CROMOCORD 9M

OERLIKON

MMA Electrodes
Chromium-Molybdenum steels

Basic coated MMA electrode for welding high-temperature creep resistant steels of type 9 Cr-1Mo-V-Nb with operating temperatures of up to +650 °C. Cromocord 9M is used for welding thick walled cast steel components, which are subjected to a tempering treatment of 8 hrs. at 740 °C. Weld metal is tested for in-service embrittlement.

Classification	
AWS	A5.5: E9018-B9-H4
EN	1599: ~E Cr Mo 9 B 42 H5

Approvals	Grades
TÜV	

see Appendix, Classification Society Approvals, for details pag. 521

Analysis of all-weld metal (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb	V	N	Cu
0.09	1	0.20	≤ 0.010	≤ 0.010	9	-	1	0.07	0.22	0.04	-

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength N/mm^2	Tensile Strength N/mm^2	Elongation A5 (%)	Impact Energy ISO - V (J) + 20 °C	Hardness
PWHT 740 °C x 8 h/furnace	≥ 550	640-760	≥ 17	≥ 75	-

Materials

T 91 (ASTM A 213), F 91 (ASTM A 182)
X10CrMoVNb9-1, grade 91 (ASTM A 387), P 91 (ASTM A 335)

Storage and redrying

Keep dry and avoid condensation.
HD ≤ 5: Re-dry at 340-360 °C for 2 hours, 5 times max.

Current condition and welding position

DC+

Packaging data

Diameter (mm)	Length (mm)	Current (A)	Electrode average weight (g)	Weld metal weight per electrode (g)
2,5	300	60-90	19,0	11,0
3,2	350	85-130	38,1	23,0
4,0	450	130-160	76,8	46,0
5,0	450	180-230	118,2	71,0