



XTR 308L

AWS A5.9 ER308L

Description:

ER308L is very similar to type ER308 but has a carbon content held to a max of .03% to avoid carbide precipitation and preserve intergranular corrosion resistant properties. 308L has mild corrosion resistance properties.

Typical Applications:

XTR 308L is an extra low carbon 20 Cr/ 9 Ni stainless steel welding consumable suitable for MIG/TIG welding of austenitic stainless steels such as 18 Cr /8 Ni type, AISI 301, 302, 304, 304L, 308 and 308L type of steels. Also, very common in the food industry, dairy, bulk chemical tanks and cylinders as well as general stainless-steel applications.

Chemistry:

	Typical	AWS Spec.	Single values are max.
Carbon (C)	0.018	0.030	
Chromium (Cr)	19.755	19.5-22.0	
Nickel (Ni)	9.100	9.0-11.0	
Molybdenum (Mo)	0.055	0.750	
Manganese (Mn)	1.730	1.0-2.5	
Silicon (Si)	0.375	0.30-0.65	
Phosphorus (P)	0.027	0.030	
Sulfur (S)	0.012	0.030	
Copper (Cu)	0.090	0.750	
Nitrogen (N)	0.017	ns	



Mechanical Properties:

	Typical	AWS Spec.	Single values are min.
Tensile Strength	87,000	75,000 psi	
Yield Strength	59,000 psi	ns	
Elongation in 2" (%)	35	35	
Charpy V-Notch	70(J) @ -20°C	ns	
Ferrite Delong (WRC)	9 (9)		
Finish	Bright Finish	-	

Welding Positions:

All

Operating Parameters: MIG/MAG (GMAW), DCEP DC+

Short ARC using Mix 90 He, 7.5 Ar, 2.5% CO2 Shielding Gas					
To weld in Spray ARC, use a 98/99% Argon mix with balance O2 Oxygen, then increase amperage, voltage & gas CFH by 70%					
Diameter	Amperage	Voltage	Speed (IPM)	Stickout (In.)	Flow Rate (CFH)
0.023 (.6mm)	50-100	14-19	120-380	1/4-3/8	15-20
0.030 (.8mm)	60-125	15-20	160-380	3/8-1/2	20-25
0.035 (.9mm)	70-145	16-22	150-330	1/2	25-30
0.045 (1.14mm)	85-175	17-22	100-230	1/2	25-30

Operating Parameters: TIG (GTAW), DCEN DC-

Shielding gas use 100% Argon Shielding Gas					
Argon, Helium mixtures preferred for greater penetration on thicker sections					
Diameter	Amperage	Voltage	Tungsten Size	Flow Rate (CFH)	2% Thoriated 2% Ceriated 2% Lanthanum or Rare Earth Tungsten Electrodes are preferred
0.045 (1.14mm)	65-120	13-16	0.045 (1.14mm)	15-20	
1/16 (1.6mm)	90-130	14-16	1/16 (1.6mm)	20-25	
3/32 (2.4mm)	120-175	15-19	3/32 (2.4mm)	25-30	
1/8 (3.2mm)	155-225	16-20	1/8 (3.2mm)	25-30	
5/32 (4.0mm)	160-230	17-21	5/32 (4.0mm)	25-30	



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