

Lucas-Milhaupt BRAZE 505 Carbide Brazing Alloy

Category : Metal , Nonferrous Metal , Precious Metal , Silver Alloy , Solder/Braze Alloy

Material Notes:

Applications: Braze 505 readily wets nickel and iron base alloys. It is recommended for joining 300 Series stainless steel and will retard interface corrosion in most exposures for which the base metals are suitable. However, for joints on cupro-nickel exposed to salt water at elevated temperatures, zinc-free alloys such as Braze 559, 603, or 630 should be used to avoid joint failure by dezincification. Because this alloy is cadmium-free, it can be safely used on food handling equipment and hospital utensils. The presence of nickel in Braze 505 aids in the joining of small tungsten carbide inserts in cutting tools. In addition, it offsets joint interface brittleness caused by diffusion of aluminum into the brazing alloy, when joining aluminum-bronze to steel. **Characteristics:** Braze 505 is very fluid at its flow point and will quickly fill long, narrow joints. Because it has the tendency to liquate (i.e., separate into low and high melting constituents) when heated slowly, this alloy should be heated quickly through its melting range. **Specifications:** This filler metal conforms to the following specification-AWS A5.8 BAg-24, SAE AMS 4788 Information provided by Lucas-Milhaupt, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lucas-Milhaupt-BRAZE-505-Carbide-Brazing-Alloy.php

Physical Properties	Metric	English	Comments
Density	9.17 g/cc	0.331 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	455 - 505 MPa	66000 - 73300 psi	1029 Cold Rolled Steel butt joint.
	479 - 607 MPa	69500 - 88000 psi	18-8 Annealed Stainless Steel butt joint.
Elongation at Break	1.0 - 9.0 %	1.0 - 9.0 %	% in 2", 18-8 Annealed Stainless Steel butt joint
	15 - 25 %	15 - 25 %	% in 2", 1029 Cold Rolled Steel butt joint.

Thermal Properties	Metric	English	Comments
Melting Point	660 - 707.2 Â°C	1220 - 1305 Â°F	
Solidus	660 Â°C	1220 Â°F	Melting Point
Liquidus	707.2 Â°C	1305 Â°F	Flow Point

Component Elements Properties	Metric	English	Comments
Copper, Cu	19 - 21 %	19 - 21 %	
Nickel, Ni	1.5 - 2.5 %	1.5 - 2.5 %	
Other, total	<= 0.15 %	<= 0.15 %	

Component Elements Properties	Metric	English	Comments
Zinc, Zn	26 - 30 %	26 - 30 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00001195 ohm-cm	0.00001195 ohm-cm	

Descriptive Properties	Value	Comments
Color	Yellow White	

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