



Manufacturers of Custom Welding Lines for Resale
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1180

Low Alloy Steel E9018-B3

INTERNATIONAL CLASSIFICATIONS

AWS A5.5, E9018-B3 H4R

ASME SFA 5.5, E9018-B3 H4R

FEATURES & APPLICATIONS

DESCRIPTION: 1180 is an outstanding welding electrode for welding higher strength piping, castings and forgings. The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity. Definitely a preferred electrode with high operator appeal.

APPLICATIONS:

1180 is used in welding chrome-moly pipes and boiler work.

FEATURES:

- Excellent arc characteristics
- Low spatter level
- Quick and easy slag removal
- Low moisture reabsorption
- Low smoke level
- Low hydrogen, less than 4 ml/100g

BENEFITS:

- Stable, easy to control arc
- Improves weld bead appearance, higher deposition
- Reduce clean-up time
- Prevents starting porosity
- Welder safety and comfort
- Resistant to hydrogen-induced cracking

ALL WELD METAL ANALYSIS (TYPICAL WEIGHT %)

Flux Color: Grey

C	Mn	P	S	Si	Cr	Mo
.10	.69	.01	.01	.50	2.35	1.06

TYPICAL MECHANICAL PROPERTIES

Undiluted Weld Metal	Maximum Value Up to:
Tensile Strength	125,000 PSI (865 MPa)
Yield Strength	111,000 PSI (765 MPa)
Elongation	18%
Diffusible Hydrogen	3.4 ml/100 gr

WELDING CURRENT & INSTRUCTIONS

Recommended Current: DCEP or AC

Diameter (mm)	3/32 (2.5)	1/8 (3.25)	5/32 (4.0)	3/16 (5.0)
Minimum Amperage	70	90	130	200
Maximum Amperage	110	160	220	300

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

Recommended Welding Procedures:

General:	Electrode positive, work negative (DCEP) or AC
Arc Length:	Very short arc
Flat:	Angle electrode 10-15° from 90°
Vertical-Up:	Use weaving techniques
Vertical-Down:	Not recommended
Overhead:	Use slight weaving motion within the puddle
Storage:	After opening, store in holding oven (250°F to 400°F) until used.
Reconditioning:	If exposed to atmosphere for extended periods, reconditioned for

one (1) hour at 600°F.

Welding Positions: Flat, Vertical-Up, Overhead

TYPICAL DEPOSITION RATES (at Optimum):

Diameter		Type of Power	Amperage	Deposition Rate Lbs/ Hr.
Inches	mm			
3/32	2.4	DCEP	100	2.38
1/8	3.2	DCEP	125	3.02
5/32	4.0	DCEP	170	4.08
3/16	4.8	DCEP	250	5.62

APPROXIMATE ELECTRODE PACKAGING & DIMENSIONS

Diameter (mm)	3/32 (2.5)	1/8 (3.25)	5/32 (4.0)	3/16 (5.0)
Length (mm)	14" (350)	14" (350)	14" (350)	14" (350)