TECHNICAL SHEET
Ag2CuP

Product name
Ag2CuP

Class of product
Silver-Copper-Phosphorous brazing alloy

Corresponding standards

ISO 17672	CuP 279
EN1044	CP 105
AWS A5.8-04	~ BCuP-6
DIN 8513	L-Ag2P

Nominal composition (weight %)

Ag:	1,8 – 2,2
P:	6,2 – 7,2
Cu:	90,6 – 91,4

Physical and technical properties

Melting range (Solidus – Liquidus):	640 - 810 °C
Working temperature:	704 – 815 ºC
Density:	8,1 g/cm^3
Tensile Strength (filler metal):	55 kg/mm^2
Electrical conductivity:	9,1 % IACS
Electrical resistivity:	18,95 micro-Ohm-cm
Recommended joint gap:	0,05 – 0,2 mm
Continuous service joint operating temp.:	-55 / + 150 °C
Max. short service joint operating temp.:	200 °C

Range of application

Ag2CuP is a silver-copper-phosphorous brazing alloy, with very good flow characteristics.

It can be used to join copper to copper or copper based base materials (e.g. bronzes / brasses).

The phosphorus contained in the alloy acts as a fluxing agent, so that it is not necessary to use an additional flux when brazing copper to copper; however when joining copper based materials (e.g. bronzes / brasses) a proper flux should be used.

Ag2CuP should not be used on ferrous or nickel alloys, or alloys containing more than 10% of nickel, due to the formation of brittle intermetallic compounds which will cause failure of the joint.

Corrosion resistance of Ag2CuP is generally satisfactory, except when the joint is contact with sulphurous atmospheres (especially at high temperatures); the alloy should therefore not be used to join parts that could come into contact with sulphur containing medias.

Typical brazing processes include flame, induction and furnace brazing.

Tensile strength of joints brazed with Ag2CuP will generally exceed base metals strength.
Joint strength is however a function of various factors, such as: type of base metals to be joined, type of joint, joint clearance, brazing procedure, etc.

Typical applications are in plumbing, in the electric and electromechanic industry, and in the refrigeration and air-conditioning industry.

Characteristics Make-up

Rods:	Ø 1,5 ⇨ 4,0 mm ; □ 1,5 ⇨ 4,0 mm	Length: 500 / 1.000 mm
Wires:	Ø 0,5 ⇨ 3,0 mm	Spooled and coiled
Rings		
Preforms from Wire		
Pastes & Powders		

Other dimensions are available upon request.

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