



GMM TIG 316L	Classification: Class: AWS : A5.9- ER316L
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Material Conforms to: AWS A5.9

Weld Process Used: TIG (GTAW)

Description:

ER316L filler metal is primarily used for welding low carbon molybdenum-bearing austenitic alloys. Good resistance to general and, owing to low C content, intergranular corrosion. The Mo content gives good resistance also to pitting. The 2% molybdenum content of 316L gives the weld deposit excellent corrosion resistance at elevated temperatures against “pitting” that may be caused by sulfuric, phosphoric and acetic acids.

Chemical Composition of wire:

Standard Requirement								
C	Mn	Si	Cr	Ni	Mo	Cu	S	P
0.03 max	1.0-2.5	0.30-0.65	18.0-20.0	11.0-14.0	2.0-3.0	0.75 max	0.03 max	0.03 max
Average Typical composition								
0.024	1.72	0.45	18.17	11.12	2.08	0.08	0.010	0.026

Mechanical Properties:

Tensile Strength (Min)	Yield Strength (Min)	Elongation (Min)
600 MPa	400 MPa	35%

Available sizes:

- **Diameter-** 1.20 mm, 1.60 mm, 2.00 mm, 2.40 mm, 3.20 mm, 4.00 mm
- **Length-** 1000 mm & 36” Inch

Welding position:

- All position

Polarity:

- DCEN (DC-)

Recommended Welding Parameters:

<u>GTAW "TIG Process"</u>			
<u>Wire Diameter</u>	<u>Amps DC</u>	<u>Volts</u>	<u>Shielding Gas</u>
1.20	80-110	13-16	Argon 100%
1.60	90-130	14-16	Argon 100%
2.40	120-175	15-20	Argon 100%
3.20	140-200	17-22	Argon 100%
4.00	160-230	18-25	Argon 100%

Packing Details:

- 1 Kg/2lbs – Tube
- 5 Kg/10lbs – Tube
- 20Kg/40lbs - Box (4 Tubes)

Note: Other shielding Gases may be used for TIG welding. Shielding gases are chosen taking Quality, Cost, and Operability into consideration.