

ST-316

2021.02



❖ Specification

AWS A5.9	ER316
JIS	Z 3321 YS316
EN	ISO 14343-A W 19 12 3

❖ Applications

ST-316 is designed for welding of 18% Cr-12% Ni-2% Mo stainless steel.

❖ Characteristics on Usage

1. ST-316 is a filler rod for TIG welding with pure Ar gas.
2. As the weld metal contains ferrite, its crack resistibility is excellent.
3. Both bead appearance and weldability are good.
4. Resistance to corrosion is extremely good.

❖ Note on Usage

Use 100% Ar gas

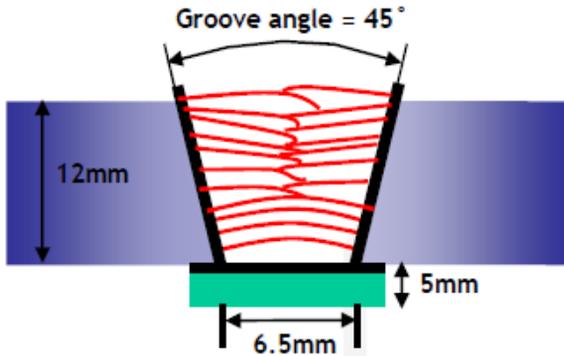
❖ Packing

Dia.	1.6mm (1/16in)	2.0mm (5/64in)	2.4mm (3/32in)	2.6mm (0.10in)	3.2mm (1/8in)
TIG	5kg (11lbs)				



Mechanical Properties of All Weld Metal & Chemical Composition of The Wire

❖ Welding Conditions



[Joint Preparation & Layer Details]

Diameter(mm)	: 2.4mm
Shielding Gas	: 100%Ar
Flow Rate(ℓ /min.)	: 20~25
Amp./ Volt.	: 160~240
Pre-Heat(℃)	: R.T.
Interpass Temp.(℃)	: 150 ± 15
Polarity	: DC(-)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)	
	TS MPa (ksi)	EL (%)	-60℃ (-76°F)	-196℃ (-320.8°F)
ST-316	631 (92)	45.2	92 (68)	39 (28)

❖ Chemical Analysis of the wire(wt%)

Consumable	Chemical Composition (wt%)									
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N
ST-316	0.05	0.36	1.91	0.014	0.009	12.90	18.47	2.62	0.017	0.04
AWS A5.9 ER316	≤0.08	0.30 ~0.65	1.0 ~2.5	≤0.03	≤0.03	11.0 ~14.0	18.0 ~20.0	2.0 ~3.0	≤0.75	-

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