

Metglas® Brazing Foils (MBF) are produced by rapidly quenching molten metal at rates of over 1,000,000°C per second. This process creates very uniform, ductile, and homogeneous brazing foils that can be used to create consistent, void-free, and optimum strength joints. Environmentally-friendly MBF also allows you to reduce your operating costs by reducing wastage, improving yield, improving furnace performance, and by lending itself to automation.

Nickel-Based Brazing Foils

Alloy	Nominal Chemical Composition, Weight %								Temperatures						Density	
									Solidus		Liquidus		Brazing (Approx.)			
	Cr	Fe	Si	C*	B	P	Mo	Ni	°C	°F	°C	°F	°C	°F	g/cm ³	lb/in ³
MBF-15 ¹	13.0	4.2	4.5	0.06	2.8	--	--	Bal	965	1769	1103	2017	1135	2075	7.82	0.283
MBF-20 ²	7.0	4.5	4.5	0.06	3.2	--	--	Bal	969	1776	1024	1875	1055	1931	7.88	0.285
MBF-30 ³	--	--	4.5	0.06	3.2	--	--	Bal	984	1803	1054	1929	1085	1985	8.07	0.292
MBF-50 ⁴	19.0	--	7.3	0.08	1.5	--	--	Bal	1052	1926	1144	2091	1170	2138	7.70	0.278
MBF-51 ⁵	15.0	--	7.25	0.06	1.4	--	--	Bal	1030	1886	1126	2059	1195	2183	7.71	0.279
MBF-53	15.0	--	7.25	0.06	1.4	--	5.0	Bal	1045	1900	1127	2060	1195	2183	7.75	0.280
MBF-60 ⁶	--	--	--	0.10	--	11.0	--	Bal	883	1621	921	1690	950	1742	8.14	0.294
MBF-80 ⁷	15.2	--	--	0.06	4.0	--	--	Bal	1048	1918	1091	1996	1120	2048	7.94	0.287

Specifications:

- 1 - MBF-15 meets the following specifications: EMS 54752 Type XIII, MSRR 9500/705, PWA996
- 2 - MBF-20 meets the following specifications: BNI-2, AMS4777, B50TF204, EMS 54752 Type II, MSRR 9500/97, DMR 35.302
- 3 - MBF-30 meets the following specifications: BNI-3, AMS4778, B50TF205, EMS 54752 Type I, MSRR 9500/114, DMR 35.304
- 4 - MBF-50 meets the following specifications: BNI-5a, B50TF217, MSRR 9500/722
- 5 - MBF-51 meets the following specifications: BNI-5b
- 6 - MBF-60 meets the following specifications: BNI-6, EMS 54752 Type XI, PWA3610
- 7 - MBF-80 meets the following specifications: B50TF207, EMS 54752 Type VIII, MSRR 9500/719, DMR 35.307

Cobalt-Based Brazing Foils

Alloy	Nominal Chemical Composition, Weight %								Temperatures						Density*	
									Solidus		Liquidus		Brazing (Approx.)			
	Co	Cr	Ni	W	B	Si	Pd	Oth	°C	°F	°C	°F	°C	°F	g/cm ³	lb/in ³
MBF-100	Bal	21.0	--	4.5	2.15	1.6	--	<0.5	1136	2077	1163	2125	1180	2156	8.13	0.294
MBF-102**	Bal	21.0	15.0	4.5	1.50	4.2	--	<0.5	1078	1972	1139	2082	1160	2120	8.10	0.293
MBF-103**	Bal	21.0	15.0	4.5	1.60	4.4	3.0	<0.5	1068	1954	1156	2113	1180	2156	8.15	0.294
MBF-104**	Bal	21.0	15.0	4.5	1.60	4.4	5.0	<0.5	1018	1864	1152	2106	1180	2156	8.18	0.296

Notes:

- * Designates calculated value
- ** Commercial availability pending for MBF-102, MBF-103, and MBF-104

Nickel-Palladium Brazing Foils

Alloy	Nominal Chemical Composition, Weight %								Temperatures						Density*	
									Solidus		Liquidus		Brazing (Approx.)			
	Ni	Fe	Cr	Pd	Si	B	Co	Mo	°C	°F	°C	°F	°C	°F	g/cm ³	lb/in ³
MBF-1005	Bal	--	--	46.7	6.1	--	--	--	810	1490	851	1564	870	1598	9.93	0.359
MBF-1011	Bal	--	--	45.5	5.0	--	5.0	4.5	847	1557	895	1643	920	1688	9.11	0.329
MBF-1012	Bal	--	10.5	36.0	0.5	3.0	--	--	820	1508	960	1760	990	1814	8.80	0.318

Notes:

- * Designates calculated value

Metglas® Braze Foils

Available Foil Geometry

Maximum Width

Alloy	Standard Foil Thickness				
	0.0010 inches (25.4 µm)	0.0015 inches (38.1 µm)	0.0020 inches (50.8 µm)	0.0025 inches (63.5 µm)	0.0030 inches (76.2 µm)
MBF-15	4.0 inches (101.6 mm)	4.0 inches (101.6 mm)			
MBF-20	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)
MBF-30	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)
MBF-50	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)			
MBF-51	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)	8.5 inches (215.9 mm)		
MBF-53	4.0 inches (101.6 mm)	4.0 inches (101.6 mm)			
MBF-60	3.0 inches (76.2 mm)	2.0 inches (50.8 mm)			
MBF-80		2.0 inches (50.8 mm)			
MBF-100	4.0 inches (101.6 mm)	4.0 inches (101.6 mm)	2.0 inches (50.8 mm)		
MBF-102*	4.0 inches (101.6 mm)	4.0 inches (101.6 mm)	2.0 inches (50.8 mm)		
MBF-103*	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)		
MBF-104*	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)		
MBF-1005	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)	1.0 inches (25.4 mm)		
MBF-1011	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)	1.0 inches (25.4 mm)		
MBF-1012	2.0 inches (50.8 mm)	2.0 inches (50.8 mm)	1.0 inches (25.4 mm)		

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*** Commercial Availability Pending**

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