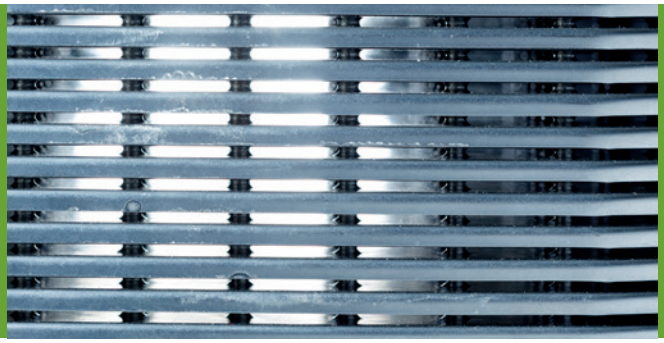
Höganäs



BrazeLet® F86

For High-Strength Applications

BrazeLet F86 is a FeCr-based stainless filler metal powder developed for high temperature brazing of stainless steels. The unique chemical composition of BrazeLet F86 offers similar properties to high-performing Ni-based filler metals, but at a more attractive and stable metal cost. Compared to Höganäs' iron-based BrazeLet® F300, BrazeLet F86 offers higher joint strength while still maintaining the good corrosion resistance, high-temperature oxidation resistance and gap filling abilities.

The optimal application medium for BrazeLet F86 stainless filler metal powders is as a brazing paste. The paste can be applied by 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
- Cu-free and low Ni-content

Alloy application BrazeLet F86	
Composition	B-Fe40CrNiSiP(Nb)
Melting temperature	1050 - 1110°C
Recommended brazing temperature	1150°C
Impurities	According to ISO 17672 and ANSI/AWS A5.8

BrazeLet® F86 technical data

Unique chemical composition

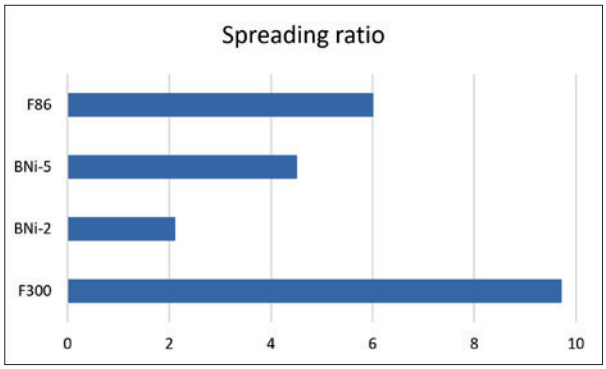
BrazeLet F86 is gas atomized into spherical particles to form a unique chemical composition resulting in the advantageous properties found during brazing and in the final joint. BrazeLet F86 is alloyed with Nb for increased corrosion resistance.

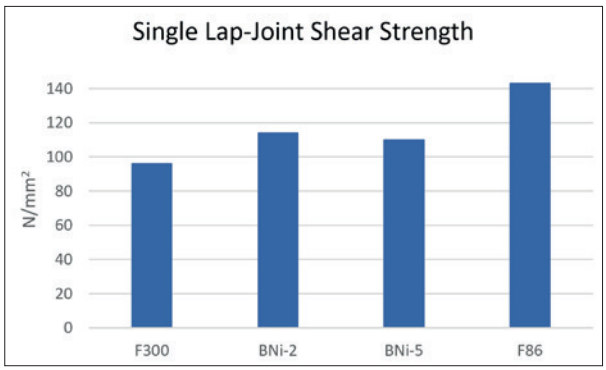
Comp. weight%	Fe	Cr	Ni	Si	P	Nb
BrazeLet F86	Bal.	29	18	6.5	6	0.5

The recommended brazing temperature for BrazeLet F86 is 1150°C/2102°F in vacuum or a controlled atmosphere.

Wetting properties

BrazeLet F86 wetting properties exceed most Ni-based filler metals. The spreading ratio, defined as the area of the melted powder divided by the area of initial powder, A_m / A_i, is 6.0 on austenitic stainless steel.



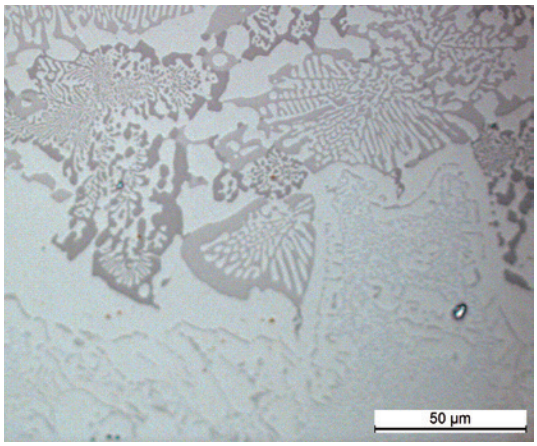


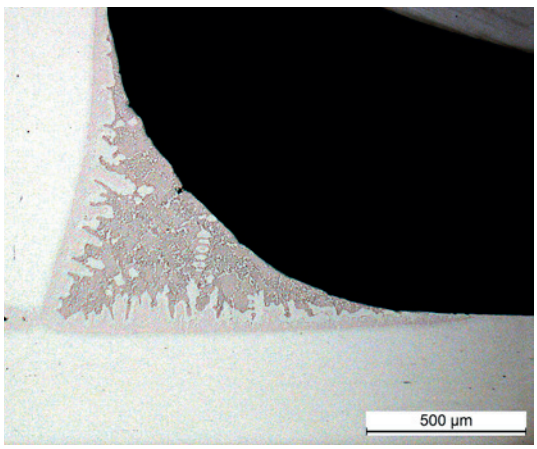
Microstructure and strength

The microstructure of BrazeLet F86 consists of a fine mix of a hard phase surrounded by a ductile phase – a combination that results in high strength. The same microstructure remains during wide gap brazing and no segregation can be detected. The joint fillet is crack free.

Corrosion resistance

BrazeLet F86 displays excellent corrosion and oxidation resistance, similar to BrazeLet® F300 and BrazeLet® Ni613. Corrosion resistance has been proven against acids such as HCl, HNO_3 and H_2SO_4.





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