



MIG 20/10MS

Classification

AWS A5.9 : ER316LSi

ISO 14343-A : G 19 12 3 L Si

Description & Applications

Low carbon solid wire with increased Silicon content 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		0.65	1.0	18.0	11.0	2.5		-			-	-
Max	0.03	1.00	2.5	20.0	14.0	3.0	0.5	-	0.03	0.02	-	-
Type	0.02	0.85	1.8	18.6	12.4	2.55	0.10	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	25	-
Max				-
Type	430	580	35	+20°C : 100 -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.

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