



Pallabraz[™] 810 Palladium Based Brazing Filler Metal

Pallabraz[™] 810 is a palladium-silver-copper brazing filler metal. Its primary area of application is in the fabrication of vacuum tube / thermionic valve type devices. Pallabraz[™] 810 is therefore normally supplied to 'Vacuum Grade' V1, which indicates that the filler metal is supplied to a tightly controlled volatile impurity specification, of the relevant standard. It is commonly used for the brazing of metallised alumina ceramics to controlled expansion nickel, iron, cobalt alloys, where it reduces the chances of intergranular penetration / liquid metal stress cracking occurring on un-plated, controlled expansion alloys.

Pallabraz[™] 810 can also be used to produce joints for moderately high (300 to 400°C) elevated temperature service conditions where it exhibits good oxidation resistance coupled with good elevated-temperature mechanical properties. It will produce joints on stainless steel that are resistant to interfacial corrosion and offers a good colour match particularly with the austenitic grades. It will also offer good levels of corrosion resistance in many other environments with other parent materials.

Composition: 5% Palladium, 68.5% Silver, 26.5% Copper

Conforms to: ISO 17672:2010 Pd 287 V1 (former specifications EN 1044:1999 PD106 V1 / BS 1845:1984 PD1V)

Melting range: 807-810°C

Uses for This Product

Typical applications are for brazing the internal structures of vacuum tube / thermionic valve devices, in particular the brazing of metallised alumina ceramics to nickel, iron cobalt alloys.

It can be used to braze a wide range of parent materials, however, when used for furnace brazing (vacuum or reducing atmosphere) of stainless steels and other similar materials the nickel plating of the parent material will be required.

Conditions for Use

Pallabraz[™] 810 is most often used for brazing in reducing atmosphere, hydrogen-containing furnace brazing operations. It can also be used in vacuum brazing applications, but the use of a partial pressure brazing technique is recommended to suppress the vaporisation of silver out of the filler metal. It can also be used in inert gas brazing operations. Pallabraz[™] 810's freedom from easily oxidisable and volatilised elements make it suitable for most controlled atmosphere brazing processes.

Pallabraz[™] 810 can also be used for brazing in air, flame brazing and HF induction where it would typically be used in conjunction with Tenacity[™] No. 5 Flux Powder.

Product Availability

All forms available and made to special order.

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