



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")

All information about our products is the result of our long standing experience which we would like to pass on to our customers as application support. Since we do not have any influence on the application with our products, please see the warranty claims in our conditions of sale because our liability is limited.

This product information does not constitute warranted properties.

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.