

## Standards

Material No.	1.4120
EN 1600	MF 17 1
DIN 8555	MF 6-GF-50-CP

## Characteristics

CARBO F-4120 is a tubular wire 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 for working temperatures up to 475 °C.

The deposit is scale resistant up to 800°C and can be tempered.

## Working 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 <sup>2</sup>	Yield strength $R_{p0,2}$ N/mm <sup>2</sup>	Elongation $A_5$ %	Hardness as welded
730	540	12	ca. 200 HB

## Weld metal analysis (typical, wt. %)

C	Si	Mn	Cr	Mo	Ni
0,2	0,9	0,8	14,0	1,2	1,0

## Gas types EN 439

I1, M13: Argon and 99% Argon with 1% Oxygen

## Current

= +

## Current intensity

DIA (mm)	DIA (inch)	Volt	Amps	Delivering form	
1,6	1/16	20 - 26	160 - 260	O	G
2,0	5/64	22 - 27	220 - 280	O	G
2,4	3/32	24 - 28	260 - 340	O	G S
2,8	7/64	25 - 29	300 - 400	O	S
3,2	1 / 8	26 - 30	320 - 460		S

## Delivering form

**O = Flux cored wire self shielding**

**G = Flux cored wire for shielded arc welding**

**S = Flux cored wire for submerged arc welding**

## Coils, weight

B/BS 300 = 15 kg      B 450 = 30 kg      pay off pack = 150 / 300 kg

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.