



Material Designation	Shrinkage Factor	Alloy Composition	Condition	YS Rp0,2 [Mpa]	UTM Rm [Mpa]	Elongation [%]	Hardness [HV]	Density min [g/cm ³]	Remarks
Low Alloys									
polyMIM FN02 MIM 2200	1.2160	Ni 1,5 - 2,5% C 0,1% max Fe Balance	Sintered	>150	>260	>20	>85 (45 HRB)	>7.5	--
polyMIM FN0205	1.2160	Ni 1,5 - 2,5% C 0,4 - 0,6% Fe Balance	Sintered	>255	>415	>15	>110 (62 HRB)	>7.55	case hardenable
			Heat treated	>700	>1100	>5 >3	490-590 (48-55 HRC)		
polyMIM FN08 MIM 2700	1.2160 1.1863	Ni 6,5 - 8,5% C 0,1% max Fe Balance	Sintered	>210	>380	>20	>120 (69 HRB)	>7.6	--
polyMIM FN0805 ---	1.2160 1.1863	Ni 6,5 - 8,5% Mn 0,5% max C 0,4 - 0,7% Fe Balance	Sintered	>400	>700	>5	>150 (79 HRB)	>7.6	case hardenable
			Heat treated	>700 (>1100)	>800 (>1300)	>5 (>3)	300-510 (30-50 HRC)		
polyMIM 4605	1.2160 1.1863	Ni 1,5 - 2,5% Mo 0,2 - 0,5% Si 1,0% max C 0,4 - 0,6% Fe Balance	Sintered	>400	>600	>5%	>150 (79 HRB)	>7.55	case hardenable
			Heat treated	>1100	>1300	>5	490-590 (48-55 HRC)		
PolyMIM 8620 1.6523	1.2160 1.1669 1.1863	Mn 0,7 - 0,9% Ni 0,4 - 0,7% Mo 0,15 - 0,25% Cr 0,4 - 0,6% C 0,12 - 0,23% Fe Balance	Sintered	>400	>650	>3	>190 (90 HRB)	>7.40	case hardenable
			Heat treated	--	--	--	650-800 (58-64 HRC)		
polyMIM 8740 1.6546	1,2160 1,1863	Ni 0,5 - 0,8% Mo 0,25 - 0,4% Cr 0,4 - 0,6% Si 0,3 - 0,55% Mn 0,1% max C 0,45 - 0,55% Fe Balance	Sintered	>550	>700	>14	>200 (92 HRB)	>7.5	heat treatment
			Heat treated	>1600	>1665	>0,3	>510 (50 HRC)		
polyMIM 42CrMo4 1.7225 MIM 4140	1,2160 1,1863	Si 0,4% max Mn 0,9% max Mo 0,15 - 0,3% Cr 0,9 - 1,2% C 0,35 - 0,5% Fe Balance	Sintered	>400	>700	>3	>130 (71 HRB)	>7.45	heat treatment
			Heat treated	>1250	>1450	>2	>450 (45 HRC)		
polyMIM 4340 1.6944	1,2160 1,1863	Ni 1,65 - 2,0% Mo 0,2 - 0,3% Cr 0,6 - 0,9% C 0,35 - 0,45% Fe Balance	Sintered	>500	>700	>11	>130 (71 HRB)	>7.5	heat treatment
			Heat treated	>1400	>1620	>2	>450 (45 HRC)		
polyMIM 16MnCr5 1.7131	1,2160 1,1863	Si 0,5% max Mn 1,0 - 1,3% Cr 0,8 - 1,1% C 0,14 - 0,19% Fe Balance	Sintered	>320	>380	>15	>120 (67 HRB)	>7.4	heat treatment
			Heat treated	>600	>1050	>8	>380 (39 HRC)		
polyMIM 1006 mod. --	1.1669 1,1863	Si 0,15% max Mn 0,25% max Fe Balance	Sintered	170	305	>20	>85	>7,45	--
polyMIM 100Cr6 1.3505	1,2160 1,1863 1,1669	Cr 1,35 - 1,65% C 0,8 - 1,05% Fe Balance	Sintered	>500	>900	>5	>230 (97 HRB)	>7.4	heat treatment, wear resistant
			Heat treated	--	--	--	>700 (60 HRC)		

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Soft Magnetic Alloys									
polyMIM Fe3Si	1.1669 1.2160	Si 2,5 - 3,1% C 0,1% max Fe Balance	Sintered	>300	>500	>20	>120	>7,55	Hc ~ 62A/m (ρ=7.60 g/cm ³) Br ~ 1.325 T (ρ=7.60 g/cm ³) Js (4 kA/m) ~ 1590 T (ρ=7.60 g/cm ³) μmax = 8.674 (ρ=7.60 g/cm ³)
polyMIM FN50 1.3926	1.1669 1.2160	Ni 49,5 - 50,5 % C <0,1% Fe Balance	sintered	>150	>400	>20	>100	7,85	--
polyMIM FN08 MIM 2700	1.2160 1.1863	Ni 6,5 - 8,5% C 0,1% max Fe Balance	Sintered	>210	>380	>20	>120 (69 HRB)	>7.6	--
Stainless Steels									
polyMIM 17-4PH 1.4542	1,1515 1.1570 1.1669	Cr 15 - 17,5% Ni 3,0 - 5,0% Mn 1,0% max Si 1,0% max Cu 3,0 - 5,0% C 0,07% max Fe Balance	Sintered	>660	>800	>3	>320 (32 HRC)	>7.65	hardenable, ferromagnetic
			Heat treated	--	--	--	>370 (38 HRC)		
polyMIM 304L 1.4306	1.1669	Cr 18 - 22% Ni 8,0 - 12% Mn 2,0% max Si 1,0% max C 0,03% max Fe Balance	Sintered	>180	>480	>25	>120	>7.78	non-magnetic, austenitic, corrosion resistant
polyMIM 316L 1.4404	1,1515 1.1570 1.1669	Cr 16 - 18,5% Ni 10 - 14% Mo 2,0 - 3,0% Mn 2,0% max Si 1,0% max C 0,03% max Fe Balance	Sintered	>140	>450	>40	>120	>7.9	non-magnetic, austenitic, corrosion resistant
polyMIM 410L 1.4024	1.1669	Cr 12 - 14% Ni 0,3% max Si 0,2 - 1,0% Mn 0,5% max Mo 0,4% max C 0,06% max Fe Balance	Sintered	>170	>335	>20	>200	>7,55	Martensitic Stainless Steel, good corrosion resistance
polyMIM 430 1.4016	1.1570	Cr 16 - 18% Mn 1,0% max Si 1,0% max C 0,12% max Fe Balance	Sintered	>200	>350	>30	>100	>7.5	ferritic, non hardenable grade, magnetic, good corrosion resistance



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Stainless Steels									
polyMIM 440C mod. mod . 1.4125	1.1570 1.1669	Nb 1,0 - 2,0% Mo 0,75% max Ni 0,6% max Cr 16 - 18% Mn 1,0% max Si 1,0% max C 0,85 - 1,0% Fe Balance	Sintered	--	>780	>15	> 350 (35 HRC)	>7.6	Martensitic Stainless Steel,
			Heat treated	--	--	--	>590 (55 HRC)		
polyMIM Nitronic 50 UNS S20910	1.1570 1.1610 1.1669	N 0,2% - 0,4% V 0,1 - 0,3% Mo 1,5 - 3,0% Cr 20,5 - 23,5% Mn 4,0 - 6,0% Ni 11,5 - 12,5% C 0,06% max Fe Balance	sintered	>380	>570	>16	>200 (190 HB)	>7,8	Austenitic Stainless Steel, non magnetic, good corrosion resistance
polyMIM F75	1.1570	Ni 0,5% max Fe 0,75% max Mn 1,0% max Si 1,0% max Mo 5,0 - 7,0% Cr 27,0 - 30,0% C 0,35% max Co Balance	Sintered	>450	>640	>8	>260 (24HRC)	>8,05	non magnetic, good corrosion resistance
			Hipped	>420	>680	>8	--	>8,2	
			Heat treated	>540	>950	>5	>360	>8,2	
Special Alloys									
polyMIM IN713C 2.4671	1.1515	Nb 1,8-2,8% Ti 0,5-1,0% Al 5,5-6,5% Mo 3,8-5,2% Cr 12-14% C 0,08-0,2% Ni Balance	sintered 20°C 650°C 850°C 1000°C	>820 >715 >335 >130	>1300 >995 >490 >165	>15 -- -- --	340 -- -- --	>7,8	Turbo charger grade (1050°C)
polyMIM IN718C --	1.1515	Ni 50-55% Nb 4,7-5,5% Ti 0,65-1,15% Al 0,2-0,8% Mo 2,8-3,3% Cr 17-21 % C 0,03-0,06 % Fe Balance	sintered 20°C	>1040	>1210	>20	200	>8,0	heat resistance 1050°C
polyMIM Hyperco 50 --	1.2160 1,1669	C <0,025 % Ni 0- 0,25 % Cr 0-0,15% Mn 0-0,15 % Si 0-0,15% Co 47,5-49,5% V 1,5-2,1% Fe Balance	--	--	--	>1	36 HRC	>7,7	--

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Tungsten Heavy Alloys									
polyMIM W-22Fe33Ni	1.2480	Fe 1,9 - 2,5% Ni 3,0 - 3,6% W Balance	sintered	--	--	--	--	>17,5	heavy-metal- alloy
polyMIM HiDens18	1.2480	Cu 1,5 - 2,5% Ni 3,0 - 4,0% W Balance	sintered	--	--	--	--	>18,0	heavy-metal- alloy
Titanium Alloys									
polyMIM Ti grade 2 3.7035	1.1515 1.1450	Fe 0,3% max O 0,25% max C 0,08% max Ti Balance	sintered	>270	>340	>20	--	>4,3	--
polyMIM Ti6Al4V 3.7165	1.1515 1.1570	Fe 0,3% max O 0,25% max Al 5,5 - 6,5% V 3,5 - 4,5% C 0,08% max Ti Balance	sintered	>750	>850	>10	--	>4,2	--
Tool Steels									
polyMIM M2 1.3343	1.1669 1.1450	Si 0,2 - 0,45% Mn 0,15 - 0,4% S 0,03% max P 0,03% max V 1,75 - 2,2% W 5,5 - 6,75% Ni 0,3% max Mo 4,5 - 5,5% Cr 3,75 - 4,5% C 0,78 - 1,05% Fe Balance	sintered	>800	>1200	>1	>520 (50 HRC)	>7,9	--
			Heat treated	--	--	--	820 HV (64HRC)		
Tungsten Carbide Cobalt (Hard Metals)									
polyMIM WC0,8Co13,5	1.3000	Co 13,5% WC Balance	sintered	--	--	--	>1440	>13,9	hard metal >210 Oe >240 *10 ⁻⁷ T*m ³
polyMIM WC0,8Co10	1.3000	Co 10% WC Balance	sintered	>4000	>6600	--	>1570	>14,35	hard metal
polyMIM WC0,8Co6	1.3000	Co 6% WC Balance	sintered	>2400	>3500	--	>1770	>14,9	hard metal
Copper Alloy									
polyMIM Cu999	1.1570	O 0 - 0,05% Fe 0 - 0,1% Cu Balance	sintered	>50	>210	>40	40 HB	>8,58	Conductivity >56,5 MS/m
polyMIM CuNi15Sn8	1.1570	Ni 14,5 - 15,5% Sn 7,5 - 8,5% Other 0 - 0,3% Cu Balance	sintered	>320	>470	10	>210	>8,7	--
			Head treated		>500	7	>260		

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