

TECHNICAL DATA

PHOS 15

Silver/Copper/Phosphorus Brazing Alloy



DESCRIPTION

Phos 15 is a self-fluxing silver/copper/phosphorus brazing alloy.
Phos 15 is designed for the joining of copper and high copper content alloys.
When brazing copper, the phosphorus within the alloy imparts a metallurgical based self-fluxing capability.
Phos 15 may also be used to braze copper alloys such as brass, bronze or gun metal, but in this case a separate flux is required, as the self-fluxing action only occurs on copper.
Phosphorus containing alloys should not be used on iron or nickel containing alloys, as this will result in brittle joints.
Silver is used to increase the ductility, but this reduces the flow properties.
Phos 15 is the most ductile of all the silver/copper/phosphorus brazing alloys, and as such is the only brazing alloy of its type that can be manufactured into foil, tape, strip and fine wire. Consequently it is used to produce a wide range of brazing alloy pre-forms, rings, punched and pressed parts such as discs, washes and clips.

APPLICATIONS

Phos 15 is ideal for electrical engineering applications where it is used to make electrically conductive joints of high mechanical strength or where resistance to vibration is required.
Such applications include the brazing of rotor bars to end rings in electric motors, fabrication of bus bars and lightning conductors, and the joining of copper pipes in heating, ventilation and refrigeration or other such high integrity applications.

TECHNICAL DATA

Composition	Silver 14.5% Copper 80% Phosphorus 4.5% Impurities according to EN 1044: 1999 Group CP
Specification	EN 1044: 1999 - CP102 BS EN ISO 17672: 2010 - CuP 284
Melting point	Solidus 645°C Liquidus 800°C
Brazing temperature	700°C minimum
Tensile strength	640N/mm ²
Elongation	10%
Hardness (HV)	185
Electrical conductivity	11% I.A.C.S @ 20°C
Recommended flux	Y or U

SUPPLY FORMATS

Rod	1.5mm - 3.0mm diameter
Foil/Strip	0.08mm - 6.0mm thickness
Powders	Typically -60#