

PRODUCT DATA SHEET

Metrode Supercore 309Mo



Supercore 309Mo is a flux cored wire for welding under high dilution conditions, particularly dissimilar welds between stainless and CMn steels. There are no comparable base metals. There are three main areas of application.

Buffer layer and clad steel: Overlays on CMn, mild steel or low alloy steels and for joining 316L clad plate. Subsequent layers are deposited with an electrode chosen to not match the cladding, eg. 316L, 318. Also as a buffer layer prior to hard surfacing with chromin carbide type consumables.

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 300°C are normally avoided. For some of these applications, a more economic alternative may be suitable, eg. 309L, 307.

Hardenable steels: The high level of alloying and ferrite level tolerates dilution from a wide range of alloyed and hardenable steels to give crack-free welds.

Classifications

WS	A5.22	E309LMo T0-4
EN	I7633-A	T23 12 2 L R M 3
EN	I7633-B	TS309LM0-FM0

Typical Chemical Analysis

% Carbon	0,03	% Chromium	23,0
% Manganese	1,3	% Nickel	12,8
% Silicon	0,7	% Molybdenum	2,7
% Sulphur	0,01	% Copper	2,3
% Phosphorous	0,02		

Typical Mechanical Properties (All weld metal in the as welded condition)

0,2% Proof Stress	550 MPa
Tensile Strength	700 MPa
% Elongation on 5d	30
Charpy V-Notch at +20°C	50 J
Hardness HV	245
Microstructure	Austenite with ferrite in the range 10-30FN

Packing Data MIG (DC+)

Position	Diameter (mm)	Current		Item Number	Pack Mass (kg)
		Amps (A)	Volts (V)		
F, HF	1,2	180	26	W081112	15,0

Suggested gas for welding: Afrox Fluxshield® but can be used with 100% CO₂. For CO₂, increase voltage by 3 V

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