

## Technical data

### Silver brazing filler metal paint

#### Silver-flo™ 55 Paint - Cadmium free silver brazing paint

#### Product description

Silver-flo™ 55 Paint consists of a silver brazing filler metal powder (Silver-flo™ 55) and a brazing flux (Easy-flo™ Flux Powder) combined in a volatile organic solvent. The proportions of filler metal to flux are optimised to make the paint suitable for brazing small components by most heating methods. The silver brazing filler metal in this product - Silver-flo™ 55, is cadmium-free. It combines a low brazing temperature with a short melting range, is very free flowing and produces neat joints with small fillets. These characteristics make it an excellent general purpose silver brazing filler metal. Joints made with Silver-flo™ 55 Paint are suitable for seawater applications, being resistant to dezincification. The optimum joint gap for this filler metal at brazing temperature is normally 0.05-0.15mm.

**Composition:** 55%Ag, 21%Cu, 22%Zn, 2%Sn

**Specification:** EN 1044 1999 AG103, BS 1845 (1984) AG14

**Melting range:** 630-660 °C

#### Uses for this product

Silver-flo™ 55 Paint is designed for use on small components which benefit from the brazing alloy / flux combination being able to be painted onto the surface. It has been used for small components, which are difficult to jig and on occasion on components held together by the operator in the flame of a brazing torch. Silver-flo™ 55 Paint has a limited amount of flux in it, therefore on medium or large components it would not be suitable because the flux would become exhausted. Larger components with extended heating times will require the application of a flux powder or paste to them prior to brazing and will in most cases use more filler metal than can be applied with Silver-flo™ 55 Paint. Silver-flo™ 55 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 with <2%Al and copper nickel), steels including, mild, carbon, tool steel, stainless steels, low alloy steel), tungsten carbide and PCD segments. On tungsten carbide specialised silver brazing filler metals containing nickel / manganese are often preferred.

#### Conditions for use

Ideally the paint should be applied to the (clean and grease free) components as a thick layer or deposit at the mouth of the joint. The components should be heated quickly and evenly to brazing temperature in air with induction, resistance or flame heating. Care should be taken not to heat the paint directly as this will cause the filler metal to melt before the joint has reached brazing temperature and will exhaust the flux. Once molten the Silver-flo™ 55 filler metal should be drawn into the joint by applying extra heat to the joint area. After cooling to below 200 °C in air the flux residues should be removed by scrubbing in hot water. If residues remain they may be removed by adding a dip in 10% dilute sulphuric acid solution followed by a water rinse. Silver-flo™ 55 Paint may show separation or settling out of the brazing filler metal particles and should be stirred before use until it forms a smooth consistent dispersion within its container. After being left open for periods of time, or if a pot is old, the paint will start to dry out. It may be reconstituted or thinned with methylated spirits although care should be taken not to over thin the product as this will dilute the product and lead to poor results.

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#### Safety

Silver-flo™ 55 Paint contains a volatile solvent, which gives off a heavy flammable vapor. Users are recommended to refer to SDS before use and apply fire precautions that are appropriate to petroleum products.

#### Product availability

Paint in 25g containers

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