

S-7010.A1

COVERED ARC WELDING ELECTRODE
FOR WELDING BUILDINGS AND PIPES



❖ Specification

AWS A5.5	E7010-A1
EN ISO 2560-A	E42 0 Mo C 1 5

❖ Applications

S-7010.A1 can be used for welding of 05.%Mo steel pipe, high pressure boilers, drums, thin steel plate for buildings and oil pipes.

❖ Characteristics on Usage

S-7010.A1 is a high cellulose type electrode which contains 0.5%Mo in its coating. X-ray performance and mechanical properties are extremely good.

❖ Note on Usage

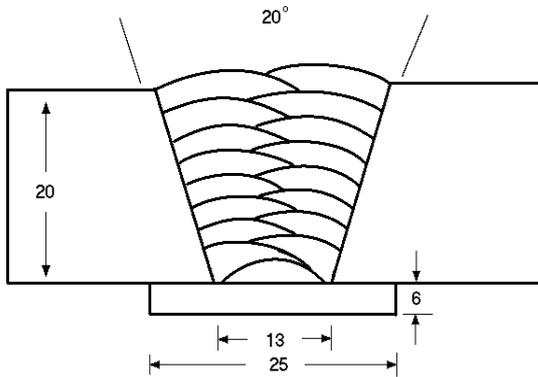
1. Preheat at 100~200°C (212~392°F)
and postheat at 620~680°C (1148~1256°F)
2. Dry the electrodes at 70~100(158~212°F) for 30~60 minutes before use.



Mechanical Properties & Chemical Compositions of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



Diameter, mm(in) : 4.0 X 400(5/32 X 16)
 Amp./ Volt. : 160 / 23~24
 Interpass Temp. °C(°F) : 130 ~145(266~293)
 Polarity : DC+

[Joint Preparation & Layer Details]

❖ Mechanical Property of All Weld Metal

Consumable	Tensile Test Results			CVN Impact Test J (ft·lbs)	PWHT	
	YS MPa (ksi)	TS MPa (ksi)	EL (%)		Temp. °C(°F)	Time
S-7010.A1	490(71)	580(84)	30.2	-	620(1148)	1 hr
AWS A5.5	≥ 400(58)	≥ 490(71)	≥ 22	Not specified	620(1148)	1 hr

❖ Chemical Composition of All Weld Metal(wt%)

Consumable	Chemical Composition					
	C	Si	Mn	P	S	Mo
S-7010.A1	0.09	0.20	0.58	0.011	0.011	0.52
AWS A5.5	≤0.12	≤0.40	≤0.60	≤0.03	≤0.03	0.40~0.65

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.



**Weldability
& Welding Efficiency Test**

❖ **Weldability**

Item	Division	Flat position	Vertical position
	Arc stability		Good
Melting rate		Excellent	Excellent
Deposition rate		Excellent	Excellent
Resistance of spatter occurrence		Excellent	Excellent
Bead appearance		Good	Good
The others		Good	Good

❖ **Results of Crater Crack Test**

Test plate	Plate thickness mm(in)	Fillet design (mm)	Welding conditions		
			Amp.(A)	Volt.(V)	Result
ASTM A36	9(0.35)		140	22~23	No crater crack

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Size Available and recommended Current & Approval

❖ Sizes Available and Recommended Current

Diameter, mm(in)		2.6 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (3/16)
Length, mm(in)		350(14)	350(14)	350(14)	350(14)
Recommended current range (AC or DC+ Amp.)	Flat position	55 ~90	90 ~130	130 ~180	180 ~240
	Vertical & Overhead position	50 ~80	805 ~120	110 ~170	150 ~200

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