

MATERIAL TYPE Tipo de Material	TRADITIONAL MIM NAME Denominación clásica	STANDARD NAME ISO 22068:2012	STANDARD NAME ASTM B 883-10 MPF 35 2007	CHEMICAL COMPOSITION Composición Química							MECHANICAL PROPERTIES (as sintered) Propiedades mecánicas (Sinterizado)				HEAT TREAT. TRAT. TÉRMICO	MECHANICAL PROPERTIES (Heat treated) Prop. Mecánicas (+Tratamiento Térmico)				MAGNETIC PROPERTIES Propiedades Magnéticas		DENSITY densidad (g/cm ³)		
				%C	%NI	%Cr	%Mo	%SI	%Mn	OTHERS	Rm (N/mm ²)	RO.2 (N/mm ²)	E %	HARDNESS		Rm (N/mm ²)	RO.2 (N/mm ²)	E %	HARDNESS	PERMEABIL. ITY.	IND.MAG. FELD (AT 1900 A/m)			
LOW ALLOY STEELS /ACEROS BAJA ALEACION Iron-Nickel (Hierro-Níquel)	FN02(00)	MIM-Fe2Ni-110	MIM-2200	<0,1	1,5/2,5		<1,0	<1,0	<1,0			>255	>110	>20	87 HV10	Case Harden				>700 HV10			>7,55 (7,6)	
	FN02	MIM-Fe2NiC-205 MIM-Fe2NiC-700H MIM-Fe2NiC-1000H	MIM-4605 MIM-4605-HT	0,4/0,8	1,5/2,5		<0,5	<1,0	<1,0			>380	>205	>11	150 HV10	Full Harden	>800 >1200	>700 >1000	>5	30 HRC 50 HRC			>7,55 (7,5)	
	FN02(05) or 4605 FN08	MIM-4605-170 MIM-Fe8Ni-210 MIM-Fe8NiC-300 MIM-Fe8NiC-500 MIM-Fe8NiC-700H MIM-Fe8NiC-1100H	MIM-4605 MIM-2700	0,4/0,6	1,5/2,5		<0,5		<1,0			380	205	>11	123 HV10	Case Harden Soft anneal Full anneal Full Harden Full Harden Full Harden	>380 Core >750 >550 (>500) >800 (>1050) >1250	>500 >300 >700 (>900) >1100	>5 >6 (>15) >5 >3	>600 Case <250 <180 (35 HRC) (40 HRC) (50 HRC)			>7,55 (7,5)	
Low alloy steels	MIM-42CrMo4	MIM-4140-400 MIM-4140-600H MIM-4140-1200H	MIM-4140	0,35/0,50 0,30/0,50		0,9/1,2 0,8/1,2	0,15/0,3 0,2/0,30	<0,4 <0,6	<0,9 <1,0	<1,0						Normalized Full Harden Full Harden Full Harden	>700 >750 >1300 >1380	>400 >600 >1200 >1070	>3 (>6) >3 >2 >3	>210 (<180) (25 HRC) (50 HRC) (46 HRC)			>7,50	
	MIM-8740		8740	0,45/0,55	0,50/0,80	0,40/0,60	0,25/0,40									Full Harden Full Harden	>1050 >1450	>950 >1300	>3 >3	<200 HV10 40 HRC			> 7,50	
	MIM-8620	21NiCrMo2	8620	0,18/0,23	0,4/0,7	0,4/0,6	0,15/0,25	<0,2	<0,2							Normalized Case Harden	>400 >800 Core	>250 >1100	>10 >2	<130 >750 Case			>7,45	
TOOL STEELS/ A. Herramientas	MIM-100Cr6	MIM-52100	52100	0,85/1,05		1,35/1,65		<0,35	<0,45						Harden								>7,50	
	MIM-M2	1. 3343	M2	0,95/1,05		3,8/4,5	4,5/5,5	0,2/0,4	0,2/0,4	%W 1,75/2,20 %W 5,5/6,75					Harden								>8,0	
SOFT MAGNETIC	FN02(00) FN50 FeSi3 430L	MIM-Fe2Ni-20 MIM-Fe50Ni-200 MIM-Fe3Si-80 MIM430-10	MIM-2200 MIM-Fe50%Ni MIM-Fe-3%Si MIM-430L	<0,1 <0,05 <0,05 <0,05	1,5/2,5 49/51			<1 <1 2,5/3,5 <1	<1 <1 <1			290 455 530 415	125 160 390 240	40 30 24 25	87 HV10 93 HV10 150 HV10 115 HV10							>2000 u >20000 u >8000 u >1000 u	1,4 T 1,3 T 1,4 T 1,1 T	>7,60 >7,70 >7,60 >7,50
STAINLESS STEELS /Inoxidables Ferritic	MIM-430L	MIM-430-210 1. 4016 / X6Cr17	MIM-430L	<0,08		16/18		<1	<1,5			>350	>210	>20	115 HV10									>7,50
	Martensitic	MIM-420	MIM-420-850H 1. 4028 / X30Cr14	420	0,15/0,40 0,25/0,45		12,0/14		<1	<1		>1000	>850	>2	44 HRC	Harden								>7,30
	Precipitation Hardening	174PH	MIM-17-4PH-850 MIM-17-4PH-700H MIM-17-4PH-1000H	MIM-17-4 PH	<0,07	3,0/5,0	15,0/17,5		<1	<1	%Cu 3,0/5,0 %Nb 0,15/0,45	>800 (>900)	>650 (>700)	>3	(30-35 HRC)	as sinter								7,5 (>7,6)
Austenitic / No Magnético Fine Surface	316L	MIM-316L-140	MIM-316L	<0,03	10,0/14	16/18,5	2,0/3,0	<1	<2	<1	>450 (>500)	>140 (>180)	>40 (>50)	120 HV10										>7,70
Nickel Free	PANACEA / X15CrMnMoN17 11 3			<0,2	<0,1	16,5/17,5	3,0/3,5	<1	10,0/12	%N 0,8/1,0	>900	>550	>30	270-300 HV10										>7,50
Heat Resistant/ Refractario	310N / 310NbC	1. 4841/ X15CrNiSi 25 21	310NbC	0,2/0,5	19/22	24/26		0,75/1,75	<1,5	%Nb 1,2/1,5 %N < 1	>550 >750	>200 >400	>35 >10	>150 HV10 >230 HV10	sinter Ar sinter N2									>7,65 >7,7
SPECIAL ALLOYS/ Aleaciones especiales Wear-Heat Resistant Desgaste a 700 C	GHS-4			2,0/2,4	38/42	11,0/13	5,0/7,0	1,5/1,9	1,0/1,3	%W 0,8/1,0 %W 0,4/0,6				300-380 HV10	25 ° C									>7,95
Corrosion resistant	HasteIloy HX	2. 4665/ NiCr22Fe18Mo		0,05/0,15	base	20,5/23	8,0/10	<1	<1	%Fe 17/20 %Co 0,5/2,5 %W 0,2/1,0	>550	>250	>20	>150 HV10										>8,0
working to 1000°C under corrosive gases	IN 713C	AMS 5391		0,08/0,20	base	12,0/14,0	3,8/5,2	<0,50	<0,25	%Fe <2,5 %Al 5,5/6,5 %Ti 0,5/1,0 %Nb 1,8/2,9				>300 HV10										> 7,78
CTE 4,5x10-6 K-1 (20-400 °C)(electronic appl)	F15/ Kovar		F15		28,5/29,5					%Co 16,5/17,5	>450	>300	>20	>110 HV10										>7,8

BLUE: ISO 22068

RED: American Standards/ Datos en rojo corresponden con norma ASTM o MPIF americana.

GREEN: MIMCRISA own results not yet international standardized/ Datos en verde corresponden con los resultados garantizados por MIMCRISA aún no estandarizados oficialmente.

BLACK: Equivalent standards from others technologies
Other materials as: Titanium, 1.4435/ 1.4462 on request.