TECHNICAL SHEET
Ag85Mn

STELLA WELDING ALLOYS

Product name
Ag85Mn

Class of product
Silver based brazing alloy, cadmium-free, copper-free and zinc-free

Corresponding standards

ISO 17672	Ag 485
EN 1044	AG 501
AWS A5.8-04	BAg-23
DIN 8513	-----

Nominal composition (weight %)

Ag:	85
Mn:	15

Physical and technical properties

Melting range (Solidus – Liquidus):	960 - 970 °C
Brazing temperature:	~ 980 °C
Density:	10 g/cm^3
Recommended joint gap:	0,05 – 0,15 mm
Continuous service joint operating temp.:	-200 / +200 °C

Range of application
Ag85Mn is a high-temperature, cadmium-free, copper-free and zinc-free silver brazing alloy, with very good flow properties.

It can be used to join ferrous and non-ferrous base metals, such as steel, stainless steel, copper, bronze, etc.

It is particularly suited for the brazing of stainless steel elements when the joint is expected to be exposed to humid conditions and/or wet environments, and when there is the need to avoid joint failure by the mechanism of interfacial corrosion.

Thanks to the absence of copper in the alloy, Ag85Mn is also ideal for applications where copper is not a desired element and/or could be subject to corrosion effects such as in ammonia-bearing environments (all copper alloys are rapidly attacked and corroded by ammonia in moist conditions).

Brazing procedures range from manual to induction, to oven techniques.

The alloy is also suited to protective atmosphere furnace brazing, but the high manganese content requires the furnace atmosphere to have a dew point lower than - 40 °C, to ensure good results.

When brazing in an oxidizing environment a proper, high working temperature, flux should be used.

Tensile strength of joints brazed with Ag85Mn will generally exceed base metals strength. Joint strength is however a function of various factors, such as: type of base metals to be joined, type of joint, joint clearance, brazing procedure, etc.
Typical applications are in the refrigeration field for the manufacturing of units that use ammonia as the refrigerating medium, or for the high temperature brazing of stainless steel elements.

Characteristics Make-up

Rods:	Ø 0,5 ⇨ 4,0 mm	Length: 500 / 1.000 mm
Wires:	Ø 0,25 ⇨ 3,0 mm	Spooled and coiled
Rings		
Preforms from Wire		

Other dimensions are available upon request

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