7024

AWS E7024 & E7024-1

REPLACES: 070821

100-F, INDEX: 100501

DESCRIPTION:

McKay's **7024** is a high-speed production electrode of the iron powder or contact type. It offers optimum arc stability along with smoothness of deposit and ease of slag removal. This electrode is primarily used for high-speed horizontal or flat fillet welds.

APPLICATIONS:

For use on railroad cars, structurals, earthmoving equipment, plate fabrication and mining machinery.

FEATURES	BENEFITS
• Self-removing slag	• Easy clean-up
• Uses drag welding technique	• Easy to use
• Meets E7024-1 specifications	• Can be used wherever an E7024 or E7024-1 is called for
• High deposition	• Faster travel speed

TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

WELD METAL ANALYSIS		AWS Spec
Carbon (C)	0.06	Not required
Manganese (Mn)	0.81	1.25 max
Phosphorus (P)	0.018	Not required
Sulphur (S)	0.019	Not required
Silicon (Si)	0.43	0.90 max

TYPICAL MECHANICAL PROPERTIES* (AS WELDED):

		AWS Spec
Tensile Strength	82,000 psi (565 MPa)	70,000 psi
Yield Strength	72,000 psi (496 MPa)	58,000 psi
Elongation % in 2"	25%	22%
Reduction of Area	20% to 40%	Not required

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (AS WELDED):

Avg. at -0°F (-18°C)	42 ft•lbf (57 J)	20 ft•lbf

CONFORMANCES AND APPROVALS:

• AWS Spec A5.1, Class E7024 • ASME SF A5.1, F-1, A-1, Class E7024, E7024-1
• ABS

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and McKay expressly disclaims any liability incurred from any reliance thereon. Typical data are obtained when welded and tested in accordance with AWS A5.1 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by McKay.

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7024

Recommended Welding Procedures:

General:	AC or electrode negative, work positive (DCEN)
Arc Length:	Short arc or drag technique
Flat:	Use faster speed of travel; angle electrode 30° from 90°
Vertical-Up:	Not recommended
Vertical Down:	Not recommended
Overhead:	Not recommended
Storage:	110°F to 130°F humidity below 50% should be avoided; at no time should this type of electrode be stored in an oven above 130°F
Reconditioning:	250°F to 300°F for one hour

Recommended Operating Parameters:

Diameter Inches	Diameter mm	Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
1/8	3.2	AC or DCEN	130	140	150
5/32	4.0	AC or DCEN	180	200	225
3/16	4.8	AC or DCEN	200	240	280
1/4	6.4	AC or DCEN	300	330	360

*For out of position welding, reduce amperages shown by 15%.

Typical Deposition Data (at optimum):

Diameter Inches	Diameter mm	Type of Power	Amps	Volts	Deposition Rate Lbs/Hr	Deposition Efficiency*%
1/8	3.2	AC	150	31	5.34	65.8
5/32	4.0	AC	225	34	6.91	69.7
3/16	4.8	AC	280	33	9.48	67.2
1/4	6.4	AC	360	35	12.19	70.8

*Allowance made for 2" stub loss included

Available Diameters and Packages:

Diameter Inches	Diameter mm	Length Inches	Length mm	50-lb. Carton
1/8	3.2	14	355	S114844-Z31
5/32	4.0	14	355	S114851-Z31
3/16	4.8	18	457	S114859-Z31
1/4	6.4	18	457	S114881-Z31