Stainless Steel for Gas Tungsten Arc Welding and Gas Metal Arc Welding

Product Name	Shielding gas	Classification AWS A5.9	Classification JIS Z3321	Dia. (mm)	Pack (kg)	Typical chemical composition of weld metal TS MPa (ksi)	EL %	Mechanical properties C	Mn	Si	Cr	Ni	Mo	other	Applications and Characteristics
TGA-307Si	TGA 100%Ar MIG Ar+0.5-2%O_2	EN ISO 14343-A-W 18 8 Mn		TGA 1.2,1.6, 2.0, 2.4, 3.2, 4.0 MIG 0.8, 0.9, 1.0, 1.2, 1.6 TW 2.4,3.2 4.0	TGA 5kg 10kg MIG 15kg 125kg 250kg TW 25kg	610(88)	40	0.08	6.7	0.9	18.7	8.2	0.05	-	It is the same as ER307, except for the higher silicon content.
MIG-307Si		EN ISO 14343-A-G 18 8 Mn													
TGA-308/308L		ER 308/308L	Y 308/308L			570(83)	38	0.02	1.65	0.50	19.8	10.3	0.12	-	The weld metal is 20Cr-10Ni stainless steel. It is suitable for the welding of AISI 304, 304L, 301, 302 and 321.
		EN ISO 14343-A-W 19 9 L													
MIG-308/308L		ER 308/308L	Y 308/308L												
		EN ISO 14343-A-G 19 9 L													
TGA-308LSi		ER 308LSi	EN ISO 14343-A-W 19 9 L Si			570(83)	38	0.02	1.60	0.73	19.7	9.2	0.12	-	The weld metal with low carbon and higher silicon content improves the fluidity of the filler metal during welding.
MIG-308LSi			EN ISO 14343-A-G 19 9 L Si												
TGA-309/309L		ER 309/309L	Y 309/309L			590(86)	35	0.02	1.60	0.5	23.1	13.8	0.15	-	The weld metal contains high Ni and Cr. Suitable for the welding of dissimilar metals such as mild steel to stainless steel.
		EN ISO 14343-A-W 23 12 L													
MIG-309/309L		ER 309/309L	Y 309/309L												
		EN ISO 14343-A-G 23 12 L													
TGA-309LSi		ER 309LSi	EN ISO 14343-A-W 23 12 L Si			610(88)	33	0.02	1.90	0.92	23.2	13.6	0.1	-	The weld metal with low carbon and higher silicon content improves the fluidity of the filler metal during welding.
MIG-309LSi			EN ISO 14343-A-G 23 12 L Si												
TGA-309LMo		-	EN ISO 14343-A-W 23 12 2 L			610(88)	33	0.02	1.40	0.4	21.2	14.8	2.6	-	The weld metal is low carbon 25Cr-12Ni-2.5Mo stainless steel. It can produces excellent oxidization resistance at high temperature. Suitable for welding of dissimilar metals.
MIG-309LMo			EN ISO 14343-A-G 23 12 2 L												
TGA-310		ER 310	Y 310			600(87)	38	0.11	1.60	0.40	26.5	20.80	0.10	-	Excellent corrosion resistance, heat resistance, and toughness. Suitable for the welding of steel with high hardenability, and 13Cr steel.
		EN ISO 14343-A-W 25 20													
MIG-310		ER 310	Y 310												
		EN ISO 14343-A-G 25 20													
TGA-312		ER 312	Y 312			700(102)	26	0.12	1.61	0.45	30.0	8.6	0.2	-	For welding of 29%Cr-9%Ni stainless cast steel. And dissimilar metal such as carbon steel or low alloy steel to stainless steel.
		EN ISO 14343-A-W 29 9													
MIG-312		ER 312	Y 312												
		EN ISO 14343-A-G 29 9													

SOLID WIRES

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Product Name	Shielding gas	Classification		Dia. (mm)	Pack (kg)	Typical chemical composition of weld meta		Mechanical properties							Applications and Characteristics
		AWS A5.9	JIS Z3321			TS MPa (ksi)	EL %	C	Mn	Si	Cr	Ni	Mo	other	
TGA-316/316L	TGA 100%Ar MIG Ar+0.5-2%O2	ER 316/316L	Y 316/316L	TGA 1.2,1.6, 2.0, 2.4, 3.2, 4.0 MIG 0.8, 0.9, 1.0, 1.2, 1.6 TW 2.4,3.2 4.0,4.8	TGA 5kg 10kg MIG 15kg 125kg 200kg TW 25kg	590(86)	39	0.015	1.60	0.52	18.5	12.1	2.5	-	For welding of 18% Cr-12%Ni-2%Mo stainless steel. It provides excellent creep strength, and resistance to sulfuric acid due to the Mo content.
		EN ISO 14343-A-W 19 12 3 L													
MIG-316/316L		ER 316/316L	Y 316/316L												
		EN ISO 14343-A-G 19 12 3 L													
TGA-316LSi		ER316LSi	Y 316LSi			600(87)	38	0.015	1.50	0.8	18.3	12.5	2.5	-	The weld metal is ultra low carbon and higher silicon content improving the fluidity of the filler metal during welding.
		EN ISO 14343-A-W 19 12 3 L Si													
MIG-316LSi		ER316LSi	Y 316LSi												
		EN ISO 14343-A-G 19 12 3 L Si													
TGA-317L		ER 317	Y 317			570(83)	41	0.015	1.86	0.45	19.4	14.0	3.2	-	For welding of low carbon 19%Cr-13%Ni-3%Mo stainless steel. Excellent intergranular corrosion resistance.
		EN ISO 14343-A-W 18 15 3 L													
MIG-317L		ER 317 L	Y 317												
		EN ISO 14343-A-G 18 15 3 L													
TGA-347		ER 347	Y 347			580(84)	38	0.05	1.6	0.43	19.3	9.2	0.1	Nb:0.57	For welding of heat resistance steel. Excellent intergranular corrosion resistance due to Nb content, suitable for welding of AISI 347, 321, 304L.
		EN ISO 14343-A-W 19 9 Nb													
MIG-347		ER 347	Y 347												
		EN ISO 14343-A-G 19 9 Nb													
MIG-409Cb		ER 409Cb	-			-	-	0.02	0.48	0.49	11.3	0.26	0.09	Nb:0.35	For Welding of exhausting component.
MIG-430		ER 430	Y 430			L510(74)	23	0.015	0.43	0.41	16.4	0.23	0.02	-	For welding of 16%Cr stainless steel.
		EN ISO 14343-A-G 17													
MIG-430LNb		-	-			471(68)	28	0.02	0.40	0.40	18.0	0.20	0.03	Nb:0.40 Cu:0.10	For welding of 18%Cr stainless steel.
TGA-2209		ER 2209	EN ISO 14343-A-W 22 9 3 N L			745(108)	27	0.02	1.4	0.41	23.0	8.7	3.18	N:0.151 Cu:0.04	For welding of 22%Cr duplex stainless steel such as LUS31803.
MIG-2209		ER 2209	EN ISO 14343-A-G 22 9 3 N L												

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