



## Dispensing **BrazeLet® Ni613DW-9005**

### Alloy Application BrazeLet Ni613

Naming	BrazeLet Ni613
Composition	B-Ni60CrPSi
Melting temperature	970-1,030 °C (1,778-1,886 °F)
Min. brazing temperature	1,090°C (1,994 °F)
Impurities	According to ISO 17672 and ANSI/AWS A5.8

### Paste Application Dispensing

Metal content	90%
Powder size	<106 µm
Typical density	4.0 g/cm³
Recommended drying	100-170 °C (210-340 °F)
Evaporation temperature of binder	Approx. 300-400 °C (570-750 °F)
Cleaning	Water
Shelf life	12 months / 6 months in cartridge
Storage	Origin closed at 4-30 °C (39-86 °F)
Typical Viscosity, Brookfield T-spindle D with HeliPath, Speed 2.5 rpm, 20 °C (70 °F)	400 Pas

**BrazeLet Ni613**, a nickel (Ni) based brazing alloy, features best-in-class wetting behaviour on stainless steel materials in a vacuum or in a protective atmosphere. Its high level of alloyed chromium (Cr) results in a superior hot gas and acid corrosion resistance. The brazing alloy is best suited for the brazing of heat exchangers such as exhaust gas recirculation (EGR) coolers in automotive applications, or home/industrial tap water applications.

Unlike standardised nickel (Ni) based alloys, **BrazeLet Ni613** is able to fill gap sizes of <0.05 mm to 0.2 mm without brittle phase lines or cracks. The resulting micro hardness of the brazing area is less than half of a Ni650 brazing gap. This leads to a more reliable and safe brazing as well as more flexibility in part tolerances.

**BrazeLet Ni613DW-9005** is a water-based brazing paste that can be used for dispensing applications, typically found on heat exchanger inlet and outlet tubes, the housings of core joints and hole plate to tube joints. It can be dispensed by using standard air pressure dispensing units. For better precision, screw dispense units are recommended. **BrazeLet Ni613DW-9005** sticks on all bevel and vertical positions without the need for pre-drying but is easily removed using water. The binder prevents pre-oxidation of Ni613-powder in trivial furnace atmospheres or in controlled atmosphere brazing with H<sub>2</sub>, N<sub>2</sub>/H<sub>2</sub> or Ar. This results in a residue-free brazed joint.

The properties of **BrazeLet Ni613DW-9005** allow reliable application in a wide speed range as a result of the dispensing equipment / automation as well as the needle diameter. The paste can be delivered in different sized cans for refilling of smaller cartridges for manual applications. For best performance when opening a can from stock, it is always recommended to stir it.