



CROMAROD® 309MoL

Rutile Electrodes
SMAW Stainless

Classifications

EN ISO 3581-A E 23 12 2 L R 32

AWS A5.4

E309MoL-17



CROMAROD® 309MoL is a rutile flux coated electrode which deposits a 23% Cr / 12%Ni / 2.5%Mo austenitic stainless steel weld metal. The high alloy content and ferrite level enable the weld metal to tolerate dilution from dissimilar and difficult-to-weld materials without hot cracking or brittle structures. Applications are :

- Dissimilar joints between stainless and mild, low alloy or medium carbon steels.
- Buffer layers on mild and low alloy steels prior to overlaying with CROMAROD® 316L.
- Interface runs in 316L clad steels.
- Joining of medium carbon hardenable steels e.g. Armour plate.

Redrying temperature 350 °C, 2h

Welding Current AC OCV > 39V DC+

Scaling temperature Approx. 1000 °C in air.

Corrosion resistance The corrosion resistance after surfacing carbon steels with two layers of Cromarod 309MoL is about the same as for 316L material.

Weld metal chemistry %

FN 20 (WRC-92)

	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%	%Cu
Min			0,5			22,0	12,0	2,0	
Typical	0,02	0,8	0,8	0,02	0,02	22,8	12,8	2,4	0,02
Max	0,030	0,90	2,0	0,025	0,025	25,0	14,0	3,0	0,5

Notes :

Core wire:

P ≤ 0.020%

S ≤ 0.015%

N ≤ 0.080%

AWS classification and ABS approval are valid up to the diameter 3.2mm (included) and not valid for 4.0mm and above.

Mechanical properties

Welding Conditions : As Welded

Typical values			T °C	Typical (J)
Yield Strength, Re	555	MPa	Impact energy, -20	50
Tensile Strength, Rm	680	MPa	CV	
Elongation A5	33	%		

CE	TÜV	DB	LR	DNV	BV	ABS	RINA	RMS	NAKS
x	X	30.042.03		x		x	x		

Diameter x Length (mm)	Current A	Voltage V	Kg weld metal / kg électrodes	No. of electrodes / kg weld metal	Kg weld metal / hour arc time	Burn-Off time / electrode (sec)
2x300	35-60	26	0,63	135	0,7	33
2,5x300	40-80	27	0,64	84	1,1	36
3,2x350	80-120	28	0,65	43	1,5	42
4x350	100-160	29	0,65	29	2,1	55
4x450	100-160	29	0,65	23	2,1	70
5x450	150-220	30	0,67	13	3,1	79

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