

Product Information

Silver containing Copper Hard Solders “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“, CuP281 (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.....

“Cu-Rophos®2“, “Cu-Rophos®5“, “Cu-Rophos®15“, “Cu-Rophos®18“

Description

Phosphorus containing copper hard solder for flux-free soldering of copper pipelines in the oil, gas and liquefied 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 without additional flux, for soldering at brass and red brass an additional hard solder flux (**Cu-Rosil®** according to DIN EN 1045 – FH 10) has to be used.

Phosphorus containing copper hard solders are suitable for constant temperature up to 200° C.

For soldering at gas and liquefied gas machines (working temperatures from -50° up to +150° C).

Cu-Rophos®2 and 5 from -50° C up to +150° C

Cu-Rophos®15 and 18 from -70° C up to +150° C

Product	Alloy	Melting range	Working-temperature	Tensile strength of soldering	Density	Electrical conductivity
Cu-Rophos®2	L-Ag2P	645-825 °C	min. 740° C	250 N/mm ²	8.1 g/cm ³	4,0 m / Ωmm ²
Cu-Rophos®5	L-Ag5P	645-815 °C	min. 710° C	250 N/mm ²	8.2 g/cm ³	5,0 m / Ωmm ²
Cu-Rophos®15	L-Ag15P	645-800 °C	min. 700° C	250 N/mm ²	8.4 g/cm ³	7,0 m / Ωmm ²
Cu-Rophos®18	L-Ag18P	645-670 °C	min. 650° C	250 N/mm ²	8.4 g/cm ³	not known

Product	Composition (weight-%)			Item no.
	Ag	Cu	P	
Cu-Rophos®2	2	91,5	6,5	3331....
Cu-Rophos®5	5	89	6	3333....
Cu-Rophos®15	15	80	5	3340....
Cu-Rophos®18	18	75	7	3350....

“Cu-Rophos®2“, “Cu-Rophos®5“, “Cu-Rophos®15“, “Cu-Rophos®18“

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 L-Ag45Sn** and flux „**Cu-Rosil**®“ should be used as a precaution.

FELDER “**Cu-Rophos**®“ copper 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”).

Attention!

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

Delivery Form

Dimensions	Packing units	Delivery form
1,5 mm square or round x 500 mm	25,0 kgs	1,0 kg carton
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		

Store protected from humidity. Properly stored durable at least 2 years.

Regarding safety information please refer to the correspondent EU-MSDS!