

## Technical data

### Silver brazing filler metal

#### Argo-braze™ 502 – Silver brazing filler metal

#### Product description

Argo-braze™ 502 is a specialised cadmium free silver-copper-zinc-nickel brazing filler metal with good flow and melting characteristics. It finds use in the brazing of tungsten carbide to steel and is seen as a cadmium free alternative to the Johnson Matthey Easy-flo™ No.3 filler metal. Some users also prefer this filler metal over the more commonly used Argo-braze™ 49H as it appears less 'sticky' when molten, allowing for easier final positioning of the tungsten carbide tip. It also produces a bright, clean braze line in comparison to the Argo-braze™ 49H, where the manganese content of this alloy can result in a dull, rough, red coloured surface to the braze. Nickel is a component of the filler metal's composition, this being present to enhance its wetting and bonding properties on tungsten carbide. It is suitable for use on carbide tips where the largest dimension does not exceed 20 mm. The product is commonly supplied in the form of a brazing paste used for brazing the tips onto circular saw blades or router blades. Argo-braze™ 502 can also be supplied in the form of a tri-foil suitable for use on cemented tungsten carbide tips over 20mm in size.

Argo-braze™ 502 can be used to braze 300 series stainless steel, where it offers a high degree of protection against interfacial corrosion. It can also be used on the 400 series materials, but it does not offer the same level of protection against interfacial corrosion as on the 300 series materials. Argo-braze™ 502 will fill joint gaps of between 0.075mm and 0.20mm at brazing temperature.

**Composition:** 50 %Ag, 20%Cu, 28%Zn, 2%Ni

**Conforms to:** AMS 4788, AWS A5.8 BAg-24, ISO 17672:2010 Ag 450

**Melting range:** 660-705 °C

#### Uses for this product

Argo-braze™ 502 can be used on stainless steel, mild steel, tungsten carbide and non-ferrous alloys. It should be noted that on 400 series stainless steels freedom from interfacial corrosion cannot be guaranteed. One of its principal uses is as a filler metal for brazing tungsten carbide tools.

#### Conditions for use

When brazing tungsten carbide to steel the filler metal should ideally be pre-placed in the joint in foil form. A standard flux such as Easy-flo™ Flux Powder or Easy-Flo™ 100 Flux Paste also sold as Mattiflux™100 Flux Paste should be used in conjunction with Argo-braze™ 502.

For the brazing of tungsten carbide special boron modified 'brown' fluxes such as Tenacity™ No. 6 Flux Powder or Paste may improve alloy wetting and flow.

Please note: - When brazing stainless steel boron containing fluxes such as Tenacity™ No. 5A Flux, Tenacity™ No. 6 Flux and Tenacity™ No. 3A Flux Paste should be avoided as boron is known to increase the risk of interfacial corrosion.

#### Product availability

All forms available on request

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