

## 77-525

### ***NOMINAL COMPOSITION***

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Copper	51.5% ± 2.0%
Zinc	9.0 ± 1.0%
Nickel	15.0% ± 0.5%
Manganese	24.5% ± 0.5%
Silicon	0.10% – 0.20%
Other Elements (Total)	0.50% Max

### ***PHYSICAL PROPERTIES***

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Color	Light Yellow
Melting Point (Solidus) <sup>(1)</sup>	1598°F (870°C)
Flow Point (Liquidus) <sup>(1)</sup>	1652°F (900°C)
Brazing Temperature Range <sup>(1)</sup>	1652°F - 1865°F (900°C - 1018°C)
Specific Gravity <sup>(1)</sup>	7.59
Density (Lbs/in <sup>3</sup> ) <sup>(1)</sup>	0.27
Electrical Conductivity (%IACS) <sup>(2)</sup>	N/A
Electrical Resistivity (Microhm-cm)	N/A

<sup>(1)</sup> Approximate Values

<sup>(2)</sup> IACS = International Annealed Copper Standard

### ***PRODUCT USES***

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77- 525 is a copper manganese infiltrant alloy primarily used to sinter tungsten carbide powder. Primary industry is the oil and gas exploration field for core and matrix body drills. This alloy exhibits excellent flow and wetting characteristics on tungsten carbides and has good gap filling properties.

77- 525 effectively fills the voids in between the particles of non-metallic carbide matrix sintering them together. The infiltrant bound with the carbide matrix creates a wear resistant constituent which is excellent for tooling applications.

### ***AVAILABLE FORMS***

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Chopped cube.

### ***SPECIFICATIONS***

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Hi-Temp 525 alloy conforms to the following specifications: N/A

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

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The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 77-525

## ***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 77-525.

## ***WARRANTY CLAUSE***

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