

# BLUE MAX<sup>®</sup> MIG 307 MOD

Stainless ▪ Similar to AWS ER307

## KEY FEATURES

- Austenitic stainless steel
- 7% Manganese (Mn) increases resistance to hot cracking between dissimilar steels
- Q2 Lot<sup>®</sup> - Certificates showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## CONFORMANCES

ISO 14343-A: G 18 8 Mn  
\*Similar to ER307

## TYPICAL APPLICATIONS

- Automotive exhaust systems
- Armor Plate (military)
- Designed for joining dissimilar stainless steels
- Work hardening manganese steel

## SHIELDING GAS

Short Circuiting Transfer  
90% He / 7.5% Argon / 2.5% CO<sub>2</sub>  
Axial Spray Transfer  
98% Argon / Balance O<sub>2</sub>

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Steel Spool
0.045 (1.2)	ED036050

## WIRE COMPOSITION<sup>(1)</sup>

	%C	%Mn	%Si	%Cr	%Ni
Typical Results <sup>(2)</sup>	0.08	7.1	0.80	18.8	8.6
	%S	%P	%Mo	%Cu	%FN
Typical Results <sup>(2)</sup>	0.009	0.023	-	-	-

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.045 (1.1)	28-32	180-250	30-50 CFH	98/2 (Ar/O <sub>2</sub> )

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 308H

Stainless ▪ AWS ER308H

## KEY FEATURES

- Provides a higher carbon deposition (minimum of 0.04% carbon) than Blue Max MIG 308L
- The higher carbon deposit provides creep strength and higher tensile at elevated service temperatures
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## CONFORMANCES

**AWS: A5.9/A5.9M:** ER308H, ER308

## TYPICAL APPLICATIONS

- Chemical
- Petrochemical Industries
- Distillery
- Catalytic Crackers
- Pulp and Paper
- Welding 302/304H/305 Stainless Steels
- Restaurant Industries

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Steel Spool	500 lb (227 kg) Accu-Trak <sup>®</sup> Drum
0.030 (0.8)	ED035038	ED035041
0.035 (0.9)	ED035039	
0.045 (1.1)	ED035040	
1/16 (1.6)	ED035042	

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C <sup>(3)</sup>	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER308H	0.04 - 0.08	19.5 - 22.0	9.00 - 11.00	0.50 max	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.06	19.9	9.7	0.07	1.8
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER308H	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.44	0.02	0.006	0.10	5 - 12

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.030 (0.8)	26-29	160-210	30-50 CFH	98/2 (Ar/O <sub>2</sub> ) 90/7.5/2.5 (He/Ar/CO <sub>2</sub> )
0.035 (0.9)	26-29	160-210	30-50 CFH	
0.045 (1.1)	28-32	180-250	30-50 CFH	
0.062 (1.6)	29-33	200-280	30-50 CFH	

<sup>(1)</sup>Typical wire chemistry. <sup>(2)</sup>See test results disclaimer. <sup>(3)</sup>AWS Requirements for ER308 is 0.08% max carbon.

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

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# BLUE MAX<sup>®</sup> MIG 308LSi

Stainless ▪ AWS ER308Si, ER308LSi

## KEY FEATURES

- High silicon level for increased puddle fluidity and toe wetting
- Proprietary surface lubricant for steady feeding and arc stability
- Versatile electrode designed to weld CrNi austenitic stainless steels
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online
- Used to primarily weld equipment made with 304 type stainless steel
- Higher silicon content improves wetting of the weld metal and potentially higher travel speeds compared to standard 308L products

## WELDING POSITIONS

All

## CONFORMANCES

<b>AWS A5.9/A5.9M:</b>	ER308Si, ER308LSi
<b>ASME SFA-A5.9:</b>	ER308Si, ER308LSi
<b>ABS:</b>	ER308Si, ER308LSi
<b>CWB/CSA W48-06:</b>	ER308LSi
<b>EN ISO 14343-B:</b>	SS308LSi
<b>ISO 14343:2009:</b>	(19 9 L Si)

## TYPICAL APPLICATIONS

- 304 and 304L stainless steels
- Common austenitic stainless steels referred to as "18-8" steels
- ASTM A743 or A744 Types CF-8 and CF-3

## SHIELDING GAS

Short Circuiting Transfer:

90% Helium / 7-1/2% Argon / 2-1/2% CO<sub>2</sub>

Axial Spray Transfer:

98% Argon / Balance Oxygen

## DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool	250 lb (113 kg) Accu-Trak <sup>®</sup> Drum	500 lb (227 kg) Speed Feed <sup>®</sup> Reel	1000 lb (454 kg) Precise-Trak <sup>®</sup> Reel
0.030 (0.8)	ED023961			
0.035 (0.9)	ED019292	ED035060		ED032834
0.045 (1.1)	ED019293	ED035063		
1/16 (1.6)	ED019294		ED035066	

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
Typical Results <sup>(3)</sup> - As-Welded	455 (66)	635 (92)	46	13

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer

**WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M**

	%C <sup>(4)</sup>	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> – AWS ER308LSi	0.03 max	19.5-22.0	9.0-11.0	0.75 max	1.0-2.5
<b>Typical Results<sup>(3)</sup></b>	0.01	19.9	10.0	0.16	2.1
	%Si	%P	%S	%N <sup>(5)</sup>	%Cu
<b>Requirements</b> – AWS ER308LSi	0.65-1.00	0.03 max	0.03 max	Not Specified	0.75 max
<b>Typical Results<sup>(3)</sup></b>	0.88	0.02	0.01	0.05	0.17

**TYPICAL OPERATING PROCEDURES**

Diameter, Polarity Shielding Gas	CTWD <sup>(6)</sup> mm (in)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)	
<i>Short Circuit Transfer</i>						
0.035 in (0.9 mm), DC+ 90% He / 7-1/2% Ar / 2-1/2% CO <sub>2</sub>	13 (1/2)	3.0 (120)	19-20	55	0.9 (2.0)	
	13 (1/2)	4.6 (180)	19-20	85	1.4 (3.0)	
	13 (1/2)	5.8 (230)	20-21	105	1.8 (3.9)	
	13 (1/2)	7.6 (300)	20-21	125	2.3 (5.0)	
	13 (1/2)	8.9 (350)	21-22	140	2.7 (5.9)	
	13 (1/2)	10.2 (400)	22-23	160	3.1 (6.7)	
0.045 in (1.1 mm), DC+ 90% He / 7-1/2% Ar / 2-1/2% CO <sub>2</sub>	13 (1/2)	2.5 (100)	19-20	100	1.1 (2.8)	
	13 (1/2)	3.2 (125)	19-20	120	1.5 (3.5)	
	13 (1/2)	3.8 (150)	21	135	1.7 (4.2)	
	13 (1/2)	4.4 (175)	21	140	2.0 (4.8)	
	13 (1/2)	5.6 (220)	22	170	2.6 (6.1)	
	13 (1/2)	6.4 (250)	22-23	175	2.9 (6.9)	
13 (1/2)	7.0 (275)	22-23	185	3.2 (7.6)		
	<i>Axial Spray Transfer</i>					
	0.035 in (0.9 mm), DC+ 98% Ar/2% O <sub>2</sub>	13 (1/2)	10.2 (400)	22	180	3.1 (6.7)
		13 (1/2)	10.8 (425)	23	190	3.3 (7.1)
		13 (1/2)	11.4 (450)	23	200	3.5 (7.5)
		13 (1/2)	12.1 (475)	23	210	3.7 (8.0)
0.045 in (1.1 mm), DC+ 98% Ar/2% O <sub>2</sub>	13 (1/2)	6.1 (240)	23	195	2.8 (6.6)	
	13 (1/2)	6.6 (260)	24	230	3.0 (7.2)	
	13 (1/2)	7.6 (300)	24	240	3.5 (8.3)	
	13 (1/2)	8.3 (325)	25	250	3.8 (9.0)	
	13 (1/2)	9.1 (360)	25	260	4.2 (10.0)	
1/16 in (1.6 mm), DC+ 98% Ar/2% O <sub>2</sub>	19 (3/4)	4.4 (175)	25	260	4.3 (9.2)	
	19 (3/4)	5.1 (200)	26	310	4.9 (10.5)	
	19 (3/4)	6.4 (250)	26	330	6.2 (13.1)	
	19 (3/4)	7.0 (275)	27	360	6.8 (14.4)	
	19 (3/4)	7.6 (300)	28	390	7.4 (15.8)	

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer <sup>(4)</sup>AWS Requirements for ER308Si is 0.08% max carbon. <sup>(5)</sup>Included in 0.50% max. for other elements not specified.<sup>(6)</sup>To estimate ESO, subtract 1/8 in (3 mm) from CTWD.**IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED**

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 308L

Stainless ▪ AWS ER308L

## KEY FEATURES

- Reduced carbon levels (0.03% max) offer increased resistance to inter-granular corrosion
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## CONFORMANCES

**AWS A5.9/A5.9M:** ER308L, ER308  
**ISO 14343:2009:** (19 9 L)  
**MIL-E-19933E (SH)** MIL 308L, MIL 308

## TYPICAL APPLICATIONS

- Designed for welding 304/304L Stainless Steels
- ASTM A743 or 744 Types CF-8 and CF-3 castings

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Steel Spool	250 lb (113 kg) Accu-Trak <sup>®</sup> Drum	500 lb (227 kg) Accu-Trak <sup>®</sup> Drum
0.030 (0.8)	ED035043	ED035048	ED035049 ED035054
0.035 (0.9)	ED035045		
0.045 (1.1)	ED035051		
1/16 (1.6)	ED035056		

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C <sup>(3)</sup>	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER308L	0.03 max	19.5 - 22.0	9.00 - 11.00	0.75 max	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.01	19.7	9.7	0.17	1.7
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER308L	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.37	0.02	0.01	0.18	8 - 14

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98/2 (Ar/O <sub>2</sub> )
0.045 (1.1)	28-32	180-250	30-50 CFH	
0.062 (1.6)	29-33	200-280	30-50 CFH	

<sup>(1)</sup>Typical wire chemistry. <sup>(2)</sup>See test results disclaimer. <sup>(3)</sup>AWS Requirements for ER308 is 0.08% max carbon.

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

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# BLUE MAX® MIG 308LCF

Stainless ▪ AWS ER308L

## KEY FEATURES

- Controlled Low Ferrite (Range 3-6 FN)
- Charpy V-Notch test results capable of exceeding 27 J (20 ft•lbf) @ -196°C (-320°F)
- Exceeds 15 mils (0.38 mm) of lateral expansion @ -196°C (-320°F)
- Q2 Lot® - Certificates showing actual wire chemistry available online

## WELDING POSITIONS

All

## SHIELDING GAS

98% Argon / 2% Oxygen

## CONFORMANCES

<b>AWS A5.9:</b>	ER308/308L
<b>ASME SFA-A5.9:</b>	ER308/308L

## TYPICAL APPLICATIONS

- LNG Storage
- Cryogenic Vessels and Piping

## TYPICAL BASE METALS

- 304L stainless steel
- 18/8 steels with service temperatures down to -196°C (-320°F)

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15kg) Steel Spool
0.035 (0.9)	ED034909
0.045 (1.1)	ED034910

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER308L	0.03 max	19.5 - 22.0	9.00 - 11.00	0.75 max	1.0 - 2.5
<b>Typical Results<sup>(3)</sup></b>	0.01	19.7	9.7	0.17	1.7
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER308L	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(3)</sup></b>	0.37	0.02	0.01	0.18	3-6

## MECHANICAL PROPERTIES<sup>(1)</sup>

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) -196°C (-320°F)	Lateral Expansion mils (mm) -196°C (-320°F)
<b>Typical Results<sup>(3)</sup></b> As-Welded with 98% Ar/2% O <sub>2</sub>	430 (63)	600 (88)	35	34 (47)	24 (0.61)

<sup>(1)</sup>Typical wire composition <sup>(2)</sup>Measured with 0.2% offset <sup>(3)</sup>See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

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# BLUE MAX<sup>®</sup> MIG 309LSi

Stainless ▪ AWS ER309Si, ER309LSi

## KEY FEATURES

- High silicon level for increased puddle fluidity and toe wetting
- Proprietary surface lubricant for steady feeding and arc stability
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online
- Controlled ferrite content for maximum corrosion resistance
- The same composition as Blue Max<sup>®</sup> MIG 309L with higher silicon content to improve the bead appearance and increase welding ease
- Excellent contour of the weld minimizes the need for grinding

## WELDING POSITIONS

All

## CONFORMANCES

<b>AWS A5.9/A5.9M:</b>	ER309Si, ER309LSi
<b>ASME SFA-A5.9:</b>	ER309Si, ER309LSi
<b>ABS:</b>	ER309Si, ER309LSi
<b>CWB/CSA W48-06:</b>	ER309LSi
<b>EN ISO 14343-B:</b>	SS309LSi
<b>ISO 14343:2009:</b>	(23 12 L Si)

## TYPICAL APPLICATIONS

- Designed for joining stainless steel to mild or low alloy steel

## SHIELDING GAS

Short Circuiting Transfer:

90% Helium / 7-1/2% Argon / 2-1/2% CO<sub>2</sub>

Axial Spray Transfer:

98% Argon/ 2% Oxygen

## DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool	500 lb (227 kg) Accu-Trak <sup>®</sup> Drum
0.030 (0.8)	ED023962	
0.035 (0.9)	ED019295	ED029770
0.045 (1.1)	ED019296	ED029771
1/16 (1.6)	ED019297	

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
<b>Typical Results<sup>(3)</sup> - As-Welded</b>	450 (65)	595 (86)	42	14

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>Measured with 0.2% offset <sup>(3)</sup>See test results disclaimer

**WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M**

	%C <sup>(4)</sup>	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> – AWS ER309LSi	0.03 max	23.0-25.0	12.0-14.0	0.75 max	1.0-2.5
<b>Typical Results<sup>(3)</sup></b>	0.03	23.5	13.7	0.28	2.0
	%Si	%P	%S	%N <sup>(5)</sup>	%Cu
<b>Requirements</b> – AWS ER309LSi	0.65-1.00	0.03 max	0.03 max	Not Specified	0.75 max
<b>Typical Results<sup>(3)</sup></b>	0.89	0.02	0.01	0.06	0.22

**TYPICAL OPERATING PROCEDURES**

Diameter, Polarity Shielding Gas	CTWD <sup>(6)</sup> mm (in)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)	
<i>Short Circuit Transfer</i>						
<b>0.035 in (0.9 mm), DC+</b> 90% He / 7-1/2% Ar / 2-1/2% CO <sub>2</sub>	13 (1/2)	3.0 (120)	19-20	55	0.9 (2.0)	
	13 (1/2)	4.6 (180)	19-20	85	1.4 (3.0)	
	13 (1/2)	5.8 (230)	20-21	105	1.8 (3.9)	
	13 (1/2)	7.6 (300)	20-21	125	2.3 (5.0)	
	13 (1/2)	8.9 (350)	21-22	140	2.7 (5.9)	
	13 (1/2)	10.2 (400)	22-23	160	3.1 (6.7)	
<b>0.045 in (1.1 mm), DC+</b> 90% He / 7-1/2% Ar / 2-1/2% CO <sub>2</sub>	13 (1/2)	2.5 (100)	19-20	100	1.1 (2.8)	
	13 (1/2)	3.2 (125)	19-20	120	1.5 (3.5)	
	13 (1/2)	3.8 (150)	21	135	1.7 (4.2)	
	13 (1/2)	4.4 (175)	21	140	2.0 (4.8)	
	13 (1/2)	5.6 (220)	22	170	2.6 (6.1)	
	13 (1/2)	6.4 (250)	22-23	175	2.9 (6.9)	
<i>Axial Spray Transfer</i>	<b>0.035 in (0.9 mm), DC+</b> 98% Ar/2% O <sub>2</sub>	13 (1/2)	10.2 (400)	22	180	3.1 (6.7)
		13 (1/2)	10.8 (425)	23	190	3.3 (7.1)
		13 (1/2)	11.4 (450)	23	200	3.5 (7.5)
		13 (1/2)	12.1 (475)	23	210	3.7 (8.0)
		<b>0.045 in (1.1 mm), DC+</b> 98% Ar/2% O <sub>2</sub>	13 (1/2)	6.1 (240)	23	195
13 (1/2)	6.6 (260)		24	230	3.0 (7.2)	
13 (1/2)	7.6 (300)		24	240	3.5 (8.3)	
13 (1/2)	8.3 (325)		25	250	3.8 (9.0)	
13 (1/2)	9.1 (360)		25	260	4.2 (10.0)	
<b>1/16 in (1.6 mm), DC+</b> 98% Ar/2% O <sub>2</sub>	19 (3/4)	4.4 (175)	25	260	4.3 (9.2)	
	19 (3/4)	5.1 (200)	26	310	4.9 (10.5)	
	19 (3/4)	6.4 (250)	26	330	6.2 (13.1)	
	19 (3/4)	7.0 (275)	27	360	6.8 (14.4)	
	19 (3/4)	7.6 (300)	28	390	7.4 (15.8)	

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>Measured with 0.2% offset <sup>(3)</sup>See test results disclaimer <sup>(4)</sup>AWS Requirement for ER309Si is 0.12% max. carbon. <sup>(5)</sup>Included in 0.50% max. for other elements not specified.

<sup>(6)</sup>To estimate ESO, subtract 1/8 in (3 mm) from CTWD.

**IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED**

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# BLUE MAX<sup>®</sup> MIG 309L

Stainless ▪ AWS ER309L

## KEY FEATURES

- Reduced carbon levels (0.03% max) offer increased resistance to inter-granular corrosion
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online
- Excellent corrosion resistance

## WELDING POSITIONS

All

## CONFORMANCES

<b>AWS A5.9/A5.9M:</b>	ER309L
<b>ISO 14343:2009:</b>	(23 12 L)
<b>CWB</b>	ER309L
<b>MIL-E-19933E (SH)</b>	MIL 309

## TYPICAL APPLICATIONS

- Ideal for joining stainless steels to themselves or to carbon or low alloy steels, and can be used at temperatures of up to 700°F (371°C)

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035071
0.045 (1.1)	ED035072
1/16 (1.6)	ED035074

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER309L	0.03 max	23.0 - 25.0	12.0 - 14.0	0.75 max	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.01	23.4	13.6	0.06	1.6
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER309L	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.38	0.02	0.007	0.07	9 - 14

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas
0.035 (0.9)	26-29	160-210	98/2 (Ar/O <sub>2</sub> )
0.045 (1.1)	28-32	180-250	
1/16 (1.6)	29-33	200-280	

<sup>(1)</sup>Typical wire composition <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 309LMo\_MOD

Stainless ▪ Similar to AWS ER309LMo

## KEY FEATURES

- Similar to 309L with the exception for the addition of 2.0 - 3.0% molybdenum to increase its pitting corrosion resistance in halide-containing environments
- Surfacing of base metals to improve their resistance to corrosion
- Used to achieve a single-layer overlay with a chemical composition similar to that of a 316L stainless steel

## WELDING POSITIONS

All

## CONFORMANCES

ISO 14343:2009: 23 12 2 L

\* Similar to ER309LMo

## TYPICAL APPLICATIONS

- Used for the first layer of multilayer overlays with filler metals such as 316L or 317L stainless steel

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035082
0.045 (1.1)	ED035083
1/16 (1.6)	ED035084

## WIRE COMPOSITION<sup>(1)</sup>

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER309LMo	0.03 max	23.0 - 25.0	12.0 - 14.0	2.0 - 3.0	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.01	22.3	15.0	2.6	1.40
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER309LMo	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.40	0.02	0.01	0.10	6 - 12

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250	30-50 CFH	
0.062 (1.6)	29-33	200-280	30-50 CFH	

<sup>(1)</sup> Typical wire composition. <sup>(2)</sup> See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 310

Stainless ▪ AWS ER310

## KEY FEATURES

- Austenitic stainless for high temperature, heat resistant applications
- The weld deposit is fully austenitic, low heat input welding procedures are needed to prevent cracking
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## CONFORMANCES

**AWS A5.9/A5.9M:** ER310  
**ISO 14343: 2009:** (25 20)  
**MIL-E-19933E (SH)** MIL 310

## TYPICAL APPLICATIONS

- Heat shields
- Furnace parts
- Ducting
- Welding 310 Stainless and similar materials
- Used for welding stainless steels of similar composition in cast and wrought forms

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035085
0.045 (1.1)	ED035086
1/16 (1.6)	ED035087

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER310	0.08 - 0.15	25.0 - 28.0	20.0 - 22.5	0.75 max	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.11	27.1	21.0		1.90
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER310	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.40	0.01	0.003	0.04	

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		
1/16 (1.6)	29-33	200-280		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 312

Stainless ▪ AWS ER312

## KEY FEATURES

- The weld deposits exhibit high tensile strength and offer some resistance to abrasion
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online
- Applications should be limited to 800°F (420°C)

## WELDING POSITIONS

All

## CONFORMANCES

**AWS A5.9/A5.9M:** ER312  
**ISO 14343: 2009:** (29 9)

## TYPICAL APPLICATIONS

- Tool steels
- Hard to weld steels
- Cast and wrought alloys
- Dissimilar metals

## SHIELDING GAS

98% Argon / 2% Oxygen

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.045 (1.1)	ED035088
1/16 (1.6)	ED035089

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER312	0.15 max	28.0 - 32.0	8.0 - 10.5	0.75 max	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.11	29.6	8.9		1.6
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER312	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.44	0.02	0.01	0.10	50 - 80

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.045 (1.1)	28-32	180-250	30-50 CFH	98% Ar / 2% O <sub>2</sub>
1/16 (1.6)	29-33	200-280		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 316L

Stainless ▪ AWS ER316L

## KEY FEATURES

- The 2-3% molybdenum improves pitting corrosion resistance of the weld deposit
- Low carbon content reduces the possibility of carbide precipitation and intergranular corrosion
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## CONFORMANCES

**AWS A5.9/A5.9M:** ER316/ER316L  
**ISO 14343:2009:** (19 12 3 L)  
**MIL-E-19933E (SH)** MIL 316L

## TYPICAL APPLICATIONS

- Power Generation
- Chemical and Petrochemical Processing
- Designed for joining 316/316L stainless steels

## SHIELDING GAS

Short Circuiting Transfer:

90% Helium / 7-1/2% Argon / 2-1/2% CO<sub>2</sub>

Axial Spray Transfer:

98% Argon / Balance Oxygen

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool	250 lb (113 kg) Accu-Trak <sup>®</sup> Drum
0.030 (0.8)	ED035091	
0.035 (0.9)	ED035092	ED035097
0.045 (1.1)	ED035098	ED035102
1/16 (1.6)	ED035104	

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M:

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER316L	0.03 max	18.0 - 20.0	11.0 - 14.0	2.0 - 3.0	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.01	18.5	12.1	2.4	1.6
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS ER316L	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.36	0.02	0.01	0.09	6 - 12

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas
0.030 (0.8)	26-29	160-210	98% Ar / 2% O <sub>2</sub>
0.035 (0.9)	26-29	160-210	
0.045 (1.1)	28-32	180-250	
1/16 (1.6)	29-33	200-280	

<sup>(1)</sup>Typical wire composition <sup>(2)</sup>See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX® MIG 316LCF

Stainless ▪ AWS ER316L

## KEY FEATURES

- Controlled Low Ferrite (Range 3-5)
- Charpy V-Notch test results capable of exceeding 27 J (20 ft•lbf) @ -196°C (-320°F)
- Exceeds 15 mils (0.38 mm) of lateral expansion @ -196°C (-320°F)
- Q2 Lot® - Certificates showing actual wire composition available online

## WELDING POSITIONS

All

## CONFORMANCES

<b>AWS A5.9/A5.9.M:</b>	ER316/316L
<b>ASME SFA-A5.9:</b>	ER316/316L

## TYPICAL APPLICATIONS

- LNG Storage
- Cryogenic Vessels and Piping

## TYPICAL BASE METALS

- 316L stainless steel

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Steel Spool
0.035 (0.9)	ED034925
0.045 (1.1)	ED034926

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements - AWS ER316L</b>	0.03 max	18.0 - 20.0	11.0 - 14.0	2.0 - 3.0	1.0 - 2.5
<b>Typical Results<sup>(3)</sup></b>	0.01	18.5	12.1	2.4	1.6
	%Si	%P	%S	%Cu	FN
<b>Requirements - AWS ER316L</b>	0.30 - 0.65	0.03 max	0.03 max	0.75 max	Not Required
<b>Typical Results<sup>(3)</sup></b>	0.36	0.02	0.01	0.09	6 - 12

## MECHANICAL PROPERTIES<sup>(1)</sup>

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) -196°C (-320°F)	Lateral Expansion mils (mm) -196°C (-320°F)
<b>Typical Results<sup>(3)</sup></b> As-Welded with 98% Ar/2% O <sub>2</sub>	410 (69)	580 (85)	36	42 (56)	27 (0.69)

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>Measured with 0.2% offset <sup>(3)</sup>See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 316LSi

Stainless ▪ AWS ER316Si, ER316LSi

## KEY FEATURES

- High silicon level for increased puddle fluidity and toe wetting
- Proprietary surface lubricant for steady feeding and arc stability
- Molybdenum grade for increased corrosion resistance
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online
- Controlled ferrite content for maximum corrosion resistance
- Similar to 316L, with higher silicon content for optimum ease and speed in MIG welding and smooth bead appearance

## WELDING POSITIONS

All

## CONFORMANCES

<b>AWS A5.9/A5.9M:</b>	ER316Si, ER316LSi
<b>ASME SFA-A5.9 ABS:</b>	ER316Si, ER316LSi
<b>CWB/CSA W48-06:</b>	ER316Si, ER316LSi
<b>EN ISO 14343-B:</b>	ER316LSi
<b>ISO 14343:2009:</b>	SS316LSi (19 12 3 L Si)

## TYPICAL APPLICATIONS

- Molybdenum bearing austenitic stainless steels
- Type 316 and 316L

## SHIELDING GAS

Short Circuiting Transfer:  
90% He / 7.5% Argon / 2.5% CO<sub>2</sub>

Axial Spray Transfer:  
98% Argon / Balance Oxygen

## DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool	250 lb (113 kg) Accu-Trak <sup>®</sup> Drum	500 lb (227 kg) Accu-Trak <sup>®</sup> Drum	500 lb (227 kg) Speed Feed <sup>®</sup> Reel
0.030 (0.8)	ED023963			
0.035 (0.9)	ED019298			
0.045 (1.1)	ED019299	ED035112	ED029772 ED029773	
1/16 (1.6)	ED019300			ED035115

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
<b>Typical Results<sup>(3)</sup> - As-Welded</b>	405 (59)	560 (81)	40	10

<sup>(1)</sup>Typical wire composition <sup>(2)</sup>Measured with 0.2% offset <sup>(3)</sup>See test results disclaimer

**WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M**

	%C <sup>(4)</sup>	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> – AWS ER316LSi	0.03 max	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5
<b>Typical Results<sup>(3)</sup></b>	0.02	18.9	11.8	2.2	2.1
	%Si	%P	%S	%N <sup>(5)</sup>	%Cu
<b>Requirements</b> – AWS ER316LSi	0.65-1.00	0.03 max	0.03 max	Not Specified	0.75 max
<b>Typical Results<sup>(3)</sup></b>	0.81	0.02	0.01	0.05	0.23

**TYPICAL OPERATING PROCEDURES**

Diameter, Polarity Shielding Gas	CTWD <sup>(6)</sup> mm (in)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)
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*Short Circuit Transfer*

<b>0.035 in (0.9 mm), DC+</b> 90% He / 7-1/2% Ar / 2-1/2% CO <sub>2</sub>	13 (1/2)	3.0 (120)	19-20	55	0.9 (2.0)
	13 (1/2)	4.6 (180)	19-20	85	1.4 (3.0)
	13 (1/2)	5.8 (230)	20-21	105	1.8 (3.9)
	13 (1/2)	7.6 (300)	20-21	125	2.3 (5.0)
	13 (1/2)	8.9 (350)	21-22	140	2.7 (5.9)
	13 (1/2)	10.2 (400)	22-23	160	3.1 (6.7)
<b>0.045 in (1.1 mm), DC+</b> 90% He / 7-1/2% Ar / 2-1/2% CO <sub>2</sub>	13 (1/2)	2.5 (100)	19-20	100	1.1 (2.8)
	13 (1/2)	3.2 (125)	19-20	120	1.5 (3.5)
	13 (1/2)	3.8 (150)	21	135	1.7 (4.2)
	13 (1/2)	4.4 (175)	21	140	2.0 (4.8)
	13 (1/2)	5.6 (220)	22	170	2.6 (6.1)
	13 (1/2)	6.4 (250)	22-23	175	2.9 (6.9)
13 (1/2)	7.0 (275)	22-23	185	3.2 (7.6)	

*Axial Spray Transfer*

<b>0.035 in (0.9 mm), DC+</b> 98% Ar/2% O <sub>2</sub>	13 (1/2)	10.2 (400)	22	180	3.1 (6.7)
	13 (1/2)	10.8 (425)	23	190	3.3 (7.1)
	13 (1/2)	11.4 (450)	23	200	3.5 (7.5)
	13 (1/2)	12.1 (475)	23	210	3.7 (8.0)
<b>0.045 in (1.1 mm), DC+</b> 98% Ar/2% O <sub>2</sub>	13 (1/2)	6.1 (240)	23	195	2.8 (6.6)
	13 (1/2)	6.6 (260)	24	230	3.0 (7.2)
	13 (1/2)	7.6 (300)	24	240	3.5 (8.3)
	13 (1/2)	8.3 (325)	25	250	3.8 (9.0)
	13 (1/2)	9.1 (360)	25	260	4.2 (10.0)
<b>1/16 in (1.6 mm), DC+</b> 98% Ar/2% O <sub>2</sub>	19 (3/4)	4.4 (175)	25	260	4.3 (9.2)
	19 (3/4)	5.1 (200)	26	310	4.9 (10.5)
	19 (3/4)	6.4 (250)	26	330	6.2 (13.1)
	19 (3/4)	7.0 (275)	27	360	6.8 (14.4)
	19 (3/4)	7.6 (300)	28	390	7.4 (15.8)

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer. <sup>(4)</sup>AWS Requirement for ER309Si is 0.12% max. carbon. <sup>(5)</sup>Included in 0.50% max. for other elements not specified.<sup>(6)</sup>To estimate ESO, subtract 1/8 in (3 mm) from CTWD.**IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED**Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.



# BLUE MAX<sup>®</sup> MIG 317L

Stainless ▪ AWS ER317L

## KEY FEATURES

- Weld deposit similar to 316L with high molybdenum content for increased corrosion resistance
- Not suitable for structural service below 400°C (752°F) or for cryogenic applications

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## CONFORMANCES

**AWS A5.9/A5.9M:** ER317L  
**ISO 14343: 2009:** (18 15 3 L)

## TYPICAL APPLICATIONS

- Food Processing
- Chemical Processing Plants
- Condensers
- Petrochemical
- Paper Making
- Designed for welding 317L and alloys with similar composition in high corrosive environments

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035116
0.045 (1.1)	ED035117
1/16 (1.6)	ED035119

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER317L	0.03 max.	18.5 - 20.5	13.0 - 15.0	3.0 - 4.0	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.01	18.9	13.7	3.5	1.4
	%Si	%P	%S	%Cu	
<b>Requirements</b> AWS ER317L	0.30 - 0.65	0.03 max	0.03 max	0.75 max	
<b>Typical Results<sup>(2)</sup></b>	0.45	0.01	0.008	0.08	

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		
1/16 (1.6)	29-33	200-280		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 320LR

Stainless ▪ AWS ER320LR

## KEY FEATURES

- Excellent corrosion resistance
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## CONFORMANCES

AWS A5.9/A5.9M: ER320LR

## TYPICAL APPLICATIONS

- Process Piping
- Heat Exchangers
- Agitators and rotors
- Chemical processing
- Metal cleaning and pickling industries
- Typically used for welding Alloy 20 base materials and materials in similar composition

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035122
0.045 (1.1)	ED035123
1/16 (1.6)	ED035124

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER320LR	0.025 max	19.0 - 21.0	32.0 - 36.0	2.0 - 3.0	1.5 - 2.0
<b>Typical Results<sup>(2)</sup></b>	0.003	20.1	33.3	2.4	1.7
	%Si	%P	%S	%Cu	%Nb
<b>Requirements</b> AWS ER320LR	0.15 max	0.015 max	0.02 max	3.0 - 4.0	Required 8 x C / 1.0 max
<b>Typical Results<sup>(2)</sup></b>	0.01	0.010	0.001	3.3	0.22

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		
1/16 (1.6)	29-33	200-280		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer.

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

# BLUE MAX<sup>®</sup> MIG 330

Stainless ▪ AWS ER330

## KEY FEATURES

- High sulfur environments adversely affect the high temperature performance
- Heat input must be kept at a minimum during welding to avoid possible micro-fissuring
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035125
0.045 (1.1)	ED035127

## CONFORMANCES

**AWS A5.9/A5.9M:** ER330  
**ISO 14343: 2009:** (18 69 H)

## TYPICAL APPLICATIONS

- Heat Treatment
- Furnace Environments
- Used to weld wrought and cast forms of stainless steels of similar chemical compositions, which offer good heat and scale resistance to 1800°F (980°C)

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER330	0.18 - 0.25	15.0 - 17.0	34.0 - 37.0	0.75 max	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.23	15.9	35.2		1.9
	%Si	%P	%S	%Cu	
<b>Requirements</b> AWS ER330	0.30 - 0.65	0.03	0.03	0.75 max	
<b>Typical Results<sup>(2)</sup></b>	0.42	0.01	0.005	0.10	

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer.

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 347

Stainless ▪ AWS ER347

## KEY FEATURES

- The addition of niobium reduces intergranular corrosion in severe operating conditions
- Q2 Lot<sup>®</sup> - Certificate showing actual chemistry available online

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## CONFORMANCES

**AWS A5.9/A5.9M:** ER347  
**ISO 14343: 2009:** (19 9 Nb)  
**MIL-E-19933E (SH)** MIL 347

## TYPICAL APPLICATIONS

- High temperature stainless applications
- Pharmaceutical Equipment
- Welding 321 and 347 type stainless and stainless clad steels
- Food Processing

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool	500 lb (227 kg) Speed Feed <sup>®</sup> Reel
0.035 (0.9)	ED035128	
0.045 (1.1)	ED035130	
1/16 (1.6)	ED035132	ED035133

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Nb + Ta
<b>Requirements</b> AWS ER347	0.08 max	19.0 - 21.5	9.0 - 11.0	0.75 max	10 x C - 1.0
<b>Typical Results<sup>(2)</sup></b>	0.03	19.5	9.3	0.25	0.60
	%Mn	%Si	%P	%S	%Cu
<b>Requirements</b> AWS ER347	1.0 - 2.5	0.30 - 0.65	0.03 max	0.03 max	0.75 max
<b>Typical Results<sup>(2)</sup></b>	1.7	0.45	0.01	0.007	0.10

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		
1/16 (1.6)	29-33	200-280		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 385

Stainless ▪ AWS ER385

## KEY FEATURES

- Super austenitic stainless steel provides resistance to stress corrosion cracking
- Q2 Lot<sup>®</sup> Certificate showing actual chemistry available online
- Low heat input procedures needed

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## CONFORMANCES

**AWS A5.9/A5.9M:** ER385  
**ISO 14343: 2009:** (20 25 5 Cu L)

## TYPICAL APPLICATIONS

- Used for welding 904L stainless steel
- Used in fabrication of equipment and vessels for handling and storage of sulfuric acid, phosphoric acid, and other inorganic and organic acids
- Process piping

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035134
0.045 (1.1)	ED035135
1/16 (1.6)	ED035136

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER385	0.025 max	19.5 - 21.5	24.0 - 26.0	4.2 - 5.2	1.0 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.010	19.9	25.0	4.2	1.8
	%Si	%P	%S	%Cu	
<b>Requirements</b> AWS ER385	0.50 max	0.02 max	0.03 max	1.2 - 2.0	
<b>Typical Results<sup>(2)</sup></b>	0.3	0.01	0.001	1.4	

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		
1/16 (1.6)	29-33	200-280		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 409Nb

Stainless ▪ AWS ER409Nb

## KEY FEATURES

- A ferritic stainless steel
- The addition of niobium improves corrosion resistance and promotes a ferritic micro-structure
- For the best results, welding must be done in a low heat input procedure not recommended for multi-pass applications
- Q2 Lot<sup>®</sup> - Certificate showing actual chemistry available online

## WELDING POSITIONS

All

## CONFORMANCES

AWS A5.9/A5.9M: ER409Nb  
SM SFA-5.9: ER409Nb

## TYPICAL APPLICATIONS

- Automotive Exhausts
- Catalytic Converters under typical applications
- Designed to weld type 409 and 409Ti base materials

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>  
90% Helium / 7.5% Argon / 2.5% Carbon Dioxide

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035137
0.045 (1.1)	ED035138

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Nb
<b>Requirements</b> AWS ER409Nb	0.08 max	10.5 - 13.5	0.6 max	0.50 max	0.075 max
<b>Typical Results<sup>(2)</sup></b>	0.04	11.5	0.4	0.03	0.50
	%Mn	%Si	%P	%S	%Cu
<b>Requirements</b> AWS ER409Nb	0.8 max	1.0 max	0.04 max	0.03 max	0.75 max
<b>Typical Results<sup>(2)</sup></b>	0.62	0.48	0.02	0.02	0.04

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 410

Stainless ▪ AWS ER410

## KEY FEATURES

- Designed to weld stainless steels of similar chemical composition as well as to overlay carbon steels to impart corrosion, erosion and abrasion resistance
- Preheat and inter-pass temperature of 400°F (200°C) or greater are recommended during welding
- Q2 Lot<sup>®</sup> Certificate showing actual wire composition and higher are recommended available online

## WELDING POSITIONS

All

## CONFORMANCES

<b>AWS A5.9/A5.9M:</b>	ER410
<b>ISO 14343: 2009:</b>	13
<b>ASME SFA-5.9:</b>	ER410
<b>MIL-E-19933E (SH)</b>	MIL 410

## TYPICAL APPLICATIONS

- Surfacing Steel Mill Rolls
- Furnace and Burner Parts
- Turbine Parts

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>  
90% Helium / 7.5% Argon / 2.5% Carbon Dioxide

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool	500 lb (227 kg) Speed Feed <sup>®</sup> Reel	1000 lb (454 kg) Speed Feed <sup>®</sup> Reel
0.035 (0.9)	ED035139	ED035141	ED035142
0.045 (1.1)	ED035140		
1/16 (1.6)	ED035143		

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER410	0.12 max	11.5 - 13.5	0.6 max	0.75 max	0.6 max
<b>Typical Results<sup>(2)</sup></b>	0.11	12.5	0.1	0.03	0.45
	%Si	%P	%S	%Cu	
<b>Requirements</b> AWS ER410	0.5 max	0.03 max	0.03 max	0.75 max	
<b>Typical Results<sup>(2)</sup></b>	0.39	0.01	0.01	0.14	

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 410NiMo

Stainless ▪ AWS ER410NiMo

## KEY FEATURES

- Used to overlay mild and low alloy steels
- Preheat and inter-pass temperature of 300°F (150°C) or greater are recommended during welding
- Post-weld heat treatment should not exceed 1150°F (620°C) as higher temperatures may result in hardening
- Q2 Lot<sup>®</sup> - Certificate showing actual chemistry available online

## WELDING POSITIONS

All

## CONFORMANCES

**AWS A5.9/A5.9M:** ER410NiMo  
**ISO 14343: 2009:** (13 4)

## TYPICAL APPLICATIONS

- Turbines
- Valve Bodies
- Power Generation
- Chemical & Petrochemical
- High Pressure Piping
- Designed to weld materials of similar chemical composition in cast and wrought forms

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>  
 90% Helium / 7.5% Argon / 2.5% Carbon Dioxide

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035144
0.045 (1.1)	ED035145

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS ER410NiMo	0.06 max	11.0 - 12.5	4.0 - 5.0	0.4 - 0.7	0.6 max
<b>Typical Results<sup>(2)</sup></b>	0.02	11.7	4.7	0.5	0.2
	%Si	%P	%S	%Cu	
<b>Requirements</b> AWS ER410NiMo	0.5 max	0.03 max	0.03 max	0.75 max	
<b>Typical Results<sup>(2)</sup></b>	0.2	0.01	0.002	0.06	

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Ar / 2% O <sub>2</sub>
0.045 (1.1)	28-32	180-250		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 420

Stainless ▪ AWS ER420

## KEY FEATURES

- Higher hardness levels than Blue Max 410, due to higher carbon & Chromium content
- Intended to weld stainless steels similar in chemical composition
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
1/16 (1.6)	ED035146

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Mn	%Si	%S	%P
<b>Requirements</b> AWS ER420	0.25-0.40	0.60	0.50	0.03	0.03
<b>Typical Results<sup>(2)</sup></b>	0.32	0.30	0.30	0.01	0.02
	%Cr	%Ni	%Mo	%Cu	
<b>Requirements</b> AWS ER420	12.0-14.0	0.60	0.75	0.75	
<b>Typical Results<sup>(2)</sup></b>	13.20	0.20	0.03	0.02	

## TYPICAL OPERATING PROCEDURES

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
MIG (DCEP)	1/16 (1.6)	29-33	200-280	30-50 CFH	98% Ar / 2% O <sub>2</sub>

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 630

Stainless ▪ AWS ER630

## KEY FEATURES

- Heat treatment of material will obtain higher strength, and greatly influence mechanical properties
- Q2 Lot<sup>®</sup> Certificate showing actual wire composition and calculated ferrite number (FN) available online
- Precipitation hardening, martensitic stainless steel

## WELDING POSITIONS

All

## CONFORMANCES

AWS A5.9/A5.9M: ER630

## TYPICAL APPLICATIONS

- Hydraulic Equipment Components
- Impellers
- Pump Shafts
- Welding 17-4 PH stainless steels

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035150
0.045 (1.1)	ED035151
1/16 (1.6)	ED035153

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Nb
<b>Requirements</b> AWS ER630	0.05 max	16.00 - 16.75	4.5 - 5.0	0.75 max	0.15 - 0.30
<b>Typical Results<sup>(2)</sup></b>	0.03	16.5	4.8	0.2	0.22
	%Mn	%Si	%P	%S	%Cu
<b>Requirements</b> AWS ER630	0.25 - 0.75	0.75 max	0.03 max	0.03 max	3.25 - 4.0
<b>Typical Results<sup>(2)</sup></b>	0.54	0.43	0.02	0.02	3.6

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Argon / 2% CO <sub>2</sub>
0.045 (1.1)	28-32	180-250		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

### IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 2209

Stainless ▪ AWS ER2209

## KEY FEATURES

- The welds offer excellent resistance to stress corrosion, cracking and pitting
- The microstructure of the weld metal consists of austenite and ferrite
- Q2 Lot<sup>®</sup> Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## CONFORMANCES

**AWS A5.9/A5.9M:** ER2209  
**ISO 14343:2009:** (22 9 3 N L)

## TYPICAL APPLICATIONS

- Offshore
- Oil and Gas
- Chemical
- Petrochemical
- Welding 2205 duplex stainless steel

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.030 (0.8)	ED035023
0.035 (0.9)	ED035025
0.045 (1.1)	ED035027
1/16 (1.6)	ED035028

## WIRE COMPOSITION<sup>(1)</sup>

	%C	%Cr	%Ni	%Mo	%Mn	%Si
<b>Requirements</b> AWS ER2209	0.03 max	21.5 - 23.5	7.5 - 9.5	2.5 - 3.5	0.5 - 2.0	0.90 max
<b>Typical Results<sup>(2)</sup></b>	0.01	22.7	8.5	3.0	1.4	0.4
	%P	%S	%N	%Cu	FN	
<b>Requirements</b> AWS ER2209	0.03 max	0.03 max	0.08 - 0.20	0.75 max	Not Required	
<b>Typical Results<sup>(2)</sup></b>	0.01	0.001	0.15	0.06	30 - 60	

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	98% Argon/ 2% Carbon Dioxide
0.045 (1.1)	28-32	180-250		
1/16 (1.6)	29-33	200-280		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

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# BLUE MAX<sup>®</sup> MIG 2594

Stainless ▪ AWS ER2594

## KEY FEATURES

- A super-duplex grade electrode that provides matching chemistry and mechanical property characteristics to wrought super-duplex alloys such as 2507 and Zeron 100, as well as to super-duplex casting alloys (ATSM A890)
- The electrode is over-alloyed 2-3% in nickel to provide the optimum ferrite/austenite ratio in the finished weld resulting in high tensile and yield strength and superior resistance to stress corrosion, cracking (SCC) and pitting corrosion
- Q2 Lot<sup>®</sup> - Certificate showing actual wire composition and calculated ferrite number (FN) available online

## WELDING POSITIONS

All

## DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) PLW Steel Spool
0.035 (0.9)	ED035029
0.045 (1.1)	ED035030

## CONFORMANCES

AWS A5.9/A5.9M:	ER2594
ISO 14343:2009:	25 9 4 N L

## TYPICAL APPLICATIONS

- Process Pipework
- Pumps and Valves
- Pressure Vessels
- Welding Zeron 100% and similar base metals

## SHIELDING GAS

98% Ar / 2% O<sub>2</sub>

## WIRE COMPOSITION<sup>(1)</sup> – As Required per AWS A5.9/A5.9M

	%C	%Cr	%Ni	%Mo	%Mn	%Si
<b>Requirements</b> AWS ER2594	0.03 max	24.0 - 27.0	8.0 - 10.5	2.5 - 4.5	2.5 max	1.0 max
<b>Typical Results<sup>(2)</sup></b>	0.02	24.6	8.6	3.8	0.8	0.3
	%P	%S	%N	%Cu	%W	FN
<b>Requirements</b> AWS ER2594	0.03 max	0.02 max	0.20 - 0.30	1.5 max	1.00 max	Not Required
<b>Typical Results<sup>(2)</sup></b>	0.02	0.01	0.25	0.01	0.01	30 - 60

## TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
0.035 (0.9)	26-29	160-210	30-50 CFH	Argon + 2-5% CO <sub>2</sub>
0.045 (1.1)	28-32	180-250		

<sup>(1)</sup>Typical wire composition. <sup>(2)</sup>See test results disclaimer

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.