

Technical data

Silver brazing filler metal

Silver-flo™ 453S – Cadmium free silver brazing filler metal

Product description

Silver-flo™ 453S is a cadmium free silver brazing filler metal. It combines a low brazing temperature with a short melting range. Silver-flo™ 453S contains 3% tin and a 0.2% addition of silicon, and as a consequence is free flowing. It produces smooth neat joints with small fillets. These characteristics have made it a popular choice for hand torch brazing of decorative brass components.

This filler metal may be used to braze steel assemblies but is not recommended on carbon steel components that are subject to high impact or fatigue stress in service.

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.

The optimum joint gap at brazing temperature is normally 0.05-0.15mm.

Composition: 45%Ag, 25%Cu, 26.8%Zn, 3%Sn, 0.2%Si

Specification: Proprietary JM specification

Melting range: 640-680 °C

Uses for this product

Silver-flo™ 453S is used extensively for the brazing of brass components which require smooth neat joints. 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 stainless 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™ 453S. However, flux selection is application dependent. Please refer to JM technical department or flux product datasheets before selecting a flux.

Product availability

Rod	1mm, 1.5mm, 2.5mm
Flux coated rod	On request
Wire	1.5mm, 2mm
Strip	On request
Foil	On request
Braze-pastes	On request
Others	Rings, Preformed Shapes

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