



Silver-flo™ 452 – Cadmium Free Silver Brazing Filler Metal

Silver-flo™ 452 is a cadmium free silver brazing filler metal. It exhibits a comparatively low brazing temperature with a short melting range. Silver-flo™ 452 is relatively free flowing and produces neat joints with small fillets. These characteristics have meant that it has found a place between the free-flowing low-melting Silver-flo™ 55 and the medium-flow higher-melting Silver-flo 40™ filler metals.

This filler metal has been used for brazing of PCD segments in tool applications. In these cases the brazing temperature has successfully been kept below the point at which the PCD begins to degrade.

It should be noted that this filler metal contains tin and may be described as being 'hot-short'. It should not be quenched from high temperatures (in excess of 300°C) and care should be taken when it is used to braze components with widely differing coefficients of thermal expansion as in both cases cracking of the joints may occur.

Silver-flo 452™ is recommended where the presence of silicon is not desirable. This alloy is suitable for seawater applications, being resistant to dezincification.

Composition:	45%Ag, 27%Cu, 25.5%Zn, 2.5%Sn
Conforms to:	EN 1044 1999 AG104, ISO 17672:2010 Ag 145, formerly L-Ag45:Sn
Melting range:	640-680°C

Uses for this Product

This filler metal can be used to join all the common engineering materials (excluding aluminium) – such as copper, copper alloys (including, brasses, bronzes, gun metal, nickel silvers, aluminium bronze, copper nickel) and steel (including, mild, carbon, tool steel, stainless steels and low alloy steel). It may be used for brazing tungsten carbide and PCD segments however where cracking of the carbide or wetting of the filler metal may be an issue specialised silver brazing filler metals containing nickel / manganese are often preferred.

Conditions for Use

This filler metal is mainly used for brazing in air with a flux. In most cases Easy-flo™ Flux can be used in conjunction with Silver-flo™ 452. However, flux selection is application dependent. Please refer to JM technical department or flux product datasheets before selecting a flux.

Product Availability

Rod	1.5mm, 2.5mm
Flux Coated Rod	On request
Wire	On request
Strip	On request
Foil	On request
Braze-pastes	On request
Other	Rings, Preformed Shapes

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