



Application

The Copper Phosphorus Alloy with Argentinum products are most widely applied to form joints on the following materials:

Copper tubes, pipes and fittings

Copper alloys including brass, bronze, nickel silver and aluminium-bronze

Electrical engineering applications

Conditions of Use

The Copper Phosphorus Alloy with Argentinum products are typically used for brazing in air with a welding gun, low melting point, high strength, good fluxility & wettability.

These products are self-fluxing when used on copper and therefore do not require a separate flux for this application.

Copper Phosphorus Alloy with Argentinum

| Part No. | Chemical Composition(%) | | | Melting Range(°C) | | Characteristic & Application |
|----------|-------------------------|---------|-----|--------------------|----------|---|
| | Ag | P | Cu | Solidus | liquidus | |
| SS2 | 1.8-2.2 | 6.8-7.2 | Bal | 645 | 788 | SS2 sits between SS5 and copper phosphorus alloy. It is less ductile and free flowing than SS5 but more ductile whilst being less free flowing than copper phosphorus alloy. It is used in HVAC&R applications for flux-free brazing of copper pipes, tubes and seams where these properties and its cost are acceptable. It is also used in some electrical engineering and plumbing applications. |
| SS5 | 4.8-5.2 | 6.5-7.0 | Bal | 643 | 771 | SS5 provides the best combination of flow and ductility of all the silver/copper-phosphorus type brazing filler metals. As a result it is extensively used in heat exchanger, air conditioning and refrigeration (HVAC&R) applications for flux-free brazing of copper pipes and tubes. It is also used for joining copper and copper alloys in electrical engineering applications. |
| SS6 | 5.8-6.2 | 7.0-7.5 | Bal | 643 | 813 | SS6 is one of the most free flowing filler metals from the copper phosphorus alloy with Ag range making it popular in heat exchanger, air conditioning and refrigeration (HVAC&R) applications. It is also one of the least ductile and should not be used in applications involving exposure to strong vibrations, impact loads or where some deformation of the joint might be expected in service. |
| SS15 | 14.5-15.5 | 4.8-5.2 | Bal | 645 | 800 | SS15 is a widely used product being the most ductile of the silver/copper-phosphorus brazing filler metals and the only one available as a foil. It is used extensively in electrical engineering applications where it is used to make electrically conductive joints. It is also used in heating and ventilation and refrigeration applications to join copper pipes. |
| SS18 | 17.5-18.5 | 6.2-6.5 | Bal | 645 | 645 | SS18 is the most free flowing filler metal from the copper phosphorus alloy with Ag range. It is used in niche applications where its low melting temperature, flow properties and electrical conductivity are an advantage. SS18 is not particularly ductile and should not be used in applications where vibration, stress or deformation of the joint in service are possible. |