

Oxford Alloy® 5356

AWS ER5356 • Aluminum



Key Features

- ❖ A 5% magnesium aluminum filler metal commonly used on base metals 5050, 5052, 5083, 5356, 5454 and 5456.
- ❖ The weld deposit of this filler metal offers good corrosion resistance when exposed to salt water.
- ❖ The post-anodizing color tint of the weld area is white.

Conformances

AWS/ASME SFA 5.10
ER5356
UNS A95356

Chemical Composition - As required per AWS 5.10

Si	Fe	Cu	Mn	Mg	Cr	Zn
0.25 max	0.40 max	0.10 max	0.05-0.20	4.5-5.5	0.05-0.20	0.10 max
Ti	Al	OEE	OET			
0.06-0.20	Bal	0.05 max	0.15 max			

Mechanical Properties - As required by AWS 5.10

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %
AWS Requirements	Not Specified		
Typical Results - As welded	270 (39)	130 (19)	17

Typical Welding Parameters

Diameter		Process	Volt	Amps	Shielding Gas
in	(mm)				
.035	0.9	GMAW	22-28	100-175	Spray Transfer 100% Argon
.045	1.2	GMAW	22-28	120-210	
1/16	1.6	GMAW	24-30	160-300	
.035	0.9	GMAW	17-19	50-150	Short Circuiting Transfer 100% Argon
.045	1.2	GMAW	16-20	60-175	
1/16	1.6	GMAW	16-20	60-175	
1/16	1.6	GTAW		60-100	100% Argon
3/32	2.4	GTAW		125-160	100% Argon
1/8	3.2	GTAW		180-240	100% Argon

Diameters & Packaging

Oxford Alloys USA				Oxford Alloys Asia Pacific			
Diameter (in)	Form	Quantity (lbs)	Spool Dimension	Diameter (mm)	Form	Quantity (kgs)	Spool Dimension
.035	GMAW	16 lb	12 inch	0.9	GMAW	7 kg	300mm
.045	GMAW	16 lb	12 inch	1.2	GMAW	7 kg	300mm
1/16	GMAW	16 lb	12 inch	1.6	GMAW	7 kg	300mm
.035	GMAW	1 lb	4 inch	0.9	GMAW	0.5 kg	100mm
.045	GMAW	1 lb	4 inch	1.2	GMAW	0.5 kg	100mm
1/16	GMAW	1 lb	4 inch	1.6	GMAW	0.5 kg	100mm
1/16	GTAW	10 lb tube		1.6	GTAW	5 kg tube	
3/32	GTAW	10 lb tube		2.4	GTAW	5 kg tube	
1/8	GTAW	10 lb tube		3.2	GTAW	5 kg tube	

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