

SW-410NiMo Cored

METAL CORED ARC WELDING CONSUMABLE
FOR WELDING OF MARTENSITIC STAINLESS STEEL



SW-410NiMo Cored

❖ Specification

AWS A5.22	E410NiMoT1-1/-4
JIS Z3323	TS410NiMo-FB1
EN ISO 17633-A-T	13 4 P M21/C1 2

❖ Applications

All position welding of martensitic stainless steels, hardfacing of Continuous casting rolls, valve seats, etc.

❖ Characteristics on Usage

SW-410NiMo Cored is a flux cored wire for martensitic stainless steel like CA6NM. SW-410NiMo Cored is a titania type flux cored wire for all position welding with CO₂ & Mixed gas. As deposition rate is higher than solid wire and MMA electrode, highly efficient welding can be performed.

Arc stability is excellent, so spatter loss is low and slag covering is uniform with good removability.

❖ Note on Usage

Proper preheating (50~150°C) (122~302°F) and interpass temperature Must be adopted in order to release to release hydrogen which may cause crack in weld metal.

Both 100% CO₂ and mixed (Ar + 20~25%CO₂)gas are useful.

❖ Packing

Dia.	1.6mm(1/16 in)	
Spool *including ball pac	12.5kg(27.6lbs)	15kg(33lbs)

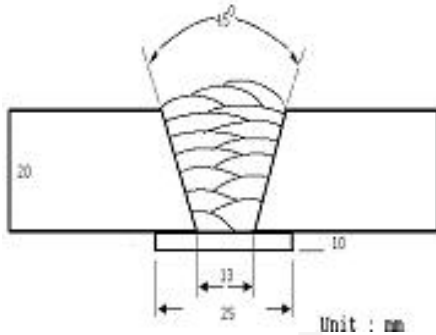


SW-410NiMo Cored

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter(mm)	: 1.6mm(1/16 in)
Shielding Gas	: 100%CO ₂
Flow Rate(ℓ /min.)	: 20~22
Amp./ Volt.	: 260/32
Stick-Out(mm)	: 20mm (0.79in)
Pre-Heat(°C)	: 150°C(302°F)
Interpass Temp.(°C)	: 150 ~ 260°C(302~500°F)
Polarity	: DC(+)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test			CVN Impact Test J(ft-lbs)		PWHT
	YS MPa(ksi)	TS MPa(ksi)	EL(%)	0°C(32°F)	-20°C(-4°F)	
SW-410NiMo Cored	710(103)	890(129)	20	50(37)	50(37)	600°C (1112°F) × 1Hr RC
AWS A5.22 E410NiMoTX-X	-	≥ 760(110)	≥ 15	-		

❖ Chemical Analysis of All weld metal(wt%)

Consumable	C	Si	Mn	P	S	Ni	Cr	Mo
SW-410NiMo Cored	0.03	0.41	0.46	0.011	0.010	4.30	12.2	0.51
AWS A5.22 E410NiMoTX-X	≤ 0.06	≤ 1.0	≤ 1.0	≤ 0.04	≤ 0.03	4.0 ~ 5.0	11.0 ~ 12.5	0.40 ~0.70

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.



Diffusible Hydrogen Content

❖ Welding Conditions

Diameter(mm)	: 1.6(1/16in)	Amps(A) / Volts(V)	: 260 / 32
Shielding Gas	: 100% CO ₂	Stick-Out(mm)	: 20
Flow Rate(ℓ /min.)	: 20	Welding Speed	: 35 cm/min (13.8 in/min)
Welding Position	: 1G	Current Type & Polarity	: DC(+)

❖ Hydrogen Analysis Using Gas Chromatograph Method

Hydrogen Evolution Time	: 72 hrs
Evolution Temp.	: 45 °C(113°F)
Barometric Pressure	: 780 mm-Hg

❖ Result(ml/100g Weld Metal)

X1	X2	X3	X4
4.24	4.26	4.29	3.87

Average Hydrogen Content 4.16 ml / 100g Weld Metal



Proper Welding Condition

❖ Proper Current Range

Consumable	Shielding Gas	Welding Position	Wire Dia.
			1.6mm(1/16in)
SW-410NiMo Cored	100%CO ₂ or Ar + 20~25%CO ₂ gas	F & HF	200~350Amp
		V-Up & OH	170~260Amp