FELDER seit 1979 LÖTTECHNIK

Product Information

Silver-containing Copper Brazing Alloys "Cu-Rophos® 2/5/15/18"

For flux-free soldering of copper pipes

"Cu-Rophos®2", CuP279 (DIN EN 17672),CP105 (DIN EN 1044), B-Cu92PAg (ISO 3677), L-Ag2P (DIN 8513)
"Cu-Rophos®5", CuP281a (DIN EN 17672),CP104 (DIN EN 1044), B-Cu89PAg (ISO 3677), L-Ag5P (DIN 8513)
"Cu-Rophos®15", CuP284 (DIN EN 17672), CP102 (DIN EN 1044), B-Cu80AgP (ISO 3677), L-Ag15P (DIN 8513)
"Cu-Rophos®18", CuP286 (DIN EN 17672), CP101 (DIN EN 1044), B-Cu75AgP (ISO 3677), L-Ag18P (DIN 8513)

According to DVGW-Arbeitsblatt GW2 (worksheet) for hard soldering of copper pipes especially in the refrigeration and air-conditioning technology

Item No.: 33.....

Description

Silver containing copper phosphorous brazing alloys for flux-free soldering of copper pipes in the oil-, gas- and liquid gas-installation as well as in heating and drinking water installation over 28 x 1.5 mm pipe dimension.

Properties

Due to the silver content, it is optimally suitable for applications in the cooling and air-conditioning sector as well as with vibration loaded machines.
Excellent flow characteristics: copper to copper applicable without additional flux, for soldering at brass and red brass an additional hard solder flux (Cu-Rosil® according to DIN EN ISO 18496 (DIN EN 1045) – FH 10) must be used.

Solder joints made with **FELDER** Cu-Rophos® brazing alloys are suitable for constant temperature up to 200 °C, for soldering at gas and liquid gas facilities up to 150 °C.

Resistance to sub-zero temperatures in the refrigeration and air-conditioning technology:

Cu-Rophos®2/5 down to -50 °C

Cu-Rophos®15/18 down to -70 °C

Tensile strength of the solder joint: 250 N/mm²

Product	Melting range	Working temperature	Density	Electrical conductivity
Cu-Rophos®2	645-825 °C	min. 740 °C	8.1 g/cm³	4.0 m / Ωmm²
Cu-Rophos®5	645-815 °C	min. 710 °C	8.2 g/cm³	5.0 m / Ωmm²
Cu-Rophos®15	645-800 °C	min. 700 °C	8.4 g/cm³	7.0 m / Ωmm²
Cu-Rophos®18	645-670 °C	min. 650 °C	8.4 g/cm³	not known

	Composition (mass-%)			
Product	Cu	Ag	P	Item no.
Cu-Rophos®2	91.5	2	6.5	3331….
Cu-Rophos®5	89	5	6	3333….
Cu-Rophos®15	80	15	5	3340….
Cu-Rophos®18	75	18	7	3350….

 State:09/23

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Application Advice

Free soldering joint from oxide layers, tinder, dross, oils and greases. Heat up the work piece up to working temperature. The solder rod should be joined to the soldering joint in a veil of flames from which comes a reducing effect on the copper surface. If the solder does not run itself around the capillary gap, the solder rod has to be applied successively at several points. This is always the case when bigger diameters have to be soldered and the flame does not completely surround the soldering joint. For such applications fork burners have been proved which with its two flames can heat up the entire soldering joint. For soldering joints in corners or wall slots, which can badly be seen from the back side, a low-melting silver solder, e. g. **FELDER Ag 145** and flux „Cu-Rosil®"should be used as a precaution.

Attention! Do not use sulphurous media with phosphorus containing copper hard solders.

FELDER "Cu-Rophos®"copper hard solders do not contain any materials above of 0.1 mass-% (0.01 mass-% for cadmium), based on each homogeneous material for which exist restrictions in the guideline 2011/65/EU ("RoHS II").

Delivery Form

Dimensions	Packing units	Delivery form
1.5 mm square or round x 500 mm	25.0 kgs	1.0 kg box
2.0 mm square or round x 500 mm		
3.0 mm square or round x 500 mm		
4.0 mm square or round x 500 mm		

Additional Delivery Forms:

1 kg production rings, wire on spools, shaped wire parts, rings, wire sections, straps and foils.

Storage and best before date

Store protected from humidity. Unlimited shelf life when properly stored.

Safety Advice

Regarding safety information please refer to the corresponding MSDS.

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