

# FONTARGEN A3002 FREEFLOW COPPER PHOSPHORUS SILVER BRAZING ALLOY

Fontargen A3002 FreeFlow is a low silver content alloy characterized by good flow behavior and gap filling properties. The homogeneous dispersion of the phosphorus increases the ductility of the wire that aims to avoid breakdowns during feeding, bending and forming process. Fontargen A3002 FreeFlow suits to brazing joints operated at temperatures between -60°C and +150°C. Fontargen A3002 FreeFlow offers a good corrosion resistance except when in contact with sulfurous environment, especially under high temperatures. Due to the formation of brittle intermetallic compounds which can cause failures of the joint, phosphorus containing filler metals should not be used on Fe- and Ni- containing base alloys.

Product features	Product benefits	User benefits
» High phosphorus content	» High capillary activity » Low filler metal working temperature	» Very good and fast penetration into narrow gaps and tight joints » Fast brazing process » Low brazing temperature process
» Silver content	» Lowers down working temperature of the filler metal » Allows dropping down phosphorus content	» Good mechanical characteristics
» Homogeneous dispersion of the phosphorus	» Reproductive flow characteristics » No phosphorus nest » Preforms manufacturing for half and/or full automated processes possible	» Good control of the wetting process » Easy bending of wires and rods if necessary
» Auto fluxing on Cu/Cu applications	» Due to the presence of phosphorus in the alloy, there is no need of flux when brazing copper to copper. However, when joining other base materials (e.g. bronzes / brasses), using an appropriated flux is necessary	» No post braze cleaning when brazing copper to copper
» Operating temperatures	» Determined by notched flexural impact test acc. to DIN EN 10045	» Can be used for joints/parts operated at temperatures between -60°C and +150°C



## Typical applications

- » Heat exchangers / Evaporators / Coils
- » Domestic & Industrial Refrigerators
- » Air Conditioners
- » Water heaters / Boilers

## Mainly used for

- » Return bends (U-Bends) on coils
- » Parts subject to diverse dynamics forces: (vibrations, dilatation, etc...)

# FONTARGEN A3002 FREEFLOW

Classification		
AWS A5.8	EN ISO 17672	DIN 8513
BCuP-6	CuP280	L-Ag2P

Typical chemical composition, wt. %			
Cu	Ag	P	Others
Bal.	2.0	7.0	0.15

Mechanical properties					
Working Temperature	Melting Range	Specific weight	Elongation	Operating service temperatures of the joint	Recommended joint gap
740°C	645°C/ 788°C	8.1g/cm <sup>3</sup>	5%	-60°C/ +150°C	0.05mm / 0.2mm

Base materials
Brass, Bronze, Copper

Heat sources
Open flame, Induction, Resistance, Furnace

Flux
FH 10 acc. to EN 1045 => F300 Series

Art. Nr.	Form	Dimensions (mm)*	Packaging*
A3002 FreeFlow	Rods/Wire/Ring	1.5 / 2.0 / 2.5 / 3.0 x 500	Bundle / Spool / Box / Bucket

\* Other dimensions/packaging on request

