

## Prince & Izant Company

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## BNi-5b

### TECHNICAL DATA

NOMINAL COMPOSITION	Nickel	Remainder
	Chromium	15.0% ± 0.5
	Silicon	7.25% ± 0.25
	Boron	1.45% ± 0.15
	Iron	1.0% max
	Carbon	0.06% max
	Phosphorous	0.02% max
	Sulfur	0.02% max
	Aluminum	0.05% max
	Titanium	0.05% max
	Zirconium	0.05% max
	Cobalt	1.0% max
	Selenium	0.005% max
	Other Elements, Total**	0.50% max
**The filler metal shall be analyzed for those specific elements for which values are shown in this table. If the presence of other elements is indicated in the course of this work, the amount of those elements shall be determined to ensure that their total does not exceed the limit specified		
PHYSICAL PROPERTIES	Color	Iron Gray
	Solidus	1886°F (1030°C)
	Liquidus	2058°F (1126°C)
	Recommended Brazing Temperature	2108-2158°F (1153-1181°C)
	Density (lbs/in <sup>3</sup> )	0.28
USES	BNi-5b is suitable for the brazing of nickel, chromium, or iron base metals. Some applications include highly stressed sheet metal components, jet engine parts, and assemblies used in corrosive conditions.	
BRAZING CHARACTERISTICS	BNi-5b has a lower silicon content than BNi-5 but it's still a good choice for narrow, deep joints or for honeycomb components. It has a lower chromium content than BNi-5 and BNi-5a. When wetting to base metals which contain higher Al or Ti content in an inert atmosphere, nickel plating of the base metal is recommended. Dry reducing atmospheres or inert atmospheres are recommended.	
PROPERTIES OF BRAZED JOINTS	The properties of a brazed joint are dependent upon the base metal, joint design and brazing technique. For atmospheric brazing the recommended radial joint clearance for nickel-base alloys fall within .000-.002" range for atmosphere brazing.	
SPECIFICATIONS	AWS BNi-5b conforms to: Unified Numbering System (UNS) N99652, American Welding Society (AWS) A5.8/A5.8M BNi-5b	
AVAILABLE FORMS	Foil, powder, paste, tape and preforms to customer specifications	

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:**

#### **DISCLAIMER**

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