



## MIG 18/15

### Classification

AWS A5.9 : ER317L

ISO 14343-A : G 18 15 3 L

### Description & Applications

Low carbon solid wire for GMAW of low carbon stainless steel with about 3.5% of Molybdenum. Used for welding and cladding on austenitic Cr-Ni-Mo stainless and clad plates. Compared to 316L grades the higher Molybdenum (Mo) content provides better general corrosion resistance, especially to crevice and pitting corrosion in chloride containing solutions.

**Main applications:** Chemical and petrochemical industries, in refineries, in the food industries and for ship building to weld pipes, tanks...

### Base materials

#### Stainless steels for general use:

UNS	Alloy	EN 10088	Material N°
S31603	316L	X2CrNiMo17-12-2	1.4404
S31653	316LN	X2CrNiMoN17-13-3	1.4429
S31700	317	X5CrNiMo17-13-3	1.4449
S31703	316LMO	X2CrNiMo18-14-3	1.4435
S31703	317L	X2CrNiMo 18-15-4	1.4438

### Typical Chemical Composition ( % )

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	Co	N
Min		0.30	1.0	18.5	13.0	3.0		-			-	-
Max	0.03	0.65	2.5	20.0	15.0	4.0	0.5	-	0.03	0.02	-	-
Type	0.01	0.40	1.4	18.8	13.6	3.5	0.10	0.01	0.02	0.01	0.06	0.06

Delong ferrite: ~10%

### All Weld Metal Mechanical Properties

	R <sub>p0.2</sub> ( MPa )	R <sub>m</sub> ( MPa )	A <sub>5</sub> ( % )	KV ( J )
Min	300	520	30	-
Max				-
Type	380	580	32	+20°C 70

### 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 <sub>2</sub> ) M13 (Ar+0.5-3%O <sub>2</sub> ) 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-MN23-191118

**Liability:** This document is intended to assist the user in choosing the product. It is up to the user to verify that the chosen product is suitable for applications for which it is intended. The company FSH Welding Group reserves the right to alter specifications without prior notice of its products. The descriptions, illustrations and specifications are for reference only and cannot be held liable for FSH Welding Group. **Fumes:** Consult information on MSDS, available upon request.

[www.fsh-welding.com](http://www.fsh-welding.com) - [info@fsh-welding.fr](mailto:info@fsh-welding.fr)