

Excalibur® 11018M MR®

AWS E11018M H4R • Low Alloy, Low Hydrogen

Typical Applications

- ▶ Quenched and tempered steels, such as A514, A517 and A709
- ▶ Crane booms
- ▶ Trailer frames
- ▶ General fabrication of high strength steels

Conformances

AWS A5.5/A5.5M: 2006	E11018M H4R
ASME SFA-A5.5:	E11018M H4R
ABS:	4YQ690 H5
DNV Grade:	4 YM69 H5
CWB/CSA W48-06:	E7618-M H4R

Key Features

- ▶ Capable of producing weld deposits with 760 MPa (110 ksi) tensile strength
- ▶ Premium arc performance
- ▶ Square coating burn-off
- ▶ Easy strike and re-strike
- ▶ Effortless slag removal

Welding Positions

All, except vertical down

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	10 lb (4.5 kg) Easy Open Can 30 lb (13.6 kg) Master Carton	50 lb (22.7 kg) Easy Open Can
3/32 (2.4)	14 (350)		ED031975
1/8 (3.2)	14 (350)	ED032607	ED031976
5/32 (4.0)	14 (350)	ED032608	ED031977
3/16 (4.8)	14 (350)		ED031978

MECHANICAL PROPERTIES⁽¹⁾ – As Required per AWS A5.5/A5.5M: 2006

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @ -50°C (-60°F)
Requirements - AWS E11018M H4R	680-760 (98-110)	760 (110) min.	20 min.	27 (20) min.
Typical Results ⁽³⁾ - As-Welded	690-758 (100-110)	765-807 (111-117)	20-26	76-103 (56-76)

DEPOSIT COMPOSITION⁽¹⁾ – As Required per AWS A5.5/A5.5M: 2006

	%C	%Mn	%Si	%P	%S
Requirements - AWS E11018M H4R	0.10 max.	1.30-1.80	0.60 max.	0.03 max.	0.03 max.
Typical Results ⁽³⁾	0.04-0.05	1.55-1.80	0.40-0.55	≤ 0.02	0.01-0.03
	%Ni	%Cr	%Mo	Diffusible Hydrogen (mL/100g weld deposit)	
Requirements - AWS E11018M H4R	1.25-2.50	0.40 max.	0.25-0.50	4.0 max.	
Typical Results ⁽³⁾	2.0-2.5	0.02-0.20	0.40-0.50	1-4	

TYPICAL OPERATING PROCEDURES

Polarity	Current (Amps)			
	3/32 in (2.4 mm)	1/8 in (3.2 mm)	5/32 in (4.0 mm)	3/16 in (4.8 mm)
DC+	70-110	90-160	130-210	180-300

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer on pg. 16.