Höganäs

BrazeLet® F300

For High-End Applications

BrazeLet F300 is a FeCr-based stainless filler metal powder developed for high temperature brazing of stainless steels. The unique chemical composition of BrazeLet F300 offers similar properties to high-performing Ni-based filler metals, but at a more attractive and stable metal cost.

The optimal application medium for BrazeLet F300 stainless filler metal powders is as a paste. The paste can be applied via conventional techniques such as dispensing, roller coating, screen printing and spraying. Höganäs provides a complete range of pastes for all application solutions.

For more information on BrazeLet and other Höganäs products, please contact your local sales representative.

Benefits:

- Cost-efficient
- Wide gap flexibility
- Corrosion resistant
- High strength
- Excellent wetting

BrazeLet® F300 Technical Data

BrazeLet F300 is gas atomised to form the unique chemical composition resulting in the advantageous properties found during brazing and in the final joint.

The recommended brazing temperature for BrazeLet F300 is 1120 °C / 2050 °F or above in a vacuum or a controlled atmosphere.

There are two versions of BrazeLet F300, one suitable for vacuum brazing and one optimised for belt furnace applications. By selecting the right F300 for the right brazing process the same properties will be obtained.

	BrazeLet F300-10	BrazeLet F300-20
Fe	Bal	Bal
Cr	20	20
Ni	20	20
P	7	7
Si	4	4
Cu	10	6.5
Process	Vacuum	Belt furnace

Wetting Properties

BrazeLet F300 wetting properties exceed most Ni-based filler metals. The spreading ratio, defined as the area of the melted powder and the area of initial powder, A_m/A_i, is close to 10. These excellent wetting properties result in a wide gap flexibility.

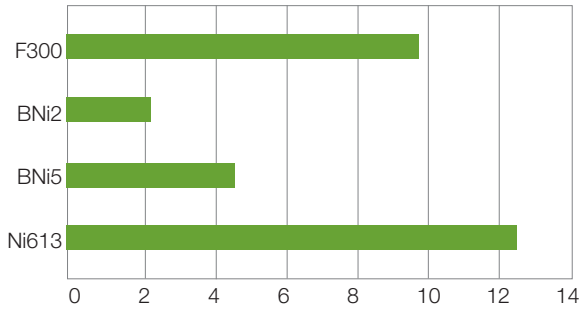
Microstructure and Strength

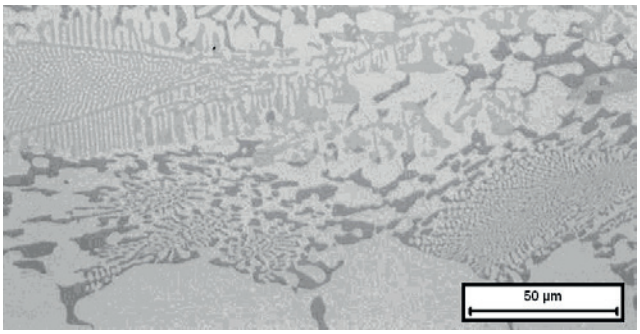
The microstructure of BrazeLet F300 contains a homogeneous mix of a hard phase surrounded by a ductile phase – a combination that results in high strength. This structure remains during wide gap brazing and no segregation can be detected. The joint fillet is crack free.

Corrosion Resistance

BrazeLet F300 has excellent corrosion and oxidation resistance to different acids (HCl, HNO_3, H_2SO_4), similar to the high-performing BrazeLet Ni613.

Spreading ratio





Joint strength