

## **HI-TEMP® 773** **CDA 773, Nickel-Silver**

### ***NOMINAL COMPOSITION***

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Copper	48.0% ± 2.0%
Nickel	10.0% ± 1.0%
Zinc	Remainder
Phosphorous	0.25%
Lead	0.05%
Aluminum	0.01%
Silicon	0.04% - 0.25%
Other Elements (Total)	0.50% Max

### ***PHYSICAL PROPERTIES***

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Color	Light Yellow
Melting Point (Solidus)	1690°F (921°C)
Flow Point (Liquidus)	1715°F (935°C)
Brazing Temperature Range	1720°F - 1800°F (938°C - 982°C)
Specific Gravity	8.08
Density (Lbs /in <sup>3</sup> )	0.292
Electrical Conductivity (%IACS) <sup>(1)</sup>	N/A
Electrical Resistivity (Microhm-cm)	N/A

<sup>(1)</sup> IACS = International Annealed Copper Standard

### ***PRODUCT USES***

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Hi-Temp 773 is a nickel silver filler metal primarily used to join tungsten carbide to steel. Brazing may be combined with heat treatment of the steel tool bits.

### ***BRAZING CHARACTERISTICS***

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This filler metal exhibits excellent wetting characteristics on tungsten carbide and tool steel. It has the ability to fill joints with wider joint clearances. It is recommended to use Handy Hi-Temp®, Handy Hi-Temp® DB or Handy Hi-Temp® Boron Modified Flux with this material.

### ***PROPERTIES OF BRAZED JOINTS***

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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. Lap joints in the listed metals have been tested at room temperature with the following results:

	Shear Strength (lbs/in <sup>2</sup> )
Tungsten Carbide / SAE 8740 Steel	25,000 - 30,000

### ***AVAILABLE FORMS***

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

## ***SPECIFICATIONS***

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Hi-Temp 773 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8/A5.8M RBCuZn-D

## ***APPLICABLE PRODUCT CODE(S)***

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The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 77-773.

## ***SAFETY INFORMATION***

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The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting". For more complete information refer to the Material Safety Data Sheet for Hi-Temp 773.

## ***WARRANTY CLAUSE***

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