TECHNICAL SHEET
Ag54Ni

STELLA WELDING ALLOYS

Product name
Ag54Ni

Class of product
Silver based brazing alloy, cadmium-free

Corresponding standards

ISO 17672	Ag 454
EN 1044	----
AWS A5.8	BAg-13
DIN 8513	----

Nominal composition (weight %)

Ag:	54
Cu:	40
Zn:	5
Ni:	1

Physical and technical properties

Melting range (Solidus – Liquidus):	720 - 855 °C
Brazing temperature:	~ 860 °C
Density:	~ 9,6 g/cm^3
Electrical Conductivity:	28,9 m/Ω·mm^2 (49,8 % IACS)
Electrical Resistivity:	3,46 μΩ·cm
Recommended joint gap:	0,1 – 0,25 mm
Continuous service joint operating temp.:	-200 / +200 °C

Range of application

Ag54Ni is a special application, cadmium-free, silver brazing alloy, with high melting point.

It can be used to join ferrous, non ferrous and dissimilar metals and alloys, such as steel, copper, copper alloys, nickel, nickel alloys, and is particularly suited to join stainless steels.

The nickel addition to the alloy retards joint or interface corrosion of the brazed assembly and improves bond strength.

Its broad melting range is helpful when joint clearances are not uniform.

Ag54Ni is suitable for furnace brazing due to its low zinc content, but can also be used by flame or induction brazing techniques. To avoid liquation, the alloy should be heated rapidly through is melting range.

When brazing in an oxidizing environment a proper flux should be used.

Tensile strength of joints brazed with Ag54Ni 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.

Characteristics Make-up

Rods
Flux Coated Rods
Wires
Strips
Rings
Preforms from Wire and from Strip
Pastes & Powders

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