

**ARCTEC® STAINLESS STEEL  
BARE ELECTRODES and WIRE  
for TIG and MIG WELDING**



**ARCTEC® ER308L AWS A5.9 Class ER308L**

**DESCRIPTION AND APPLICATION:**

Arctec® E308L has the same composition as type 308 except for reduced carbon content. The low carbon content of this filler metal reduces the risk of carbide precipitation and thus increases the resistance to intergranular corrosion.

Primarily used for welding low carbon base materials of similar composition.

<b>Typical Mechanical Properties:</b>	Tensile Strength: 83,000 psi (572 Mpa)					Elongation 40%
<b>Typical Deposit Analysis:</b>	C	Cr	Ni	Mn	Si	
%	.02	20.8	10.1	1.70	.60	

**ARCTEC® ER309L AWS A5.9 Class ER309L**

**DESCRIPTION AND APPLICATION:**

Arctec® ER309L-16 has the same composition as type 309 except for reduced carbon content. The low carbon content of this filler metal reduces the risk of carbide precipitation and thus increases the resistance to intergranular corrosion.

For joining and cladding steels of similar composition in wrought and cast form. Also used for welding dissimilar steels such as joining stainless to carbon steel.

<b>Typical Mechanical Properties:</b>	Tensile Strength: 84,000 psi (579 Mpa)					Elongation: 36%
<b>Typical Deposit Analysis:</b>	C	Cr	Ni	Mn	Si	
%	.02	23.4	12.7	1.75	.50	

**ARCTEC® ER316L AWS A5.9 Class ER316L**

**DESCRIPTION AND APPLICATION:**

Arctec® ER316L has the same composition as type 316 except for reduced carbon content. The low carbon content of this filler metal reduces the risk of carbide precipitation and thus increases the resistance to intergranular corrosion. The addition of molybdenum increases the resistance to pitting corrosion caused by corrosive media such as sulfuric acids, chlorides and cellulose solutions. Primarily used for welding low carbon molybdenum bearing austenitic alloys.

<b>Typical Mechanical Properties:</b>	Tensile Strength: 83,000 psi (534 Mpa)					Elongation: 36%
<b>Typical Deposit Analysis:</b>	C	Cr	Ni	Mn	Si	Mo
%	.02	19.2	12.6	1.80	.85	2.50

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a quality welding alloy

## ARCtec® ER317L AWS A5.9 Class ER317L

### DESCRIPTION AND APPLICATION:

Arctec® ER317L is similar in composition to type 317 except for reduced carbon content. The low carbon content of this filler metal reduces the risk of carbide precipitation and thus increases the resistance to intergranular corrosion. The addition of molybdenum increases the resistance to pitting corrosion caused by corrosive media such as sulfuric acids, chlorides and cellulose solutions. This alloy is used for welding alloys of similar composition and in severely corrosive environments where crevice and pitting corrosion are of concern.

<b>Typical Mechanical Properties:</b>	Tensile Strength: 80,000 psi (520 Mpa)					Elongation: 30%
<b>Typical Deposit Analysis:</b>	C	Cr	Ni	Mn	Si	Mo
%	.02	19.4	13.8	1.65	.45	3.25

## ARCtec® ER410 AWS A5.9 Class ER410

### DESCRIPTION AND APPLICATION:

Arctec® ER410 is a 12 % chromium air hardening steel. This filler material is most commonly used for welding alloys of similar composition. Also used for overlays on carbon steel to resist corrosion, erosion, or abrasion. Preheat and postheat treatments are required to achieve satisfactory weldments.

<b>Typical Mechanical Properties:</b>	Tensile Strength: 65,000 psi (450 Mpa)					Elongation: 20%
<b>Typical Deposit Analysis:</b>	C	Cr	Ni	Mn	Si	Mo
%	.12	13.0	.60	.60	.50	.75

### Availability:

Process	Packaging	Diameter		
TIG	36" Cut Length 4.5kg (10 lb) Tube	1.5 mm 1/16"	2.50 mm 3/32"	3.25 mm 1/8"
MIG	30 lb (13.6kg) spool	.90mm (.035")	1.2mm (.045")	1.6mm (1/16")

THE FOLLOWING PARAMETERS MAY BE USED AS A GUIDELINE FOR TIG AND MIG WELDING STAINLESS STEEL

PROCESS:	DIAMETER:	VOLTAGE	AMPERAGE	SHIELDING GAS
TIG	1.5 mm 1/16"	12-15	60-90	100% Argon
	2.50 mm 3/32"	13-16	80-110	
	3.25 mm 1/8"	14-18	90-130	
MIG	.90mm (.035")	26-29	150-180	99% Argon + 1% Oxygen
	1.2mm (.045")	28-32	200-250	
	1.6mm (1/16")	29-33	180-220	

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