

# CARBO 4120 B

<b>International standards</b>	Material No.	1.4120
	EN 1600	E 13 1 B 22
	DIN 8555	E 6-UM-200-PR

**Approvals** ---

**Characteristics and typical applications** CARBO 4120 B is a basic coated electrode 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.  
The deposit is scale resistant up to 800°C and can be tempered.

**Operating temperature** Room temperature up to 500° C

**Base materials** .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.

<b>Mechanical properties of all-weld metal (typical values)</b>	<b>Tensile strength</b> R <sub>m</sub> N/mm <sup>2</sup>	<b>Yield strength</b> R <sub>p0,2</sub> N/mm <sup>2</sup>	<b>Elongation</b> A <sub>5</sub> %	<b>Hardness HB as welded</b>	
	730	540	12	ca. 150	ca. 200

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

**Current** = +

**Welding positions** PA, PB, PC, PD, PE, PF

**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 300	50 - 80				4,0	16,0
3,2 x 350	80 - 110			29,7	5,0	20,0
4,0 x 350	100 - 160			45,0	5,0	20,0
5,0 x 450	150 - 200			90,3	6,0	24,0

Rev. 000