

Bostrand 309LSi



AWS A/SFA 5.9-93 ER309LSi
EN 12072 G 23 12 LSi

Description and applications

Bostrand 309LSi is a corrosion-resisting 24% chromium -13% nickel stainless steel solid wire for welding austenitic chromium-nickel alloys of the 23Cr/12Ni type, and for joining dissimilar steels e.g. stainless steel to mild steel. The silicon content of the wire is elevated in order to improve weldability.

Bostrand 309LSi is also suitable for use as a buttering layer when cladding ferritic steels with stainless steels. It may also be used for joining high carbon equivalent ferritic steels to themselves with reduced preheat requirements.

The gas shield should be an Ar/He mixture, or Ar/1%O₂ or Ar/2%O₂. CO₂ may also be used if a weld metal carbon level above 0.03% is acceptable.

Typical all-weld mechanical properties – as welded using Ar/He or Ar/20%CO₂

Yield Stress		440 min	MPa
Tensile Strength		600	MPa
Elongation		41 min	%
Charpy V impact values	at +20%	160	J
	at -60°C	130	J
	at -110°C	90	J

Chemical Composition (wire)

	Min	Max
C		0.025
Si	0.65	1.00
Mn	1.0	2.0
P		0.030
S		0.025
Cr	23.0	25.0
Ni	12.0	14.0
Mo		0.50

Welding Parameters

Size (mm)	0.8	1.0	1.2
Current (amps)	50-140	80-190	180-280