



HYUNDAI
W E L D I N G

Rev. 00

ST-316L

HYUNDAI WELDING CO., LTD.



❖ Specification

AWS A5.9	ER316L
JIS Z3321	YS316L
EN ISO 14343-A	W 19 12 3 L

❖ Applications

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

❖ Characteristics on Usage

1. SM-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 its bead appearance and weldability are good.
4. Resistance to corrosion and heat is extremely good.

❖ Note on Usage

Use 100% Ar gas

❖ Packing

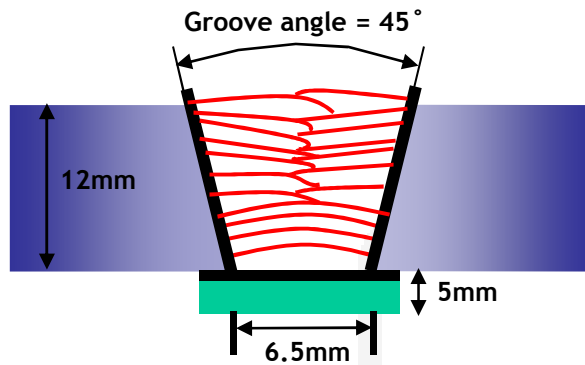
Size(mm)	1.2	1.6	2.0	2.4	3.2
Length(mm)	1000				



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



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(-)

[Joint Preparation & Layer Details]

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact test (Joule)	
	TS(MPa)	El(%)	-60℃	-196℃
ST-316L	582.0	48.0	143.0	82.0

❖ Chemical Analysis of the wire(wt%)

Consumable	Shielding Gas	Chemical Composition (%)									
		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N
ST-316L	100% Ar	0.019	0.39	1.75	0.021	0.007	11.38	18.58	2.12	0.145	0.02
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	-

This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.



**Mechanical Properties
& Chemical Composition of All Weld Metal**

❖ **δ – Ferrite No.**

Consumable	Shielding Gas	Diagram			FERITSCOPE MP-30 * (FISCHER)
		Schaeffler	DeLong	WRC(1992)	
ST-316L	100% Ar	6.6	9.9	8.9	8.5



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