

# TECHNICAL SHEET

## CuP8

### Product name

CuP8

### Class of product

Copper-Phosphorous brazing alloy

### Corresponding standards

ISO 17672	CuP 182
EN1044	CP 201
AWS A5.8-04	-----
DIN 8513	L-CuP8

### Nominal composition (weight %)

Cu: Bal.  
P: 7,5 – 8,1

### Physical and technical properties

Melting range (Solidus – Liquidus):	710 - 770 °C
Minimum brazing temperature (flow point):	720 °C
Density:	8 g/cm <sup>3</sup>
Tensile Strength (filler metal):	60 kg/mm <sup>2</sup>
Recommended joint gap:	0,05 – 0,15 mm
Continuous service joint operating temp.:	-55 / + 150 °C
Max. short service joint operating temp.:	200 °C

### Range of application

CuP8 is a copper-phosphorous brazing alloy, with excellent flow properties.

It can be used to join copper to copper or copper based base materials (e.g. bronzes / brasses), on vibration free joints.

CuP8 is extremely fluid at brazing temperature and will penetrate into very narrow gaps and very tight joints.

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.

CuP8 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 CuP8 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 CuP8 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 and air conditioning industries, for joining copper to copper on vibration-free joints; the alloy is very effective for very fast joining of tight-fitting copper pipes and tubing.

### 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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**STELLA**  
WELDING ALLOYS

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NOTE:

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