

# **ST-316L**

2021.02



## ❖ Specification

<b>AWS A5.9</b>	ER316L
<b>JIS</b>	Z 3321 YS316L
<b>EN</b>	ISO 14343-A W 19 12 3 L

## ❖ Applications

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

## ❖ Characteristics on Usage

1. ST-316L 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

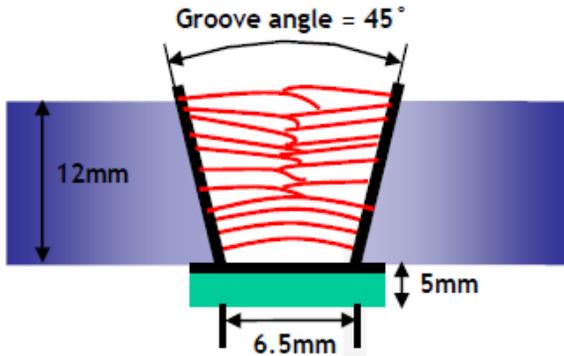
## ❖ Packing

<b>Dia.</b>	1.6mm (1/16in)	2.0mm (5/64in)	2.4mm (3/32in)	2.6mm (0.10in)	3.2mm (1/8in)
<b>TIG</b>	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-316L	594 (87)	44.8	101 (74)	56 (41)

### ❖ Chemical Analysis of the wire(wt%)

Consumable	Chemical Composition (wt%)									
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N
ST-316L	0.02	0.43	1.87	0.012	0.010	13.06	19.00	2.63	0.023	0.03
AWS A5.9 ER316L	≤0.03	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	-