



**SUBARC 312**

SUBARC 312 is used for welding medium and high carbon hardenable steels, of known or unknown specifications. Combination of high alloy and high ferrite content (40-50FN) gives extreme tolerance to dilution on a wide range of hardenable and alloy steels with minimum or no preheat. It has also been found useful for welding free-cutting steels or those with a low Mn:S ratio (especially <20 or so), where other weld

metals may fail to prevent hot cracking due to liquation at the fusion boundary. Weld deposit work-hardens and gives good wear and friction resistance. Useful for resistance to corrosion and to high temperature scaling up to about 1000°C, but not recommended for structural applications above 300°C or for welds to be post-weld heat treated, owing to embrittlement.

**MATERIALS TO BE WELDED**

There are 3 main areas of application:  
Buffer layers and clad steels, Dissimilar joints and Hardenable steels.

**CLASSIFICATIONS**

AWS	A5.9	ER312
BS EN	12072	29 9
DIN	8556	SG X10CrNi 30 9 (1.4337)

**CHEMICAL ANALYSIS**

% Carbon	0.100	% Chromium	30.00
% Manganese	1.800	% Nickel	9.300
% Silicon	0.400	% Molybdenum	0.100
% Sulphur	0.005	% Copper	0.100
% Phosphorous	0.020		

**TYPICAL MECHANICAL PROPERTIES  
ALL WELD METAL**

Tensile Strength	780 MPa
0.2% Proof Stress	640 MPa
Elongation on 4d	20%
Impact Energy 20°C	50J
*Flux Dependant	

**PACKING DATA**

(DC+)

Diameter (mm)	Current (A)		Item Number	Pack Mass (Kg)
	Amps	Volts		
2.40	400	32	078-160	25

Suggested flux : McKay MK-SS or Metrode SSB

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