

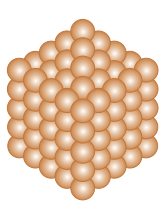
BRAZING ALLOYS

BNI 2
BNI 5A/B

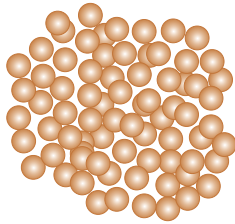


What is Amorphous?

Materials with an amorphous crystalline structure, such as nickel based brazing foils, have the advantage that the alloying metals are distributed very equally.



Crystal



Amorphous

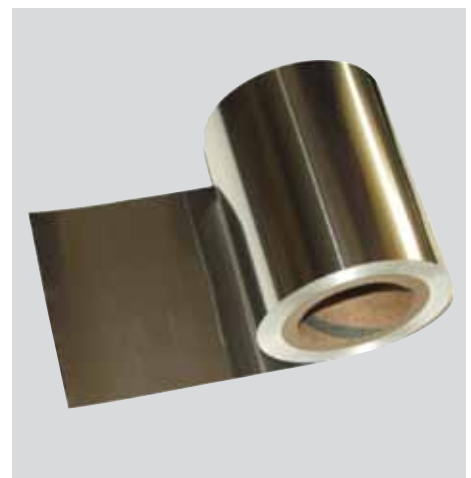


NICKEL BASED AMORPHOUS BRAZING ALLOYS

Grade	Chemical composition wt. %							Melting range °C		Brazing temp. °C	Density g/cm ³
	Cr	Fe	Si	C	B	P	Ni				
BNi2	7.0	3.0	4.5	Max 0.08	3.2		Bal	969	1,024	1,055	7.88
BNi5a	19		7.3	Max 0.08	1.5		Bal	1,052	1,144	1,170	7.70
BNi5b	15		7.3	Max 0.08	1.4		Bal	1,030	1,126	1,195	7.73

THICKNESS AND WIDTH OF THE BRAZING FOIL

Grade	Thickness	Width
BNi2, BNi5a, BNi5b	25 – 35 µm	3 - 40 mm



Advantage of Brazing Foil

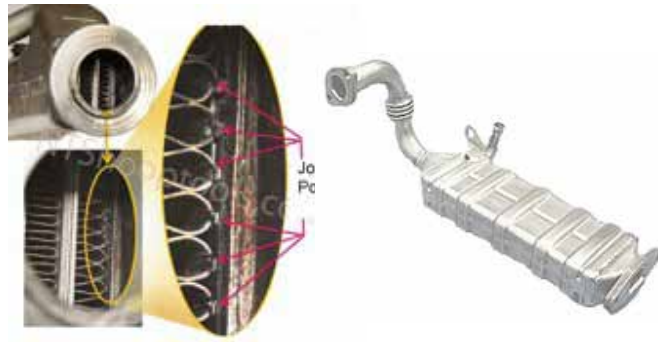
Strength of foil

- No organic binder
- Eliminating contaminating residues
- Unlimited shelf life
- Creates non porous joints
- Melts quickly
- Easy to place between parts

Main Applications



Heat exchanger



EGR Cooler



Metal substrate

BRAZING FOIL

AWS A5.8	DIN EN 1044	AMS	Nominal Composition (% wt.)						Melting Range °C
			Ni	Cr	Si	B	Fe	C	
BNi-2	NI 102	4,777	Bal.	7	4.5	2.7	3	≤ 0.08	970-1,000
BNi-5a	NI 105	-	Bal.	19	7.3	1.5	-	≤ 0.08	1,080-1,135

THICKNESS AND WIDTH OF THE BRAZING FOIL

Grade	Thickness	Width
BNi2, BNi5a, BNi5b	25 – 35 µm	3 - 40 mm