

Product Information

FELDER Special Soft Solder Bi57Sn42Ag1

Lead-free soft solder rods

Not standardised solder alloy on the basis of Bi58Sn42 acc. to DIN EN ISO 9453

Item No.: 13480315

Felder lead-free soft solders do not contain any substances which are subject to restriction according to directive 2011/65/EU ("RoHS")

Application

With its very low melting point of 138 °C **FELDER** lead-free soft solder **Bi57Sn42Ag1** is especially suited for soldering of temperature-sensitive components. **Due to the density anomaly here (the alloy expands - as water does - during solidification!), the use in conventional wave and selective soldering machines is not recommended without prior consultation with the system manufacturer!**

Properties

Solders with a high content of bismuth solidify coarsely crystalline and behave ductile only with slow deformation, with rapid deformation they are brittle. It is characteristic that the alloy will spread after solidification. A direct soldering of steel with BiSn-solders is not possible. We recommend the previous copper plating or tinning. The addition of 1 % silver has a grain refining effect and improves the physical properties of the solder alloy.

Composition:	57 % Bi, 42 % Sn, 1 % Ag
Melting temperature:	138 – 140 °C
Density:	8,6 g/cm ³
Electrical Conductivity:	2,9 x 10 ⁶ Sm ⁻¹
Hardness (HB):	24
Tensile strength:	~ 55 N / mm ² (at 20 °C and rapid deformation)

Composition in % according to ISO 9453

Sn	Pb	Sb	Bi	Cu	Au	In
41 - 43	≤0,07	≤0,10	Rest	≤0,05	≤0,05	≤0,10
Ag	Al	As	Cd	Fe	Ni	Zn
0,8 - 1,2	≤0,001	≤0,03	≤0,002	≤0,02	≤0,01	≤0,001

Delivery Forms

Pressed flat rods, approx. 250 g, 400 mm long.
 Other delivery forms are available on request.

Advice

Other alloys are included in our standard delivery program.