

CARBO 4120 MPR

International Standards	Material No.	1.4120
	EN 1600	EZ 13 1 R 52
	DIN 8555	E6-UM-200-PR

Approvals ---

Characteristics and typical applications CARBO 4120 MPR is a rutile coated electrode with a recovery of 160% for plating and joining equal and similar ferritic Cr-steels and cast steels. Proper weldings are subject to the recommended heat treatment. The electrode is specially suitable for sealing surfaces on water-, steam- and gas-valves, especially for sulphuric gases. The deposit is resistant to seawater, thin acids and scale resistant in air an oxidizing gases up to 800°C . The deposits can be tempered.

Operating temperature Room temperature up to 500° C

Base materials 1.4021 X20Cr13 1.4120 GX20CrMo13

Recommendations for fabrication Since ferritic steels tend to embrittlement caused by coarse grain development the heat input should be as low as possible. For hardfacing on low alloyed base materials a preheating of 150°C-350°C subject to the thickness (on materials with higher strength 350°C) should be done. Post weld treatment is not necessary but quench hardening to the desired hardness may be applied.

Mechanical properties of all-weld metal (typical values)	Tensile strength R _m N/mm ²	Yield strength R _{p0,2} N/mm ²	Elongation A ₅ %	Hardness	
	730	540	12	HB 30	HB as welded
				ca. 150	ca. 200

Weld metal analysis (typical, wt %)	C	Si	Mn	Cr	Mo	Ni
	0,2	0,9	0,8	14	1,2	1

Current = + / ~ , 50 V

Welding positions PA, PB,

Rebaking 1 h, 350° C + / - 10° C (if necessary)

Dia./Length	Amperage (A)	Pcs./packet	Pcs./carton	kg/1000	kg/packet	kg/carton
2,5 x 350	60 - 90	178	712	28,1	5,0	20,0
3,2 x 350	80 - 120	105	421	47,5	5,0	20,0
4,0 x 450	120 - 160	65	259	92,6	6,0	24,0
5,0 x 450	160 - 220	41	166	144,7	6,0	24,0

Rev. 000

Statements on composition and application are just for the applier's information. Statements on mechanical properties always refer to the all-weld-metal according to valid standards. Carbo-Weld may change the characteristics of its products without notice. We recommend the applier to check our products for their special application autonomously.