

S-7024.F

COVERED ARC WELDING ELECTRODE
FOR HIGH EFFICIENT WELDING

2020.12

HYUNDAI WELDING CO., LTD.



❖ Specification

AWS A5.1	E7024
JIS Z 3211	E4324
EN ISO 2560-A	E42 0 RR 7 4

❖ Applications

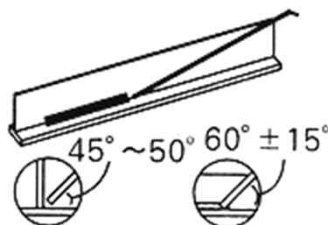
Flat and horizontal fillet welding of internal structures, inside hulls, buildings, machine construction

❖ Characteristics on Usage

S-7024.F is a representative iron powder titania type electrode widely used for flat and horizontal fillet welding. This is an excellent electrode with high efficiency.

❖ Note on Usage

1. The optimum speed ratio is 1-1.5%
2. Dry the electrodes at 70-100°C (158~212°F) for 30-60 minutes before use.
2. Keep the standard holding angles of the electrode in horizontal fillet welding as shown in the sketch

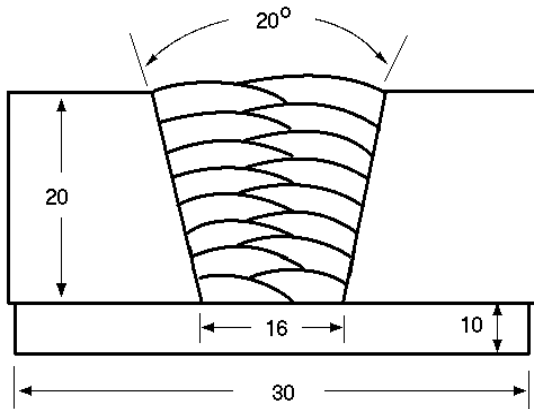




Mechanical Properties & Chemical Compositions of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter. : 4.0 X 400mm(5/32 X 16in)

Amp./ Volt. : 170 / 23~24

Interpass Temp. : 80~130℃ (176~266°F)

Polarity : AC or DC+

❖ Mechanical Property of All Weld Metal

Consumable	Tensile test			CVN Impact Value J (ft.lbs)
	YS MPa (lbs/in ²)	TS MPa (lbs/in ²)	EL (%)	0℃ (32°F)
S-7024.F	513(74,000)	561(81,000)	23.4	61(45)
AWS A5.1	≥ 400(58,000)	≥ 490(71,000)	≥ 17	≥ 27 (20)

❖ Chemical Composition of All Weld Metal(wt%)

Consumable	Chemical Composition (%)				
	C	Si	Mn	P	S
S-7024.F	0.08	0.42	0.82	0.022	0.014
AWS Spec	≤ 0.15	≤ 0.90	≤ 1.25	≤ 0.035	≤ 0.035

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****❖ Weldability**

Division	Items	Checked	Remarks
Arc	Start arc	Excellent	•Welding conditions H-Fillet
	Stability	Good	
	Concentricity	Excellent	
Slag	Fluidity	Good t	
	Detachability	Excellent	
Bead appearance		Excellent	
Melting rate		Good	
Heat resistance		Good	
The others		Good	

❖ Test Conditions of Deposition Efficiency

Consumable	Base Metal		Welding conditions		
	Specification	Dimension, mm(in)	Amp. (A)	Welding speed (mm/min)	Position
S-7024.F 4.0 X 450mm (5/32 X 18in)	ASTM A36	300 X 150 X12 (12 X 5.9 X 0.5)	200 (DC+)	200~210	Flat

❖ Results of Deposition Efficiency Test

Consumable	Deposition efficiency(%)	
	For electrode	For core wire
S-7024.F 4.0 X 450mm(5/32 X 18in)	70 ~ 72	180 ~ 185

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Size Available and recommended Current & Approval

❖ Sizes Available and Recommended Current

Diameter mm(in)		3.2 (1/8)	4.0 (5/32)	4.5 (11/64)	5.0 (3/16)	6.0 (15/64)
Length mm(in)		400 (16)	450 (18)	450 (18) 700 (28)	450 (18) 700 (28)	450 (18) 700 (28)
Recommended current range (AC or DC+ Amp.)	Flat & H-Fillet position	100 ~150	140 ~200	180 ~230	200 ~250	260 ~300

❖ Authorized Approval Details

Classification	Max Dia. mm(in)	Welding position	Grade				
			ABS	LR	DNV GL	NK	CWB
E7024	7.0(9/32)	F, H-Fil	2	2, 2Y, 2YG	2	KMW2 KMW52	CSA W48 E4924

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