



Spraying

BrazeLet® Ni613S-8701

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 Spraying

Metal content	87%
Powder size	<63 µm
Typical density	3.6 g/cm³
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
Shelf life	18 months/ 6 months in cartridge
Storage	Origin closed at 4-30 °C (39-86 °F)
Typical Viscosity, Brookfield T-spindle B with Helipath, Speed 2.5rpm, 20 °C (70 °F)	25 Pas

BrazeLet Ni613, a nickel (Ni) based brazing alloy, features a best in class wetting behaviour on stainless steel material in vacuum or 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 brazing heat exchangers such as exhaust gas recirculation (EGR) cooler in automotive or tap water applications in home or industry.

Unlike the standardised 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.

Spraying, provides the biggest versatility and flexibility of all brazing filler application methods. It can coat any surface with virtually any thickness, and thus can do the job of other paste applications. Compared to other methods, it offers advantages like lower investment, higher application speed, easier drying and less shrinkage of workpiece during brazing, and in some cases, even paste savings. It also allows you to evaluate and design your future roller coating and screen printing processes, if you are planning to adopt those.

The solvent based brazing paste **BrazeLet Ni613S-8701** can be used for spraying structured plates, typically found in flat heat exchanger designs. It ensures reliable coating over time without drying the spraying nozzles. **BrazeLet Ni613S-8701** 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 sprayed parts can be dried with standard drying process (hot air) at 120-170 °C. Here, the drying time depends on thermal mass, parts design and the used furnace and thus needs to be established. After drying, the paste has excellent adhesion to the metal sheet.