



Unibraze 7024

(E7024/E7024-1)

Specification/APPROVALS: • AWS A5.1, E7024, E7024-1ASME SFA5.1, F-1, A-1 • ABS Grade 3 • CWB E4924-1

DESCRIPTION: UNIBRAZE 7024/7024-1 is an excellent high-speed electrode for fillet welds. It is exceptionally fast when used down hand in properly designed weld joints or in horizontal fillet welds where equal leg fillets are desired. When a drag welding technique is used, the electrode operates well on either AC or DC (electrode negative) power. The arc force of UNIBRAZE 7024/7024-1 minimizes slag entrapment, and the slag is self-removing in most applications.

APPLICATIONS: Earthmoving equipment, mining machinery, plate fabrication, railroad cars ,shipbuilding and mobile trailers.

FEATURES:

- High deposition
- Uses drag welding technique
- Self-removing slag
- Meets E7024-1 specifications

BENEFITS:

- Faster travel speed
- Easy to use
- Easy clean-up
- UNIBRAZE 7024 can be used wherever an E7024 or E7024-1 is called for

TYPICAL WELD METAL PROPERTIES (Chem Pad):

Weld Metal Analysis%

Carbon (C)	0.06
Manganese (Mn)	0.77
Phosphorus (P)	0.008
Sulphur (S)	0.019
Silicon (Si)	0.37
Nickel (Ni)	0.07
Chromium (Cr)	0.05
Molybdenum (Mo)	0.01
Vanadium (V)	0.03

AWS Spec (max)

0.15
1.25
0.035
0.035
0.90
0.30
0.20
0.30
0.08

TYPICAL MECHANICAL PROPERTIES (As welded)

Tensile Strength	79,000 psi (545 MPa)
Yield Strength	71,000 psi (487 MPa)
Elongation % in 2"	26%
Reduction of Area	20% to 40%

AWS Spec (min)

70,000 psi (483 MPa)
58,000 psi (400 MPa)
22%
not required

TYPICAL CHARPY-V-NOTCH IMPACT VALUES: (As welded)

Avg. at 0°F (-18°C)	50 ft•lbs (68 Joules)
---------------------	-----------------------

AWS Spec (min)

20 ft•lbs (27 Joules)

RECOMMENDED WELDING PROCEDURES:

- CURRENT:** AC or electrode negative, work positive (DCEN)
- ARC:** 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:** 60°F to 100°F, (20° to 40°C) and below 50% relative humidity or holding oven @ 100° to 120°F (38° to 49°C)
- RECONDITIONING:** 250°F to 300°F, (121° to 149°C) for one hour @ temperature



RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
Inches	mm				
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
7/32	5.6	AC or DCEN	250	280	320
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		Type of Power	Amps	Deposition Rate lbs/hr	Deposition Efficiency*%
Inches	mm				
1/8	3.2	DCEN	140	3.42	65.8
5/32	4.0	DCEN	200	4.94	68.2
3/16	4.8	DCEN	240	6.06	69.3
7/32	5.6	DCEN	280	7.35	69.0
1/4	6.4	DCEN	330	8.83	69.1

*Allowance made for 2" stub loss included.

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its product.