HYUNDAI WELDING

Rev. 05

S-316L.16N

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

2024.12

HYUNDAI WELDING CO., LTD.

S-316L.16N

❖ Specification

AWS A5.4	E316L-16
JIS Z 3221	ES316L-16
EN ISO 3581-A	E 19 12 3 L R

❖ Applications

S-316L.16N is designed for welding of 18%Cr-12%Ni-2%Mo stainless Steels. (Petrochemical processing, textile industries etc.)

❖ Characteristics on Usage

S-316L.16N 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.

❖ Note on Usage

1. Dry the electrodes at 350℃(662°F) for 60 minutes before use.
2. Remove dirts 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+

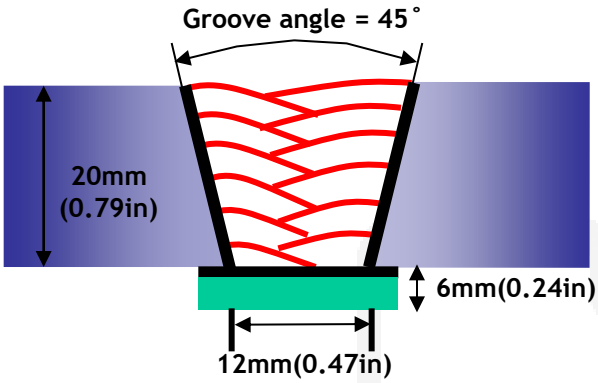
❖ Packing

Packet	2.5kg(5.5lbs) / 5Kg(11lbs)
Carton	2.5kg(5.5lbs) X 4 : 10kg(22lbs) 5Kg(11lbs) x 4 : 20Kg(44lbs)

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter	:	4.0mm(5/32in)
Amp./ Volt.	:	140/25
Travel speed	:	13~18(Cm/min)
Pre-Heat	:	R.T .
Interpass Temp.	:	150±15℃(302±59°F)
Position	:	Flat
Polarity	:	AC or DC+

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact Test Joule(ft·lbs)	
S-316L.16N	TS MPa (lbs/in²)	El(%)	-20℃(-4°F)	-60℃(-76°F)
	557(81,000)	45.2	50(37)	42(31)
AWS A5.4 E316L	≥490(71,000)	≥ 30	Not Specified	

❖ Chemical Analysis of All weld metal(wt%)

Consumable	Chemical Composition (%)								
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu
S-316L.16N	0.02	0.75	0.95	0.018	0.012	12.7	18.5	2.7	0.024
AWS A5.4 E316L	≤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

Mechanical Properties & Chemical Composition of All Weld Metal

❖ δ – Ferrite No.

Consumable	WRC(1992)	FERITSCOPE MP-30 * (FISCHER)
S-316L.16N	6.5	6~8

❖ Bead Appearance

H-Fillet , Base : STS 304L(6T)

AC, 140A/25V

DC+, 145A/25V