



## Screen printing **BrazeLet® Ni2P-9003**

### Alloy Application BrazeLet BNi2

Naming	Ni620 according to ISO 17672 BNi-2 according to ANSI/AWS A5.8
Composition	B-Ni82CrSiBFe according to ISO 17672 and ANSI/AWS A5.8
Melting temperature	970-1,000 °C (1,778-1,832 °F)
Min. brazing temperature	1,050 °C (1,922 °F)
Impurities	According to ISO 17672 and ANSI/AWS A5.8

### Paste Application Screen Printing

Metal content	90%
Powder size	<63 µm
Typical density	4.0 g/cm³
Flash point of solvent	>100 °C (212 °F)
Recommended drying	120-170 °C (250-340 °F)
Evaporation temperature of binder	Approx. 300-400 °C (570-750 °F)
Cleaning	Aliphatic solvents or Bio based solvents
Shelf life	18 months / 6 months in cartridge
Storage	Origin closed at 4-35 °C (39-95 °F)
Typical Viscosity, Brookfield T-spindle D with Hellpath, Speed 2.5 rpm, 20 °C (70 °F)	300 Pas

The Ni-based brazing alloy **BrazeLet BNi2** is suitable for brazing stainless steel or super alloy materials in vacuum or nitrogen-free protective atmosphere. **BrazeLet BNi2** contains boron as a melting point depressant and can therefore be brazed at relatively low temperatures. It provides excellent high temperature strength and oxidation resistance. It is a versatile brazing filler metal used in aerospace, automotive and industrial applications such as heat exchangers and turbines.

As **BrazeLet BNi2** is sensitive to gap thickness, it is recommended that gaps do not exceed 50 µm. Wider gaps risk the formation of a crack-sensitive brittle centre line.

The brazing paste **BrazeLet Ni2P-9003** is typically in use for printing thin paste layers of about 0.05 to 0.1 mm on flat plates, on top of structured plates or fins by use of screens or stencils. A typical application is the printing on parts for flat heat exchangers. The use of rubber squeegees is recommended. Reliable printing requires a precise positioning fixture combined with the use of vacuum table or clamping device. Typical printing speed is 300 mm/s. Thin printing lines should have a width of >0.3 mm, small dots diameter should be >1 mm.

The solvent based brazing paste **BrazeLet Ni2P-9003** increases productivity wherever drying of the paste is an issue. The paste has no settlement and no stirring is required in the equipment. However, when opening a can from stock it is always recommended to stir the paste.

The printed parts can be dried with standard drying process (hot air) at 120-170 °C. The drying time varies depending on thermal mass, design of the parts and the used furnace and needs to be established.