



Roller coating **BrazeLet® Ni5R-8501**

Alloy Application BrazeLet Ni5

Naming	Ni 650 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	1080-1135°C (1976-2075°F)
Min. brazing temperature	1150°C (2102°F)
Impurities	According to ISO 17682 and ANSI/AWS A5.8

Paste Application Roller Coating

Metal content	85%
Powder size	<63 µm
Typical density	3.4 g/cm ³
Flash point of solvent	>100°C (212°F)
Recommended drying	120-170°C (248-338°F)
Evaporation temperature of binder	Approx. 350-450°C (662-842°F)
Cleaning	Aliphatic solvents/bio based surfactant cleaners
Shelf life	12 months / 6 months in cartridges
Storage	Origin closed at 4 to 30°C (39-86°F)
Typical Viscosity, Brookfield T-spindle C with HeliPath, Speed 2.5 rpm, 20°C (70°F)	90 Pas

The nickel (Ni) based brazing alloy **BrazeLet Ni5** 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 Ni5** 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.

The brazing paste **BrazeLet Ni5R-8501** can be used for roller coating fins or structured plates, typically found in flat heat exchanger designs. Depending on type of roller used the paste can be applied with thin layers either on top or on the side of the fin tips. Gap size between paste roll and scraper of 0.08 to 0.12 mm is recommended. The amount of paste is controlled by weight and is a function of the fins or structured plate design. **BrazeLet Ni5R-8501** properties allow reliable application in a wide range of coating speeds, tested up to 20m/min. The solvent based paste ensures reliable coating over time without drying on the roll. It has no settlement and no stirring is needed in the equipment. However, when opening a can from stock it is always recommended to stir the paste.

The coated fins can be dried with standard drying process (hot air) at 120°C-170°C. Here, the drying time depends on thermal mass, parts design and the used furnace and thus needs to be established. When dried, the paste has excellent adhesion to the metal sheet.