

## TECHNICAL DATA SHEET 255

### Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672 (2016-11)	AWS A-5.8	DIN 8513	EN ISO 3677	AMS
Ag-Cu-Zn-Sn	670	Ag 145Si	~BAg-36	L-Ag45Sn	B-Ag45CuZnSn(Si)-640/680	4761

### Characteristics:

**BRAZARGENT 5045** is a widely used Cd free alloy which main elements are: Copper, Zinc, high Silver (45%) and Tin contents. Silver and Tin contents lowers the melting point, increases fluidity and exhibits good wetting properties. Its excellent fluidity makes it suitable in closely fitting joints as able to penetrate very tight gaps. This Brazargent 5045 alloy offers very good performance in terms of operating, and makes it suited for delicate assemblies with tight clearances. Offers good mechanical properties and corrosion resistance.

The rods are available in bare rods (to be used with ours AGFLUX/ Paste, in coated rods (**AGFLUX or HP Flux**) and also available in **TBW** (Tubular Brazing Wire). This technology (Flux inside) offers a great efficiency in terms of application and control to metal/flux ratio (12% +/- 2).

### Applications:

**BRAZARGENT 5045** can be used for brazing any Steels, Copper and copper based alloys, stainless steels, as well for Nickel and Nickel based alloys. Can be used for brazing with flame or induction brazing procedures (except coated forms and Oven).

Applications: Typical applications are found e.g. in HVAC, automotive, food and sanitary, electric industry, household and healthcare sectors. Operating temperature for brazed joint is approx. -200°C to +200°C (without loss in strength).

### Typical Chemical Compositions (%):

Ag	Cu	Zn	Sn	Al	Bi	Cd	Si*	P	Pb	Max impurities
45.00	27.00	25.50	2.40	<0.001	<0.03	<0.01	0.10	<0.008	<0.025	<0.15

### Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm <sup>3</sup>	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Silver - Yellow	640	680	9.1	14 %	500	17.90	9.60

Ag 145Si: A small amount of Silicon (~0.1%) is added during the melting in order to improve stability of the alloy and brazability (no sparking effect).

### Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

### Standard Size, Types and Heat Source Recommendations:

Size Ø x 500 (mm)	Type					OXY/ACETYLENE	INDUCTION	AÉRO-PROPANE	FOUR/OVEN
	Bare	Coated	TBW	Coil/Spool	Preforms				
Ø 1.5 to 3.0	√	√	√	√	√	√	√	√	√
						Coated	√	X	√
Ø 0.7 to 3.0						√	√	√	√

Customised sizes other than above standard dimensions are solicited case to case basis

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