

TS-309LB

AWS A5.4 E309L-15
JIS Z3221 ES309L-15

Characteristics and Applications:

The weld metal of TS-309LB contains more Cr, Ni than TS-308LB. The microstructure containing suitable quantity of ferrite gives it an excellent resistance to hot cracking. The welding can be done in all positions with good X-ray soundness and good mechanical properties. The product produces good notch toughness at the temperature as low as -46°C. It is suitable for welding of dissimilar metals of mild steel and steel stainless, hardening alloy steel and steel with poor weldability.

Notes on usage:

1. Dry the electrodes at 300-350°C for 60 minutes and keep at 100-150°C before using.
2. Use lower currents for dissimilar metals welding.

Typical chemical composition of weld metal (wt%):

C	Mn	Si	P	S	Cr	Ni
0.04	1.23	0.27	0.020	0.012	22.7	13.2

Typical mechanical properties of weld metal:

Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -46°C (-51°F)
440(64)	570(83)	40	55(41)

Welding position:



Sizes and recommended current range (AC or DC<+>):

Diameter (mm)		2.6	3.2	4.0	4.8
Length (mm)		300	350	350	350
Amps	F	60-90	80-130	130-170	160-210
	V&OH	50-80	70-110	100-130	--

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