

# **ST-309L**

2021.10



## ❖ Specification

<b>AWS A5.9</b>	ER309L
<b>JIS</b>	Z 3321 YS309L
<b>EN</b>	ISO 14343-A W 23 12 L

## ❖ Applications

ST-309L is designed for welding of low carbon 22% Cr-12% Ni steel and a dissimilar metals, clad side of 18% Cr-8% Ni steel.

## ❖ Characteristics on Usage

As the weld metal contains ferrite, its crack resistibility is good. Due to its high level of alloy, it has excellent resistance to heat.

## ❖ Note on Usage

Use 100% Ar

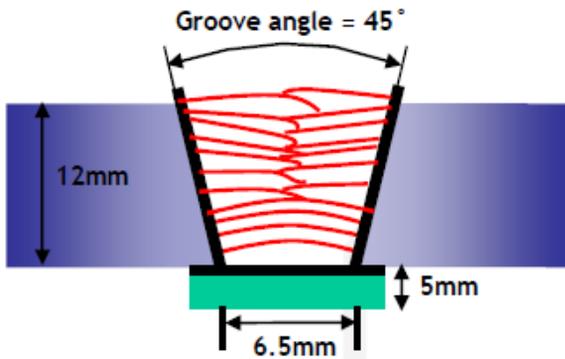
## ❖ Packing

<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 & Chemical Composition of All Weld Metal

### ❖ Welding Conditions



[ Joint Preparation & Layer Details ]

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

### ❖ Mechanical Properties of All weld metal(wt%)

Consumable	Tensile Test		CVN Impact test Joule (ft-lbs)
	TS MPa (ksi)	EI (%)	-60℃ (-76°F)
ST-309L	575 (83)	43.2	85 (63)

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

Consumable	C	Si	Mn	P	S	Ni	Cr
ST-309L	0.02	0.52	2.3	0.017	0.007	13.7	23.5
AWS A5.9 ER309L	≤0.03	0.30 ~0.65	1.0 ~2.5	≤0.030	≤0.030	12.0 ~14.0	23.0 ~25.0

### ❖ δ - Ferrite No.

Consumable	Shielding Gas	Diagram		
		Schaeffler	Delong	WRC(1992)
ST-309L	100%Ar	7.8	9.6	8.3

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