TECHNICAL SHEET
Ag18CuP LP

STELLA WELDING ALLOYS

Product name
Ag18CuP LP

Class of product
Silver-Copper-Phosphorous brazing alloy

Corresponding standards

ISO 17672	CuP 285
EN1044	-----
AWS A5.8-04	BCuP-8
DIN 8513	-----

Nominal composition (weight %)

Ag:	18
Cu:	Bal.
P:	6,3

Physical and technical properties

Melting range (Solidus – Liquidus):	643 - 666 °C
Minimum brazing temperature (flow point):	670 °C
Density:	8,4 g/cm^3
Tensile Strength (filler metal):	50 kg/mm^2
Electrical conductivity:	6 % IACS
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

Ag18CuP LP is a silver-copper-phosphorous brazing alloy, with very low melting point and excellent 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.

Ag18CuP LP 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 Ag18CuP LP 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.

Due to its very narrow melting range, which prevents liquation problems, Ag18CuP LP is particularly recommended for furnace brazing.

Tensile strength of joints brazed with Ag18CuP LP 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 the refrigeration, electric and electromechanic industry.

Characteristics Make-up

Rods:	Ø 1,5 ⇨ 4,0 mm	Length: 500 / 1.000 mm
Wires:	Ø 1,0 ⇨ 3,0 mm	Spooled and coiled

Rings
Preforms from Wire
Pastes & Powders

Other dimensions are available upon request.

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