



## Argo-braze™ 632 – Silver Brazing Filler Metal

Argo-braze™ 632 is a specialised silver-copper-tin-nickel brazing filler metal. It is used principally for brazing stainless steel joints or joints between stainless steel and another parent material that will be subject to attack in service by interfacial corrosion, commonly called crevice corrosion.

Where a joint involving a stainless steel member will be exposed to damp or wet aqueous based service environments the joint will be susceptible to interfacial corrosion, a unique and rapid form of corrosive attack. The name interfacial corrosion is derived from the failure mechanism, which involves the corroding away of the bonding layer (the interface layer) created between the filler metal and the parent material. It is common for joints that have failed due to interfacial corrosion to show a complete separation of the filler metal from the parent material and this can occur within a period as short as 3 months for immersed joints.

Argo-braze™ 632 has a long melting range and high brazing temperature (691 - 802°C) and flows relatively poorly when molten. It is useful as a gap-filling alloy producing large fillets. Argo-braze™ 632 is an alternative to the Argo-braze™ 56 filler metal, but the lower brazing temperature of the latter makes it easier to use in many applications.

Argo-braze™ 632 does not contain zinc and is hence resistant to dezincification in salt water or marine environments. Typical joint gaps at brazing temperature should be 0.1-0.25mm.

**Composition:** 63%Ag, 28.5%Cu, 6%Sn, 2.5%Ni  
**Conforms to:** AWS A5.8 BAg-21 / AMS 4774, ISO 17672:2010 Ag 463  
**Melting range:** 691-802°C

### Uses for This Product

Argo-braze™ 632 is used principally for brazing joints involving a stainless steel member in conditions where interfacial corrosion is likely to be a service hazard. It has been found to offer near complete protection from interfacial corrosion on 300 series austenitic stainless steels, while offering a very high level of protection on the martensitic 403,410, 440A grades and the ferritic 430 grade. Applications might include medical or surgical instruments, steam turbine blades and specialised stainless steel pipework.

### Conditions for Use

Due to the product's long melting range it is prone to liquate (separate into low and high melting constituents) if it is heated slowly through its melting range. For this reason rapid heating methods should be employed wherever possible. On small components Easy-flo™ Flux Paste or Easy-Flo™ 100 Flux Paste also sold as Mattiflux™ 100 Flux Paste are recommended. Where prolonged heating is required Tenacity™ No. 5 Flux should be used.

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

### Product Availability

Brazing Rods	1.5mm, 2mm, 2.5mm, 3mm	Wire	0.5mm to 3mm
Other forms	On request		

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