Screen printing
BrazeLet® Ni5P-9003

Alloy Application BrazeLet BNi5

Naming	*Ni650 according to ISO 17672 BNi-5 according to ANSI/AWS A5.8*
Composition	*B-Ni71CrSi according to ISO 17672 and ANSI/AWS A5.8*
Melting temperature	*1,080-1,135°C (1,976-2,075°F)*
Min. brazing temperature	*1,150°C (2,102°F)*
Impurities	*According to ISO 17672 and ANSI/AWS A5.8*

The nickel (Ni) based brazing alloy **BrazeLet BNi5** is suitable for brazing stainless steel or super alloy materials in vacuum or protective atmosphere. It provides excellent high temperature strength, oxidation and corrosion resistance, making it a good choice for applications such as catalytic converters, heat exchangers and gas turbines. It is suitable for thin-walled components due to limited dissolution of the base material.

As **BrazeLet BNi5** 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. A diffusion heat treatment can be considered to dissolve the brittle silicides for larger gap clearances up to 100 µm.

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	*12 months / 6 months in cartridge*
Storage	*Origin closed at 4 to 35°C (39-95°F)*
Typical Viscosity, Brookfield T-spindle D with Helipath, Speed 2.5 rpm, 20°C (70°F)	*300 Pas*

The brazing paste **BrazeLet Ni5P-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 Ni5P-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°C-170°C. The drying time varies depending on thermal mass, design of the parts and the used furnace and needs to be established.

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Customer support is provided every step of the way. We are deeply involved with you prior to delivery, offering expert advice to ensure an optimum solution. The Höganäs tech centres are well equipped to support all kinds of trials for roller coating applications and the parameters can be targeted towards specific customers' process. We can provide test series of components with paste applied the same way as in final production in order to make sure the customers' productivity and quality requirements are fulfilled.