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TiBraze-200

TECHNICAL DATA

NOMINAL COMPOSITION	Zirconium	20% ± 1.0
	Nickel	20% ± 1.0
	Copper	20% ± 1.0
	Titanium	Balance
	Molybdenum	0.1% max.
	Hafnium	0.1% max.
	Iron	0.08% max.
	Aluminum	0.05% max
	Silicon	0.02% max.
	Oxygen	0.20% max.
	Nitrogen	0.03% max.
	Carbon	0.04% max.
	Other Elements, Total	0.50% max.
PHYSICAL PROPERTIES	Solidus	1555°F (848°C)
	Liquidus	1572°F (856°C)
	Recommended Brazing Temperature	1622-1722°F (883-939°C)
	Density (g/cm ³)	6.68
	CTE [m/(m•°C)]	8.8 x10 ⁻⁶
USES	TiBraze-200 is a corrosion resistant filler metal suitable for brazing titanium, niobium, refractory metals, aluminides and stainless steel. It can also be used to join ceramics, graphite and carbon composites to metals and other non-metallic components without the need for prior metallization of the contact surface. Joints brazed with TiBraze-200 can be used in service temperatures up to 932°F (500°C) for long term exposure.	
BRAZING CHARACTERISTICS	Suitable for use in all vacuum brazing applications as well as under partial pressure of argon gas. Brazing of alloys containing active components under protective nitrogen atmosphere is not recommended. It is important to maintain a high purity, oxygen-free environment; any oxidation of reactive elements will limit alloy wettability across the non-metallic surface. A vacuum of 10 ⁻⁴ torr or better is required to successfully braze with TiBraze-200. For controlled atmosphere brazing or vacuum brazing the recommended radial joint clearance for active alloys ranges between 0-0.002 in (0-0.05 mm).	
PROPERTIES OF BRAZED JOINTS	The properties of a brazed joint are dependent upon the base metal, joint design and brazing technique.	
SPECIFICATIONS	TiBraze-200 conforms to: American Welding Society (AWS) A5.8/A5.8M BTi-5	
AVAILABLE FORMS	Amorphous foil and specialty preforms per customer specifications	

**SAFETY
INFORMATION**

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."

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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