HYUNDAI WELDING

Rev. 00

S - 316L.16N

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

HYUNDAI WELDING CO., LTD.

S -316L.16N

❖ Specification

AWS A5.4	E316L-16
JIS Z3221	ES316L-16
EN 1600	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+

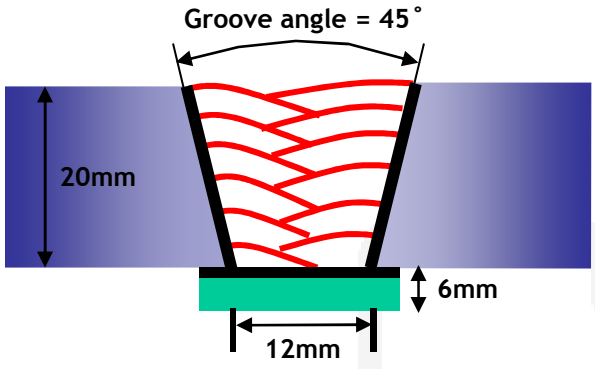
❖ Packing

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

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

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

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact Test (Joule)	
S-316L.16N	TS(MPa)	El(%)	-20℃	-60℃
	587	44.2	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.16N	0.027	0.74	0.99	0.027	0.014	11.57	19.07	2.53	0.11
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

Mechanical Properties & Chemical Composition of All Weld Metal

❖ δ – Ferrite No.

Consumable	Diagram			FERITSCOPE MP-30 * (FISCHER)
	Schaeffler	Delong	WRC(1992)	
S-316L.16N	10.0	12.1	8.6	5~6

❖ Bead Appearance

Flat(1G, PA) , Base : STS 304L(6T)

AC, 140A/25V

DC+, 145A/25V

Approvals

❖ AUTHORIZED APPROVAL DETAILS

Consumable	KR	ABS	LR
S-316L.16N	RD316L 2.4~5.0	AWS A5.4 E316L-16 2.4~5.0	316L 2.4~5.0
	BV	DNV	NK
	UP(E316L-16, -20℃) 2.0~5.0	316L 2.4~5.0	KD316L 2.0~5.0
	CWB	TUV	CE
	CSA W48-06 E316L-16 2.0~5.0	EN 1600 E 19 12 3 L R 2.0~5.0	EN 1600 E 19 12 3 L R 2.0~5.0
	DB	CCS	
	E19 12 3 L R (1.4430) DIN EN 1600 2.0~5.0	316L 2.0~5.0	