

## Technical data

### Silver brazing filler metal - Silversmithing Solders

Silver-flo™ 67 - X (Extra Easy), E (Easy), H (Hard)

Silver-flo™ 74M (Medium), Silver-flo™ 81En (Enamelling)

#### Product description

Silver-flo™ 67X, 67E, 67H, Silver-flo™ 74M, and Silver-flo™ 81En are cadmium free silver brazing filler metals designed for use on silver and silver alloys. They are used by silversmiths and referred to as 'solders'. These filler metals are often simply described by using their traditional names 'Easy', 'Extra Easy' etc. These names describe the relative melting temperatures of the 'solders', 'Extra Easy' being the lowest and 'Hard' being the highest.

Each 'solder' has a minimum 66.7% of silver and hence can be used as a hallmarking grade 'silver solder' on sterling silver. Apart from the Silver-flo™ 81En these 'solders' generally have good melting ranges and are therefore relatively free flowing. They produce neat joints with small fillets and also provide a good colour match with silver alloys. These characteristics make them ideal for joining silver alloys in jewellery or silversmithing applications.

A silversmith can use the different 'solders' to build up a complex piece of silverware using the higher melting 'solders' first followed by the lower melting 'solders' in a highly skilled step-brazing operation. Silver-flo™ 67E can also be used on pure or high silver content alloys to prevent dissolution of silver by the molten brazing alloy. Silver-flo™ 81En 'Enamelling solder' is used for 'soldering' pieces of silver that will subsequently be enamelled. Here a 'solder' with a high melting point and with a low zinc content is required so that the enamelling process neither re-melts the soldered joints nor causes the zinc in the 'solder' to volatilise.

Alloy	Melting	Weight per strip	Size
Silver-flo™ 67X Easy	667-709°C	5g	2 x 0.45 x 600mm
Silver-flo™ 67E Easy	705-723°C	9g	2 x 0.45 x 600mm
Silver-flo™ 74 Medium	720-765°C	6g	2 x 0.45 x 600mm
Silver-flo™ 67H Hard	745-778°C	18g	2 x 0.45 x 600mm
Silver-flo™ 81En Enamelling solder	730-800°C	9g	2 x 0.45 x 600mm

#### Uses for this product

Primarily used for joining sterling / standard silver and other high silver content alloys used in the silversmithing industry.

#### Conditions for use

These alloys are designed for brazing in air with a flux. Flux selection is very much down to the individual choice of the silversmith. Easy-flo™ flux can be used in conjunction with the Silver-flo™ 67 products. Some silversmiths will add borax to the Easy-flo™ flux to extend its life when using the hard or enamelling solders. Tenacity™ 125 flux powder can also be used for this purpose and some silversmiths prefer the restrictive flow of this flux. These products are available as a brazing paste with or without flux depending on the heating method being deployed.

**Product availability** See table above. Please note: other forms and compositions can be supplied for international markets.

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