

FLUX CORED

Oxford Alloy® 91T1-B3

AWS E91T1-B3 • Chrome Moly

Key Features

- ❖ Designed for all-position welding
- ❖ For welding 2-1/4 % Cr 1% Mo steels.
- ❖ The weld metal analysis is similar to an E9018-B3 electrode.
- ❖ Designed for single or multiple pass welding.

Conformances

AWS/ASME SFA 5.29
E91T1-B3
UNS W53031

Chemical Composition - As required per AWS 5.29

C	Mn	Si	P	S	Cr	Mo
0.05-0.12	1.25 max	0.80 max	0.03 max	0.03 max	2.00-2.50	0.90-1.20

Mechanical Properties - As required by AWS 5.29

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	PWHT (Stress Relieved)
AWS Requirements	620 - 760 (90-110)	540 (78) min	17 min	1 Hr @ 690+/-15°C (1275+/- 25°F)
Typical Results - As welded	680 (99)	630 (91)	24	

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂



Typical Welding Parameters

Diameter		Process	Flat		Vertical-Up		Overhead	
in	(mm)		Volt	Amps	Volt	Amps	Volt	Amps
.035	(1.9)	FCAW	20-30	130-250	16-23	90-180	20-28	130-240
.045	(1.14)	FCAW	23-30	150-280	22-26	150-250	24-29	150-250
1/16	(1.6)	FCAW	25-34	180-400	21-27	180-300	24-30	180-310

Diameters & Packaging

Oxford Alloys USA			Oxford Alloys Asia Pacific		
Diameter (in)	Spool Dimension (in)	Spool Weight (lbs)	Diameter (mm)	Spool Dimension (mm)	Spool Weight (kgs)
.035	12	33 lb spool	0.9	300	15 kg spool
.045	12	33 lb spool	1.2	300	15 kg spool
1/16	12	33 lb spool	1.6	300	15 kg spool

Actual test results may vary. Refer test result disclaimer on page 160.