

MMA Electrodes Chromium-Molybdenum steels

CROMOCORD 91 is a basic coated MMA electrode for welding high-temperature creep resistant steels of type 9%Cr-1%Mo - V - Nb - N with operating temperatures of <650 °C. Applications include thick-walled castings with a post weld tempering treatment at 740°C for 8h, also for thin-walled components (e.g. pipework) with a postweld heat treatment at higher temperatures and shorter times (e.g. 760°C for 2 h).

Classification	
EN ISO	3580-A: E CrMo91 B 4 2 H5
AWS	A5.5: E 9018-B9-H4
EN 1599	E CrMo91 B 4 2 H5

Approvals	Grade
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N
0.1	0.7	0.3	≤ 0.012	≤ 0.010	9	0.4	1	0.05	0.20	0.04

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				+20 °C	-20 °C
760 °C x 2h/furnace	≥ 530	620-850	≥ 17	≥ 70	≥ 27

Materials

T 91 (ASTM A 213), F 91 (ASTM A 182)

X10CrMoVNb9-1, grade 91 (ASTM A 387), P 91 (ASTM A 335)

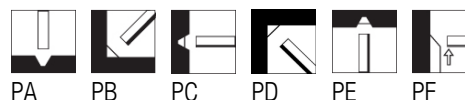
Storage

Keep dry and avoid condensation.

HD ≤ 5: Re-dry at 340-360 °C for 2 hour, 5 times max.

Current condition and welding position

DC+



Packaging data

Diam. (mm)	Length (mm)	Current (A)	Approx. weight (kg/1000)	VPMD	
				PC	Code
2.5	350	70-95	20.9	100	●
3.2	350	90-120	35.6	60	●
4.0	350	135-165	53	35	●
5.0	450	170-220	108	20	●