

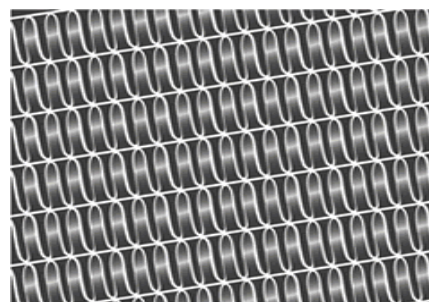
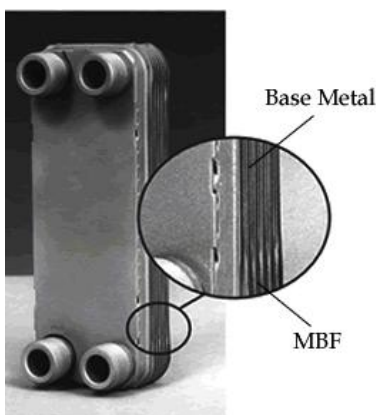
As the world's leading producer of Amorphous Brazing Filler Metals, Metglas, Inc. continues to expand brazing alloy compositions suitable for the most demanding applications. Our newest, 100% metallic, ductile foils, MBF601 and MBF602, offer high strength, excellent corrosion resistance, quick processing, and low melting temperatures. Additionally, all Metglas Brazing Foils (MBF's) are now available in optional flangeless packaging.

New MBF601 and MBF602 Alloy Composition

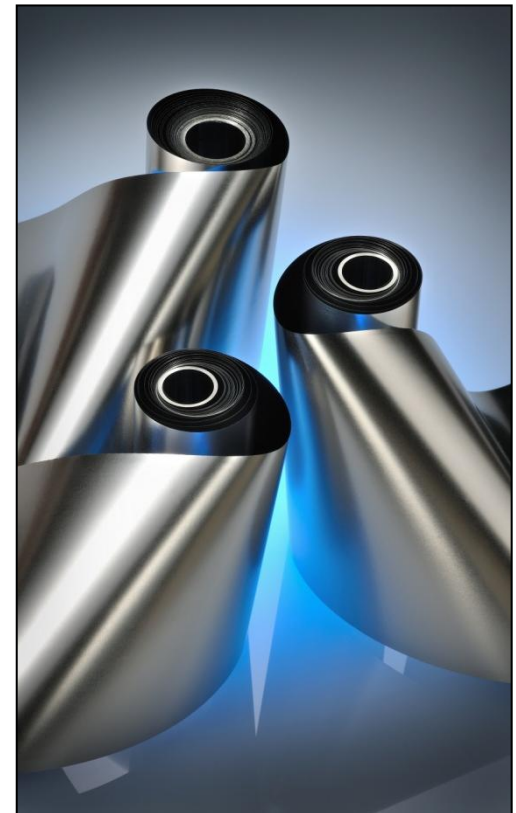
Amorphous Metals Designation	Nominal Composition, wt %							Temperature °C (°F)		Mass Density g/cm ³
	Ni	Cr	Fe	Si	B	P	Mo	Solidus	Liquidus	
MBF601	Bal	16	32	1.5	0.5	6.0	1.5	960 (1760)	1030 (1886)	7.57
MBF602	Bal	11	35	1.5	0.5	6.0	1.5	910 (1670)	1020 (1868)	7.60

Available Geometry

Maximum Width by Thickness			
Amorphous Metals Designation	Standard Foil Thickness		
	0.0010" (25.4 µm)	0.0015" (38.1 µm)	0.0020" (50.8 µm)
MBF601* *Tentative	6.7" (170.18 mm)	8.5" (215.9 mm)	-
MBF602* *Tentative	6.7" (170.18 mm)	8.5" (215.9 mm)	-



Metglas Brazing Foils offer excellent wetting and flow to fill all voids in the large number of joints in a typical plate fin heat exchanger.



Metglas® Brazing Foil Outperforms Alternative Filler Metals

Ref: MBFPL10_15_2015

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1) HEAT RECYCLER

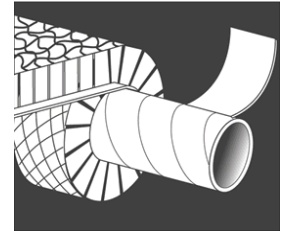
Waste heat recovery systems are gaining popularity because of rising energy costs. This finned tube heat exchanger recovers waste heat as steam for a Rankine cycle turbine.

Brazing Application

Fins must be brazed up to 30m of indivisible lengths to the tube. Approximately 22 km of tubing may be used in a single exchanger. High flexibility and the ability to resist tension and crushing during assembly are crucial. High strength, corrosion resistant joints with a uniform thickness are essential. Brazing filler metals in powder and powder-binder composites are poor candidates because of contaminating residues and possible joint shrinkage.

Solution

MBF offer the advantage of a completely automated process, purity and consistent thickness. Each tube is rotated to wrap it with foil and fin. The machine tensions brazing foil and fin stock as it turns the tube. The fins are crimped at one edge which is pressed tightly against the brazing foil. The assembly is moving continuously through an induction heating station under the cover of pure Nitrogen. Brazing occurs when the assembly passes through the high powered heating zone at 1065°C for 1–2 minutes. Easy automation and low manufacturing costs are provided.



Tube is wrapped with MBF and fin stock in an automated brazing process

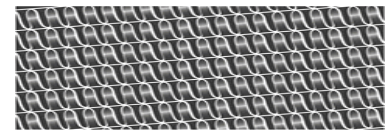
2) PLATE-FIN HEAT EXCHANGERS

Brazing Application

High efficiency use in demanding installations where light weight, corrosion resistant and high performance are necessary, such as aerospace and automotive exhaust applications.

Solution

MBF foil thickness can be controlled to provide at least 15% weight savings over similar powder alloys. Without binders or adhesives, the MBF joint is typically stronger than comparable powder, paste or tape joints by insuring clean, consistent, non-porous and complete joint coverage.



Metglas Brazing Foils offer excellent wetting and flow to fill all voids in the large number of joints in a typical plate fin heat exchanger.

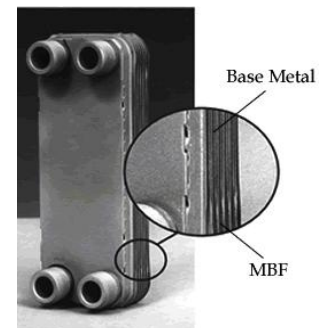
3) PLATE-PLATE HEAT EXCHANGERS

Brazing Application

The ability to resist corrosion in deionized water, ammonia, and other harsh chemical systems while sustaining design pressures up to 1760 psi (120 bar).

Solution

MBF series alloys are corrosion resistant to ammonia and other corrosive environments. High resistance to sulfuric, phosphoric, and nitric acids make MBF foil an ideal brazing filler metal for austenitic stainless steels.



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