FELDER seit 1979 LÖTTECHNIK

Product Information

FELDER-ISO-Core® "UltraClear", lead free

Flux filled, halide- and lead-free soft solder wire for soldering in the electronics production
Flux according to DIN EN 61190-1-3 / IPC J-STD-004: REL0, DIN EN ISO 9454-1: 1231

Item no.: (55/56)51….

Description

High-quality, lead-free solder wire for hand and machine soldering in the field of electrical engineering, electronics and also electro mechanics. The flux characterises itself by **high temperature resistance** and **no** spattering during the melting process. An **optimal wetting** as well as **standard exceeding spreading values** make this lead-free solder wire to a top-quality product among the cored solder wires.

The new FELDER flux recipe "UltraClear" is built upon a basis of synthetic resins (free from colophony) and has been perfectly matched to the requirements of the lead-free soldering technique in the assembly production:

- **fast wetting and high spreading** on all common surfaces in electronics
- **no flux spatters** on the components, on plant sections or on users' hands
- **crystal clear flux residues** to enhance the optical impression
- **lowest outgassing and neutral smell** reduce the workplace pollution
- **easily removable flux residues from the solder iron tips,** which can be removed with conventional means (**FELDER Tinner**, soldering sponge, metal wool)
- **flux type REL0 according to J-STD-004 and DIN EN 61190-1-3** for assembly production
- **the durability of the solder iron tips will be considerably extended**

Solder Alloys

Alloy	EN ISO 9453:2014	DIN EN 61190	Melting Range	Item-No.
Sn100Ni+	Sn99,25Cu0,7Ni0,05	Sn99,25Cu,7Ni,05	227°C	555194....
SN100^{-403}C	Sn99,25Cu0,7Ni0,05	Sn99,25Cu,7Ni,05	227°C	565194….
Sn99Ag+	Sn99Cu,7Ag0,3(NiGe)	Sn99Cu,7Ag0,3 (NiGe)	217 - 227°C	555181....
Sn96Ag+	Sn96,5Ag3Cu0,5(NiGe)	Sn96,5Ag3Cu0,5 (NiGe)	217 - 219°C	555176....
Sn96,5Ag3Cu0,5	Sn96,5Ag3Cu0,5	Sn96,5Ag3Cu,5	217 - 219°C	5176….
Sn95,5Ag3,8Cu0,7	Sn95,5Ag3,8Cu0,7	Sn95,5Ag3,8Cu,7	217°C	5184....
Sn99,3Cu0,7	Sn99,3Cu0,7	Sn99,3Cu,7	227°C	5194....
Further lead-free alloys are available on customer's request.				

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Impurities / Tolerances according to EN ISO 9453:2014

e.g.: SAC 305

Element	Ag	Al	As	Bi	Cd	Cu	Fe
Content (%)	3,0 ± 0,2	0,001	0,03	0,1	0,002	0,5 ± 0,2	0,02
Element	Pb**	Sb	Sn	Zn			
Content (%)	0,07	0,1	Rest	0,001			

e.g.: Sn100Ni+

Element	Ag	Al	As	Bi	Cd	Cu	Fe
Content (%)	0,003	0,001	0,03	0,1	0,002	0,7± 0,2	0,02
Element	Ge	Ni	Pb**	Sb	Sn	Zn	
Content (%)	0,01- 0,015	0,05 ± 0,03	0,07	0,1	Rest	0,001	

**The maximum lead content in FELDER electronic solder wires is 0.05 %.

Properties

Flux type : 1231 according EN ISO 9454-1 (REL0)

Flux content : 2.2 % (standard), 1.5 %, 3.5 %

Halide content : < 0.01%

Flux distribution : single cored (standard), 3-, 5-cored also available

Copper mirror test

acc. to IPC-TM-650, 2.3.32 : passed (no mirror breakage)

Corrosion test

acc. to IPC-TM-650, 2.6.15 : no corrosion

SIR-test

acc. to IPC-TM-650, 2.6.3.3 : >100 MΩ at 85 °C/85 % RH, 168 h

Migration test : no e-corrosion

Ø in mm : 0.25, 0.35, 0.50, 0.75, 1.00, 1.50, 2.00

Spool sizes in kg : 0.10, 0.25, 0.50, 1.00, 2.50, 5.00

 Status: 02/22

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Cleaning

The crystal clear, solid flux residues, classified as REL0 (1231), are also non-corrosive on non-ferrous metals. Therefore, they may remain on the soldering joint.

Advice

Lead-free FELDER-ISO-Core® "UltraClear" solder wires do not contain any substances that are subject to restriction by directive 2011/65/EU ("RoHS").

We are pleased to produce all solder wires according to your company standards.

Storage

Keep dry and as far as possible dust-free. Minimum durability: 60 months.

Handling Advice

Please refer to the corresponding MSDS.

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