

Product Information

Silver hard solder, cadmium free

Cadmium free silver hard solder
acc. EN ISO 17672, DIN EN 1044, AWS A5.8

Art.-No.: 34

Since 2015 we abstain from using environmental harmful colorants and deliver our silver hard solders with white flux coating and imprinted alloy, dimension and batch number.



All information about our products are the result of our long standing experience, which we would like to pass on to our customers. 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 represent warranted properties.

Description

FELDER silver hard solder are silver based brazing alloys with excellent flow characteristics. They can be used for brazing any steel types, copper and copper based alloys as well as nickel and nickel based alloys. The soldering can be processed by brazing with flame or induction brazing procedures.

Standards

EN ISO 17672	DIN EN 1044	EN ISO 3677	AWS A5.8	DIN 8513	Article-no.:
Ag 130	AG 107	B-Cu36ZnAgSn-665/755	-	L-Ag30Sn	3421....
Ag 134	AG 106	B-Cu36AgZnSn-630/730	-	L-Ag34Sn	3431....
Ag 140	AG 105	B-Ag40CuZnSn-650/710	BAG-28	L-Ag40Sn	3442....
Ag 145	AG 104	B-Ag45CuZnSn-640/680	BAG-36	L-Ag45Sn	3447....
Ag 156	AG 102	B-Ag56CuZnSn-620/655	BAG-7	L-Ag55Sn	3455....

Composition

Alloy	Composition (weight- %)			
	Ag	Cu	Zn	Sn
Ag 130	29-31	35-37	30-34	1.5-2.5
Ag 134	33-35	35-37	25.5-29.5	2-3
Ag 140	39-41	29-31	26-30	1.5-2.5
Ag 145	44-46	26-28	23.5-27.5	2-3
Ag 156	55-57	21-23	15-19	4.5-5.5

Properties

Alloy	Melting range	Density	Working temperature	Tensile strength
Ag 130	665-755°C	8,8 g/cm ³	740°C	430 N/mm ²
Ag 134	630-730°C	9,0 g/cm ³	710°C	430 N/mm ²
Ag 140	650-710°C	9,1 g/cm ³	690°C	400 N/mm ²
Ag 145	640-680°C	9,2 g/cm ³	670°C	400 N/mm ²
Ag 156	620-655°C	9,4 g/cm ³	650°C	400 N/mm ²

Application field

For hard soldering of hard steel, steel, stainless steel, copper, nickel and nickel alloys. Also suitable for cryogenic applications. No significant reduction in the tensile strength and notched impact strength of solder joints on copper, brass and steel at -196 °C. The soldering joints are applicable with operating temperatures up to 200°C. These solders are also used in the medical and food sector. Also suitable for piping with which technical gases are transported, e.g. Oxygen, Nitrogen, Hydrogen, CO₂ and noble gases, e.g. Argon and Helium. Bare material should be soldered in connection with a flux according DIN EN 1045 – FH 10 („CuFe Nr. 1“ paste respectively „CuFe P“ powder).

Application advices

Soldering parts must be free of oxide layers, tinder dross, oils and greases. When using bare material apply sufficient flux on the soldering joint and surrounding area. Heat the work piece up to working temperature, apply solder rod and let the flux melt.

When using flux-coated silver hard solder, the work piece is heat up of up to 250°C, apply solder rod and let the flux melt. Heat up to working temperature and let the solder melt off. The flame of the solder burner should be adjusted from neutral of up to slightly reducing (gas surplus). The flux residues have to be removed thoroughly; they are water soluble.

Delivery forms

Type	Dimensions
500 mm rods 1 kg-fabrication rings wire on spools	Ø 1,0 mm
	Ø 1,5 mm
	Ø 2,0 mm
	Ø 3,0 mm
Flux-coated rods according to DIN EN 1045	Ø 1,5 mm x 500 mm
	Ø 2,0 mm x 500 mm
	Ø 3,0 mm x 500 mm

Storage information

Protect against humidity.

Stored dry and dust-free, the material is durable for an unlimited period.

Further information

FELDER cadmium free silver hard solders do not contain any materials above of 0,1 weight-% (0,01 weight-% for cadmium) based on each homogeneous material, for which exist restrictions in the guideline 2011/65/EU („RoHS II“),

Please do not hesitate to contact us for any further information.