TECHNICAL SHEET
Cu59ZnSnMn

STELLA WELDING ALLOYS

Product name
Cu59ZnSnMn

Class of product
Copper-zinc brazing alloy

Corresponding standards

ISO 17672	~ Cu 471
EN 1044	~ CU 304
AWS A5.8-04	~ RBCuZn-C
DIN 8513	-----

Nominal composition (weight %)

Cu:	59 - 61
Zn:	bal.
Sn:	0,2 – 0,5
Si:	0,15 - 0,4
Mn:	0,5 - 1

Physical and technical properties

Melting range (Solidus – Liquidus):	870 - 900 °C
Brazing temperature:	~ 900 °C
Density:	8,4 g/cm^3
Tensile strength (filler metal):	45 kg/mm^2

Range of application

Cu59ZnSnMn is a copper-zinc brazing alloy, with little additions of silicon, tin and manganese to control zinc vaporization and to promote flow properties.

It is used to join steels, cast irons, copper and copper alloys, nickel and nickel based alloys and also stainless steel when corrosion resistance is not a major requirement.

When brazing in an oxidizing environment the use of a proper high-temp flux, as BR1 is necessary.

Brazing techniques range from flame to induction.

Cu59ZnSnMn is often used for the braze-welding technique with liquid flux spread through the torch flame, by means of vaporizer equipments.

Because of the high zinc content it is recommended to keep the heating cycle to a minimum to prevent zinc vaporization.

Typical applications are found in the tubular constructions industry (metal furniture, bicycle frames, radiators & towel warmers etc.), mining tools, heating and cooling systems, etc.

Characteristics Make-up

Rods:	Ø 1,5 ⇨ 4,0 mm	Length: 500 / 1.000 mm
Flux Coated Rods:	Ø 1,5 ⇨ 4,0 mm	
Wires:	Ø 1,5 ⇨ 4,0 mm	(spooled and coiled)

Rings & Preforms from wire
Powder and Paste

Other dimensions are available upon request.

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