

# TS-309LB

AWS A5.4 E309L-15  
EN ISO 3581-B ES309L-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
AWS	≤0.04	0.5-2.5	≤1.00	≤0.04	≤0.03	22.0-25.0	12.0-14.0
EN ISO	≤0.04	0.5-2.5	≤1.00	≤0.04	≤0.03	22.0-25.0	12.0-14.0
Typical value	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)
AWS	-	≥ 520(75)	≥ 30	-
EN ISO	-	≥ 520(75)	≥ 25	-
Typical value	440(64)	570(83)	40	55(41)

## Welding position:



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

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

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