



MIG 20/10M

Classification

AWS A5.9 : ER316L

ISO 14343-A : G 19 12 3 L

Description & Applications

Low carbon solid wire for GMAW of stainless steels like 316, 316L, or without Molybden like 304, 304L. Mainly used for general construction with service temperature from -120°C up to +400°C.

Main applications: Boiler making, piping system, pressure vessels, power plant, chemical and petrochemical industries, refineries, food industries...

Base materials:

Stainless steels for general uses:

UNS	Alloy	EN 10088	Material N°
S31600	316	X5CrNiMo17-12-2	1.4401
S31603	316L	X2CrNiMo17-12-2	1.4404
S30400	304	X5CrNi18-10	1.4301
S30403	304L	X2CrNi18-10	1.4306

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	Co	N
Min		0.30	1.0	18.0	11.0	2.5		-			-	-
Max	0.03	0.65	2.5	20.0	14.0	3.0	0.5	-	0.03	0.02	-	-
Type	0.02	0.45	1.8	18.6	12.1	2.55	0.08	0.01	0.02	0.01	0.05	0.06

Delong ferrite: 5-15%

All Weld Metal Mechanical Properties

	R _{p0.2} (MPa)	R _m (MPa)	A ₅ (%)	KV (J)
Min	320	510	30	-
Max				-
Type	470	600	35	+20°C : 120 -196°C : 45

Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters		Shielding Gas
		Current (A)	Voltage (V)	
GMAW = +	0.8	70 - 180	18 - 26	ISO 14175: M12 (Ar+0.5-5%CO ₂) M13 (Ar+0.5-3%O ₂) 15-20 l/min
	1.0	80 - 220	18 - 28	
	1.2	150 - 320	22 - 32	
	1.6	220 - 380	24 - 34	

Back shielding with Argon or Nitrogen gas or with copper backing support to avoid "back end" rust phenomena.

FT En-MN10-200325

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