PAG 60

CuP-Ag 6% Manual brazing

Certified A.T.G.

TECHNICAL DATA SHEET N°145

Specifications:

Alloy	Working Temperature (˚C)	NF EN ISO 17672	NF A81 362	DIN 8153	EN ISO 3677	ATG
Cu-P-Ag-Ni	690	CuP 283a	CuP291	-	BCu87PAg(Ni)645-725	-

Characteristics:

PAG 60 is a brazing alloy with 6.0% Silver. An addition of 0.1 % Nickel is done to improve the ductility of the brazed joint. This addition also refines the alloy, increasing the brazed joints mechanical characteristics and improving electrical conductivity. This special alloy certified by **A.T.G. (French Ministry of Industry)** in conjunction with **AGFLUX** on checking number **A.T.G. 1530** is recommended for high strength capillary brazing. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron (Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. The corrosion resistance of this alloy is comparable to that of copper excepts, when the joint is exposed to sulphur containing gas or at elevated temperatures. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without Silver.

Applications:

PAG 60 It is recommended for hard brazing of copper and optionally copper brass pipes of combustible installations. As well as all low temperature applications. In Air conditioning and refrigeration application, **PAG 60** can be used for the service temperature between +150˚C (without loss in strength) to -50˚C. This alloy can be used with flame.

Typical Chemical Compositions (%):

Cu	P	Ag	Ni	Si	Bi	Cd	Pb	Zn	Al	Zn + Cd	Max. impurities
Reminder	7.30	6.00	0.10	0.1	<0.03	<0.01	<0.020	<0.050	<0.010	<0.05	<0.10
Si as per ATG B.524.3 0.05-0.15%											

Typical Physical Properties

Colour	Solidus (˚C)	Liquidus (˚C)	Density g/cm³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	645	725	8.2	4%	450	-	-

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size, Types and Heat Source Recommendations :

Size (mm)	Type							
	Bare	Coated	Coil	Preforms				
1.50, 2.00, 2.50, 3.00	√	√	–	√	√	√	√	√

Preform sizes and other type other than above standard dimensions are solicited case to case basis

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