



HYUNDAI
W E L D I N G

Rev. 00

S - 316L.17

SHIELDED METAL ARC WELDING CONSUMABLE
FOR WELDING OF 18% Cr-12% Ni-2% Mo STAINLESS STEEL

HYUNDAI WELDING CO., LTD.



❖ Specification

AWS A5.4	E316L-17
JIS Z3221	ES316L-17
EN 1600	E 19 12 3 L R

❖ Applications

S-316L.17 is designed for welding of 18%Cr-12%Ni-2%Mo stainless Steels. (Petrochemical processing, textile industries etc.)

❖ Characteristics on Usage

- 1.S-316L.17 is a lime- titania type electrode provided with a good Usability and weldability. It has an excellent resistibility to inter-Crystalline corrosion in the as-welded condition.
2. S-316L.17 has a high moisture resistance and good porosity resistance

❖ Note on Usage

1. Dry the electrodes at 350°C(662°F) for 60 minutes before use.
2. Remove dirt such as oil and dust from the groove.
3. Weaving width should be within two and a half times of electrode's diameter.

❖ Type of Current

AC or DC+

❖ Packing

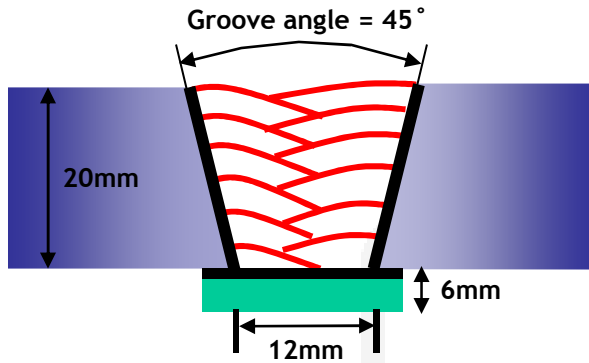
Packet	2.5kg(5.5lbs)
Carton	2.5kg(5.5lbs) X 4 : 10kg(22lbs)



Mechanical Properties & Chemical Composition of All Weld Metal

❖ **Welding Conditions**

Method by AWS Spec.



- Diameter(mm)** : 4.0mm
- Amp./ Volt.** : 140/25
- Travel speed(Cm/min)** : 13~18
- Pre-Heat(°C)** : R.T .
- Interpass Temp.(°C)** : 150±15
- Position** : Flat
- Polarity** : AC or DC+

[Joint Preparation & Layer Details]

❖ **Mechanical Properties of All weld metal**

Consumable	Tensile Test		CVN Impact Test (Joule)	
	TS(MPa)	EI(%)	-20℃	-60℃
S-316L.17	562	43.5	54	46
AWS A5.4 E316L-XX	≥ 490	≥ 30	Not Specified	

❖ **Chemical Analysis of All weld metal(wt%)**

Consumable	Chemical Composition (%)								
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu
S-316L.17	0.025	0.88	1.33	0.029	0.016	11.7	19.4	2.4	0.02
AWS A5.4 E316-XX	≤0.04	≤1.0	0.5~2.5	≤0.04	≤0.03	11.0~14.0	17.0~20.0	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	Diagram		
	Schaeffler	DeLong	WRC(1992)
S-316L.17	9.9	13.7	9.5

❖ **Bead Appearance**



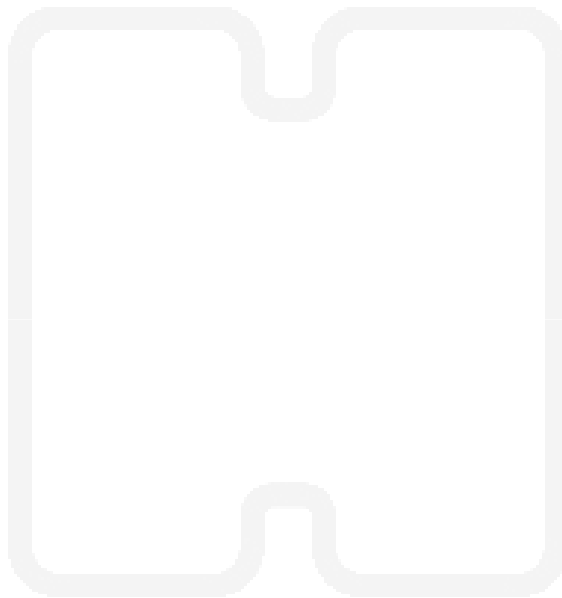
This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING 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.



Approvals

❖ AUTHORIZED APPROVAL DETAILS

Consumable	ABS		
S-316L.17	AWS A5.4 E316L-17 2.0~5.0		



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.