



WA. ALLOY CO.

WASHINGTON ALLOY'S Quality
Management System is
Certified to **ISO 9001:2008**
Cert # 05-R0925

8018-B2 Low-Alloy Steel Electrode

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com



American Welding Society
Sustaining Company Member



ALLOY DESCRIPTION AND APPLICATION;

USA8018-B2 is Cr-Mo covered electrodes commonly used in maintenance and fabrication of 1/2 % Mo and 1/2 -1.25 % Cr where base metals in the power / boiler piping and equipment may be found. 8018-B2 can be used for base metal such as A335-P2, P11, P12, A119-T11, A301-B, A217-WC6, and A182-F11. The low hydrogen potassium, iron powder covering has high deposition with good smooth arc, low spatter and easy slag removal. Preheat of 300-500° F and postheat of 1250-1350°F are often found with this alloy.

TYPICAL WELDING PROCEDURES; DCEP or AC - OPTIMUM IN BOLD

	3/32"	1/8"	5/32"	3/16"	1/4"
Diameter	3/32"	1/8"	5/32"	3/16"	1/4"
Length	14"	14"	14"	14"	18"
Amps Flat	60- 90 -100	90- 140 -130	130- 170 -190	190- 235 -250	255- 275 -300
Vertical up & Overhead	60- 85 -90	80- 110 -120	110- 145 -170		

Arc Length = Very short arc, Flat use 15°angle from 90°, Vertical up & Overhead use weaving techniques within puddle

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.
Preheat and postheat recommended

TYPICAL WELD METAL CHEMISTRY (%) AND WELD METAL PROPERTIES;

	AWS Spec.	8018-B2		AWS Spec	8018-B2
Carbon	0.05-0.12	0.06	Tensile Strength (psi)	80,000 min.	97,000
Manganese	0.90 max	0.70	Yield Strength (psi)	67,000	86,000
Silicon	0.80 max	0.610	Elongation in 2"	19 % min.	25%
Phosphorus	0.030 max.	0.011	Charpy V-notch at 72°F	n/a	30 ft·lbs
Sulfur	0.030 max.	0.010	Reduction of area	n/a	55%
Chromium	1.00-1.50	1.32			
Molybdenum	0.40-0.65	0.55			

(STRESS RELIEVED)

AVAILABLE SIZES: TE8018-B2 = 10 # containers of 3/32, 1/8, 5/32, 3/16

Other sizes may be available – please inquire

SPECIFICATIONS; ANSI/AWS A5.5 E8018-B2
ASME SFA A5.5 E8018-B2

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