

**SUPERCORE 309LP**

Supercore 309LP has 3 main areas of application:

**Buffer layers and clad steels:**

Overlays on CMn, mild steel or low alloy steels and for joining 304L/321 clad plate. Subsequent layers are deposited with an electrode chosen to match the cladding, e.g. 308L, 347.

**Dissimilar joints:**

Tolerance to dilution is exploited in joining stainless types 410, 304L, 321 and 316L to mild and low alloy steels such as stiffeners, brackets and other attachments.



Service temperatures above 400°C are normally avoided. It is also used for welding 12%Cr utility ferritics' such as Cromweld 3CR12, to itself and other steels.

**Similar metal joints:**

Wrought and cast steels of 23Cr-12Ni type can be welded if the service requirement is corrosion resistance below 400°C. However, for high temperature structural service, weld metal with controlled higher carbon and lower ferrite should be used.

**CLASSIFICATIONS**

AWS	A5.22	E309LT1-4
BS EN	12073	T23 12 L P M 2

**CHEMICAL ANALYSIS**

% Carbon	0.030	% Chromium	24.00
% Manganese	1.300	% Nickel	12.50
% Silicon	0.600	% Molybdenum	0.100
% Sulphur	0.020	% Copper	0.100
% Phosphorous	0.020	% Ferrite	15.00

**TYPICAL MECHANICAL PROPERTIES  
ALL WELD METAL**

Tensile Strength	570 MPa
0.2% Proof Stress	450 MPa
Elongation on 4d	35%
Impact Energy 20°C	50 J
Impact Energy -50°C	40 J

**Microstructure**

Austenite with ferrite in the range 8-20FN. The solid wires tend to have lower ferrite than the MMA and FCW consumables, the ferrite falling in the range 8-15FN for the solid wires.

**PACKING DATA**

(DC+)

Diameter (mm)	Current (A)		Stickout (mm)	Item Number	Pack Mass (Kg)
	Amps	Volts			
1.20	120 - 250	20 - 32	15 - 20	081-120	15

Suggested Shielding Gas: Fluxshield

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