



Nickel Alloys

Oxford Alloy 82T-1
Oxford Alloy 625T-1

Duplex & Super Duplex

Oxford Alloy 2209T1-1/4
Oxford Alloy 2594T1-1/4

Stainless Steel

Oxford Alloy 308HT1-1/4
Oxford Alloy 308LT0-1/4
Oxford Alloy 308LT1-1/4
Oxford Alloy 309LT0-1/4
Oxford Alloy 309LT1-1/4
Oxford Alloy 316LT0-1/4
Oxford Alloy 316LT1-1/4
Oxford Alloy 317LT0-1/4
Oxford Alloy 317LT1-1/4
Oxford Alloy 347T0-1/4
Oxford Alloy 347T1-1/4

Chrome Moly

Oxford Alloy 81T1-B2
Oxford Alloy 91T1-B3

Mild Steel

Oxford Alloy 71T-1M

FLUX CORED

FLUX CORED

Oxford Alloy® 82T-1

AWS ENiCr3T1-1/T1-4 • Nickel Alloys

Key Features

- ❖ Gas shielded all position flux cored wire
- ❖ Typical applications include joining nickel-chromium-iron alloys, surfacing steel with nickel-chromium-iron weld metal, joining alloys 600, 601 and alloy 800 to themselves or to stainless and carbon steels.
- ❖ Also used to clad the side of joints in steels that have been clad with nickel-chromium-iron weld metal.

Conformances

AWS/ASME SFA 5.34
ENiCr3T1-1/T1-4
UNS W86082

Chemical Composition - As required per AWS 5.34						
C	Mn	Si	Cr	Fe	Nb	S
0.10 max	2.5- 3.5	0.50 max	18.0- 22.0	3.0 max	2.0- 3.0	0.015 max
Ti	P	Ni	Cu	OET		
0.75 max	0.03 max	67.0 min	0.50 max	0.50 max		

Mechanical Properties - As required by AWS 5.34				
	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ -196 °C (-320°F)
AWS Requirements	550 (80) min	Not Specified	25 min	Not Specified
Typical Results - As welded	620 (90)	400 (58)	27	109 (78)



Typical Welding Parameters

Diameter		Process	Wire Feed Speed (ipm)	Wire Ext.	Volt	Amps	Shielding Gas
in	(mm)						
.045	1.2	FCAW	290-400	½ in. (12mm)	25-26	150-200	75% Ar / 25% CO ₂ or 100% CO ₂
1/16	1.6	FCAW	190-275	½ in. (12mm)	26-27	200-250	

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)
.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.

Oxford Alloy® 625T-1

AWS ENiCrMo3T1-1/T1-4 • Nickel Alloys



Key Features

- ❖ Gas shielded all position flux cored wire
- ❖ Typical applications include joining nickel-chromium-molybdenum alloys, surfacing steel with nickel-chromium-molybdenum weld metal, joining steels to nickel based alloys.
- ❖ Also used to clad the side of joints in steels that have been clad with nickel-chromium-molybdenum.

Conformances

AWS/ASME SFA 5.34
ENiCrMo3T1-1/T1-4
UNS W86625

Chemical Composition - As required per AWS 5.34

C	Mn	Si	Cr	Mo	Fe	Nb
0.1 max	0.5 max	0.5 max	20.0-23.0	8.0-10.0	5.0 max	3.15-4.15
Ti	S	P	Ni	Cu	OET	
0.4 max	0.015 max	0.02 max	58.0 min	0.5 max	0.5 max	

Mechanical Properties - As required by AWS 5.34

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ -196 °C (-320°F)
AWS Requirements	690 (100) min	Not Specified	25 min	Not Specified
Typical Results - As welded	770 (112)	500 (72)	38	67 (48)

Typical Welding Parameters

Diameter		Process	Wire Ext.	Volt	Amps	Shielding Gas
in	(mm)					
.045	1.2	FCAW	½ in	25-26	150-200	75% Ar / 25% CO ₂ or 100% CO ₂
1/16	1.6	FCAW	½ in	26-27	200-250	

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)
.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.

FLUX CORED

Oxford Alloy® 308HT1-1/4

AWS E308HT1-1/T1-4 • Stainless Steel

Key Features

- ❖ Designed for all-position welding
- ❖ Carbon content is controlled between .04 -08 % and Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E308HT1-1/T1-4
UNS W30831

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04-0.08	0.5-2.5	1.0 max	18.0-21.0	9.0-11.0	0.75 max	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	550 (80) min	Not Specified	30 min	Not Specified
Typical Results - As welded	610 (89)	460 (67)	40	51 (38)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂



Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08	8.08	5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

Oxford Alloy® 308LT0-1/4

AWS E308LT0-1/TO-4 • Stainless Steel



Key Features

- ❖ Designed for flat and horizontal welding positions
- ❖ Carbon content is below .04 % and Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E308LT0-1/TO-4
UNS W30835
ABS Approved

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.5	1.0 max	18.0-21.0	9.0-11.0	0.75 max	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	520 (75) Min	Not Specified	30 min	Not Specified
Typical Results - As welded	580 (84)	460 (67)	38	51 (38)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

FLUX CORED

Oxford Alloy® 308LT1-1/4

AWS E308LT1-1/T1-4 • Stainless Steel

Key Features

- ❖ Designed for all-position welding
- ❖ Carbon content is below .04 % and Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E308LT1-1/T1-4
UNS W30835
ABS Approved

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.5	1.0 max	18.0-21.0	9.0-11.0	0.75 max	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	520 (75) min	Not Specified	30 min	Not Specified
Typical Results - As welded	580 (84)	460 (67)	38	61 (45)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂



Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	25	26	28	30	25	27	28	29
Voltage	227	341	445	567	154	193	243	321
Wire Feed speed (in/min)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
Deposition rate (lbs/hr)	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0
% Efficiency								

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

Oxford Alloy® 309LT0-1/4

AWS E309LT0-1/T0-4 • Stainless Steel



Key Features

- ◆ Designed for flat and horizontal welding positions
- ◆ For welding dissimilar metals – stainless, mild steel, or low alloy.
- ◆ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E309LT0-1/T0-4
UNS W30935
ABS Approved

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5- 2.5	1.0 max	22.0- 25.0	12.0- 14.0	0.75 max	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (kSI)	Yield Strength MPa (kSI)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	520 (75) min	Not Specified	30 min	Not Specified
Typical Results - As welded	580 (84)	450 (65)	37	60 (44)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

FLUX CORED

Oxford Alloy® 309LT1-1/4

AWS E309LT1-1/T1-4 • Stainless Steel

Key Features

- ❖ Designed for all-position welding
- ❖ For welding dissimilar metals – stainless, mild steel, or low alloy.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E309LT1-1/T1-4
UNS W30935
ABS Approved



Chemical Composition - As required per AWS 5.22						
C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.5	1.0 max	22.0-25.0	12.0-14.0	0.75 max	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22				
	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	520 (75) min	Not Specified	30 min	Not Specified
Typical Results - As welded	580 (84)	450 (65)	37	49 (36)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Diameter	Typical Welding Parameters							
	.045 (1.14mm)				1/16" (1.6mm)			
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08	8.08	5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

Oxford Alloy® 316LT0-1/4

AWS E316LT0-1/T0-4 • Stainless Steel



Key Features

- ❖ Designed for flat and horizontal welding positions
- ❖ Carbon content is below .04 % and Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E316LT0-1/T0-4
UNS W31635
ABS Approved

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.5	1.0 max	17.0-20.0	11.0-14.0	2.0-3.0	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	485 (70) min	Not Specified	30 min	Not Specified
Typical Results - As welded	560 (84)	460 (67)	38	55 (41)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

FLUX CORED

Oxford Alloy® 316LT1-1/4

AWS E316LT1-1/T1-4 • Stainless Steel

Key Features

- ❖ Designed for all-position welding
- ❖ Carbon content is below .04 % and Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E316LT1-1/T1-4
UNS W31635
ABS Approved

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.5	1.0 max	17.0-20.0	11.0-14.0	2.0-3.0	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	485 (70) min	Not Specified	30 min	Not Specified
Typical Results - As welded	560 (84)	460 (67)	38	55 (41)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂



Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	25	26	28	30	25	27	28	29
Voltage	227	341	445	567	154	193	243	321
Wire Feed speed (in/min)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
Deposition rate (lbs/hr)	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0
% Efficiency								

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

Oxford Alloy® 317LT0-1/4

AWS E317LT0-1/TO-4 • Stainless Steel



Key Features

- ❖ Designed for flat and horizontal welding positions
- ❖ Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E317LT0-1/TO-4
UNS W31735

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.5	1.0 max	18.0-21.0	12.0-14.0	3.0-4.0	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	520 (75) min	Not Specified	20 min	Not Specified
Typical Results - As welded	630 (91)	470 (68)	33	49 (36)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08	8.08	5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

FLUX CORED

Oxford Alloy® 317LT1-1/4

AWS E317LT1-1/T1-4 • Stainless Steel

Key Features

- ❖ Designed for all-position welding
- ❖ Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E317LT1-1/T1-4
UNS W31735



Chemical Composition - As required per AWS 5.22						
C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.5	1.0 max	18.0-21.0	12.0-14.0	3.0-4.0	0.04 max
S	Cu					
0.03 max	0.75 max					

Mechanical Properties - As required by AWS 5.22				
	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	520 (75) min	Not Specified	20 min	Not Specified
Typical Results - As welded	630 (91)	470 (68)	33	49 (36)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Diameter	Typical Welding Parameters							
	.045 (1.14mm)				1/16" (1.6mm)			
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08	8.08	5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

Oxford Alloy[®] 347T0-1/4

AWS E347T0-1/T0-4 • Stainless Steel



Key Features

- ❖ Designed for flat and horizontal welding positions
- ❖ Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E347T0-1/T0-4
UNS W34731

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Nb+Ta	Mo
0.08 max	0.5-2.5	1.0 max	18.0-21.0	9.0-11.0	8 x C min/ 1.0 max	0.75 max
P	S	Cu				
0.04 max	0.03 max	0.75 max				

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	520 (75) min	Not Specified	30 min	Not Specified
Typical Results - As welded	650 (94)	480 (70)	34	61 (45)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

FLUX CORED

Oxford Alloy® 347T1-1/4

AWS E347T1-1/T1-4 • Stainless Steel

Key Features

- ❖ Designed for all-position welding
- ❖ Provides superior weld performance and enhanced operator appeal.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.22
E347T1-1/T1-4
UNS W34731



Chemical Composition - As required per AWS 5.22						
C	Mn	Si	Cr	Ni	Nb+Ta	Mo
0.08 max	0.5-2.5	1.0 max	18.0-21.0	9.0-11.0	8 x C min / 1.0 max	0.75 max
P	S	Cu				
0.04 max	0.03 max	0.75 max				

Mechanical Properties - As required by AWS 5.22				
	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68 °F)
AWS Requirements	520 (75) min	Not Specified	30 min	Not Specified
Typical Results - As welded	650 (94)	480 (70)	34	61 (45)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

	Typical Welding Parameters							
	.045 (1.14mm)				1/16" (1.6mm)			
Diameter								
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

Oxford Alloy® 2209T1-1/4 AWS E2209T1-1/T1-4 • Duplex



Key Features

- ❖ Designed for all-position welding
- ❖ Designed for the welding of 22Cr-5Ni-2Mo-0.15N duplex stainless steel (UNS S31803), commonly known as 2205.
- ❖ Also used for welding on stainless structures where a particularly high strength is required.

Conformances

AWS/ASME SFA 5.22
E2209T1-1/T1-4
UNS W39239

Chemical Composition - As required per AWS 5.22

C	Mn	Si	Cr	Ni	Mo	P
0.04 max	0.5-2.0	1.0 max	21.0-24.0	7.5-10.0	2.5-4.0	0.04 max
S	Cu	N				
0.03 max	0.75 max	0.08-0.20				

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ 20 °C (68°F)
AWS Requirements	690 (100) min	Not Specified	20 min	Not Specified
Typical Results - As welded	820 (119)	685 (99)	27	60 (44)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂

Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	Amperage	130	165	190	220	170	210	250
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08		5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

FLUX CORED

Oxford Alloy® 2594T1-1/4

AWS E2594T1-1/T1-4 • Super Duplex

Key Features

- ❖ Designed for all-position welding
- ❖ The sum of the Cr + 3.3 (Mo + 0.5W) + 16N, known as the Pitting Resistance Equivalent Number (PREN), is at least 40.
- ❖ Designed for the welding of super duplex stainless steels UNS S32750 and S32760 (wrought) and for UNS J93380 and J93404 (cast).

Conformances

AWS/ASME SFA 5.22
E2594T1-1/T1-4
UNS W39594

Chemical Composition - As required per AWS 5.22

C	Mn	Si	P	N	W	Cr
0.04 max	0.5 - 2.5	1.0 max	0.04 max	0.20- 0.30	1.0 max	24.0- 27.0
Ni	Mo	S	Cu			
8.0- 10.5	2.5- 4.5	0.03 max	1.5 max			

Mechanical Properties - As required by AWS 5.22

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ -40 °C (-40 °F)
AWS Requirements	760 (110) min	Not Specified	15 min	Not Specified
Typical Results - As welded	870 (126)	680 (99)	25	37 (27)

Recommended Shielding Gas

100% CO₂
75% Argon / 25% CO₂



Typical Welding Parameters

Diameter	.045 (1.14mm)				1/16" (1.6mm)			
	130	165	190	220	170	210	250	300
Amperage	130	165	190	220	170	210	250	300
Voltage	25	26	28	30	25	27	28	29
Wire Feed speed (in/min)	227	341	445	567	154	193	243	321
Deposition rate (lbs/hr)	4.25	6.14	8.08	8.08	5.34	6.89	8.57	11.43
% Efficiency	84.0	83.0	84.0	84.0	83.0	82.5	83.0	83.0

The ESO (Electrical Stick Out) is 1/2" - 1". DCEP (electrode positive) is specified. When using 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts.

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)
.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.

Oxford Alloy® 81T1-B2

AWS E81T1-B2 • Chrome Moly



Key Features

- ❖ Designed for all-position welding
- ❖ For welding 1-14 % Cr 1/2% Mo steels.
- ❖ The weld metal analysis is similar to an E8018-B2 electrode.
- ❖ Hermetically sealed packaging to ensure freshness.

Conformances

AWS/ASME SFA 5.29
E81T1-B2
UNS W52031

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	1.00-1.50	0.40-0.65

Mechanical Properties - As required by AWS 5.29

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	PWHT (Stress Relieved)
AWS Requirements	550 - 690 (80-100)	470 (68) min	19 min	1 Hr @ 690+/-15°C (1275+/- 25°F)
Typical Results - As welded	600 (87)	530 (77)	25	

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.

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.

Oxford Alloy[®] 71T-1M

AWS E71T-1/1M • Mild Steel



Key Features

- ◆ Designed for all-position welding
- ◆ Produces fillet welds with little spatter. Cleaning time is reduced because the slag cover is complete and can be easily removed.
- ◆ Designed for welding mild and medium-carbon steels.

Conformances

AWS ASME SFA 5.20
E71T-1/1M
UNS W07601
ABS Approved

Chemical Composition - As required per AWS 5.20

C	Mn	Si	P	S	Cr	Ni
0.12 max	1.75 max	0.90 max	0.03 max	0.03 max	0.20 max	0.50 max
Mo	V	Al	Cu			
0.30 max	0.08 max	-	0.35 max			

Mechanical Properties - As required by AWS 5.20

	Tensile Strength MPa (ksi)	Yield Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @ -18 °C (0 °F)
AWS Requirements	(70-95)	(58) min	22 min	27 (20) min
Typical Results - As welded	520 (76)	500 (73)	28	65-120 (48-89)

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.