Alloy Application BrazeLet Ni613

**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 results in a more reliable and safe brazing.

The brazing paste **BrazeLet Ni613P-9012** is typically in use for printing thick paste layers of about 0.2 to 0.6 mm on flat parts or on top of structured parts by use of screens or stencils. A typical application is printing of paste on hole plates of tube bundled heat exchangers. The use of rubber squeegees is recommended. Reliable printing requires precise positioning fixture tool by use of vacuum table or clamping device. Typical printing speed is 100 mm/s. Thin printing lines should at least have a width twice the printing thickness and the small dots diameter should be three times the printing thickness or greater.

Printing accuracy is very precise as the paste maintains its shape during drying. The solvent based **BrazeLet Ni613P-9012** increases productivity wherever drying of the paste is an issue. 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 printed parts can be dried with standard drying process (hot air) at 120-170°C. Here, the drying time needs to be established as it varies depending on thermal mass, parts design and the used furnace. After drying, the paste has excellent adhesion to the metal sheet.

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 at 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.