

Bellman-Melcor

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#773 (RBCuZn-D)

TECHNICAL DATA

NOMINAL COMPOSITION	Copper	48.0% ± 2.0
	Nickel	10.0% ± 1.0
	Silicon	0.145% ± 0.105
	Zinc	Balance
	Phosphorus	0.25% Max
	Lead	0.05% Max
	Aluminum	0.01% Max
	Other Elements, Total	0.50% Max

PHYSICAL PROPERTIES	Color	Brass Yellow
	Solidus	1690°F (921°C)
	Liquidus	1715°F (935°C)
	Recommended Brazing Temperature	1765-1815°F (963-991°C)
	Density (lbs./in³)	0.302
	Specific Gravity	8.47
	Electrical Conductivity (%IACS)	5.5
	Electrical Resistivity (Microhm-cm)	31.4
	Tensile Strength	70,000 psi (Average)
	Elongation, 2" gage length	25
	Brinell Hardness	120

USES

Nickel silver is a low fuming, cadmium free bronze. It is an excellent replacement for high cost silver brazing alloys when higher brazing temperatures are acceptable. The weld deposits of nickel silver have very high tensile strength, good ductility and excellent corrosion resistance. Nickel silver weld deposits are also machinable and work-harden when put into service.

Suitable for tubular structures. Nickel silver is available pre-flux coated with the correct amount of flux. No dipping or preparatory work is necessary. Preheating may be desired for some applications. A neutral or slightly oxidizing flame is recommended.

Applications Include:

- Brazing tungsten carbides, copper alloys, nickel alloys, stainless steels & carbon steels.
- Brazing or oxyacetylene welding of steel or cast iron where good color match is desired.
- Building-up or overlaying worn parts such as gear teeth, bearings and valve seats

**BRAZING
CHARACTERISTICS**

#773 has good wetting characteristics on ferrous and non-ferrous materials particularly steels and coppers. Maximum strength and joint integrity are obtained where joint clearance falls within the range of 0.003in – 0.005in per side. Heating methods include torch, induction and furnace. Unsuitable for brazing in a protective atmosphere.

**PROPERTIES OF
BRAZED JOINTS**

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

SPECIFICATIONS

#773 alloy conforms to: Unified Numbering System (UNS) C77300 and American Welding Society (AWS) A5.8/A5.8M RBCuZn-D

AVAILABLE FORMS

Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.

Individuals requiring further information and Engineering Specification Documents may wish to contact the Engineering Society for Advanced Mobility, Land Sea Air and Space, The Society of Automotive Engineers <http://www.sae.org/> (SAE AMS) or The American Welding Society (AWS) <http://aws.org/>

NOTE:

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