

SW-307NS Cored

FLUX CORED ARC WELDING CONSUMABLE
FOR WELDING OF 13% Mn STEELS, CLADDING CARBON STEELS



SW-307NS Cored

❖ Specification

EN ISO 17633-A T18 8 Mn M M13/I1

❖ Applications

SW-307NS Cored is designed for welding of 13% Mn steels, Cladding Carbon steels, dissimilar steels

❖ Characteristics on Usage

SW-307NS Cored is a metal cored wire with a hot cracking resistant austenite weld metal. The tough weld metal has an excellent crack resistance, even when welding steels with very poor weldability. This wire is designed for welding dissimilar steels, 13Mn steels with Reduced weldability and for cladding carbon steels, can also be used As a buffer layer prior to hard surfacing. Designed for high deposition welding of multi-layer standing fillet welds.

❖ Note on Usage

Use 100% Ar gas or Ar+ 2~5 O₂ gas

❖ Packing

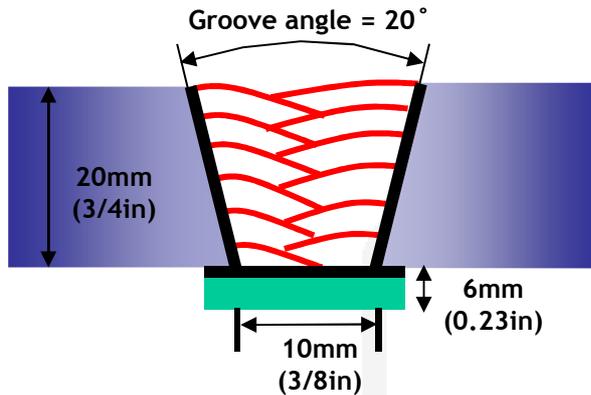
Diameter	1.2mm (0.045in)			
Spool *including ball pac	5kg (11lbs)	12.5kg (28lbs)	15kg (33lbs)	20kg (44lbs)



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by EN 1597-1(1997)



[Joint Preparation & Layer Details]

Diameter(mm)	: 1.2mm(0.045in)
Shielding Gas	: 100 %Ar
Flow Rate(ℓ /min.)	: 20~22
Amp./ Volt.	: 190/25
Stick-Out(mm)	: 20(3/4 in)
Pre-Heat(°C)	: R.T . °C(°F)
Interpass Temp.(°C)	: ≤150°C(302°F)
Polarity	: DC(+)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact Test J(ft · lbs)	
	TS (Mpa/ksi)	EL (%)	-20°C (-4°F)	-60°C (-76°F)
SW-307NS Cored	621(90,045)	40.2	89(65.7)	69(50.9)
EN ISO 17633-A T 18 8 Mn	≥500	≥25	Not Specified	

❖ Chemical Analysis of All weld metal(wt%)

Consumable	Shielding Gas	Chemical Composition (%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Cu
SW-307NS Cored	100% Ar	0.07	0.6	7.3	0.021	0.008	8.6	18.3	0.1	0.02
EN ISO 17633-A T 18 8 Mn		≤0.20	≤1.2	4.5 ~7.5	≤0.035	≤0.025	7.0 ~10.0	17.0 ~20.0	≤1.0	-

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.



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Mechanical Properties & Chemical Composition of All Weld Metal

❖ Bead Appearance

Horizontal Fillet(2F, PB) , Base : SS400(6mm,0.23in)



100% Ar (190A/25V, 35CPM)

❖ δ – Ferrite No.

Consumable	Shielding Gas	Diagram			FERITSCOPE MP-30 * (FISCHER)
		Schaeffler	DeLong	WRC(1992)	
SW-307NS Cored	100% Ar	-	-	3.7	4.0

Welding Efficiency

❖ Deposition Rate & Efficiency

Consumable (size)	Shielding Gas	Welding Conditions		Wire Feed Speed m/min (in/min)	Deposition Efficiency(%)	Deposition Rate kg/hr(lb/hr)
		Amp. (A)	Volt. (V)			
1.2mm (0.045 in)	100%CO ₂	190	25	5.5(216)	95~100	4.2(9.1)

Deposition efficiency=(Deposited metal weight/Wire weight used)×100

Deposition rate=(Deposited metal weight/Welding time,min.)×60

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