)

Instron Series IX Automated Materials Test System

ASTM E8M (3 mm/min at 23 ˚C)

Tensile Strength	55.41 MPa
Yield Strength	44.64 MPa
Max Percent Strain	62.15 %
Energy to Yield Point	0.17 J
Energy to Break Point	16.47 J
Toughness	20.07 MPa

Alloy Composition

Main Composition		**JIS Z 3282 (wt%)**
Tin	Sn	63 +/- 0.5
Lead	Pb	Remainder
Contamination		
Antimony	Sb	0.20 max
Silver	Ag	0.10 max
Aluminium	Al	0.001 max
Arsenic	As	0.03 max
Bismuth	Bi	0.10 max
Cadmium	Cd	0.002 max
Copper	Cu	0.08 max
Iron	Fe	0.02 max
Indium	In	0.10 max
Nickel	Ni	0.01 max
Zinc	Zn	0.001 max

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