HYUNDAI WELDING

Rev. 01

S - 308.16N

SHIELDED METAL ARC WELDING CONSUMABLE
FOR WELDING OF 18% Cr-8% Ni STAINLESS STEEL

2021.05

HYUNDAI WELDING CO., LTD.

S-308.16N

❖ Specification

AWS A5.4	E308-16
JIS Z3221	ES308-16
EN ISO 3581-A	E 19 9 R

❖ Applications

S-308.16N is designed for welding of 18%Cr-8%Ni stainless steels. (Petrochemical processing, textile industries etc.)

❖ Characteristics on Usage

S-308.16N is a lime- titania type electrode for extra-low carbon 18%Cr - 8% Ni steel with good usability. It is quite efficient because Its burn-off rate and deposition rate are high because comparatively High amperage can be used.

❖ Note on Usage

1. it is mostly effective to proceed with welding. Keeping the arc as short as possible in flat position.
2. Remove dirts such as oil and dust from the groove.
3. Dry the electrode at 350℃(662°F) for 60 minutes before use.

❖ Type of Current

AC or DC+

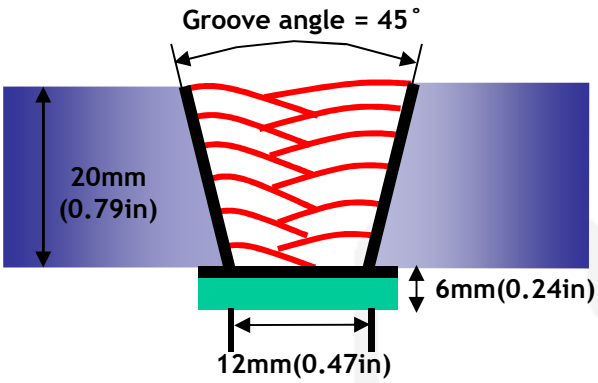
❖ Packing

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

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact Test Joule(ft·lbs)
S-308.16N	TS MPa (lbs/in^2)	El(%)	-60℃(-76˚F)
	561(81,300)	44.0	43(38)
AWS A5.4 E308-XX	≥520(75,400)	≥ 35	Not Specified

❖ Chemical Analysis of All weld metal(wt%)

Consumable	Chemical Composition (%)								
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu
S-308.16N	0.03	0.65	0.66	0.026	0.011	9.8	19.6	0.14	0.12
AWS A5.4 E308-XX	≤0.08	≤1.0	0.5~ 2.5	≤0.04	≤0.03	9.0 ~11.0	18.0 ~21.0	≤0.75	≤0.75

Mechanical Properties & Chemical Composition of All Weld Metal

❖ δ – Ferrite No.

Consumable	Diagram			FERITSCOPE MP-30 * (FISCHER)
	Schaeffler	Delong	WRC(1992)	
S-308.16N	10.6	9.3	6.6	5~6

❖ Bead Appearance

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

AC, 140A/25V

DC+, 145A/25V

Approvals

❖ AUTHORIZED APPROVAL DETAILS

Consumable	KR	ABS	DNV
S-308.16N	RD308 2.4~5.0	AWS A5.4 E308-16 2.4~5.0	NV 308 2.4~5.0