

Standards

DIN 8555	MF 21-GF-55-CGTZ
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Characteristics

CARBO F- DURIT Ni is a tubular wire containing fused tungsten carbides in a nickel base matrix alloy. The weld metal is composed of 63 % fused tungsten carbides which are embedded in 37% matrix alloy containing NiSiB.

CARBO F- DURIT Ni excels by producing a smooth, clean surface. The alloy flows extremely well, due to the low melting point of between 900 and 1000°C.

The nickel based matrix alloy provides excellent resistance to acids and other corrosive media. And is used for applications which are subject to extremely strong abrasive wear and corrosive media at the same time.

Typical applications

Hardfacing equipment parts made of ferritic and austenitic steels, e.g. mixer blades, milling plates, conveyor worms, stabilizer blades, slurry pump valves, moulding sand preparation plants, corrosion resistant hardfacings on parts which are subject to strong abrasive wear, e.g. in the chemical industry and the food industry.

Recommendations for best welding results

Thoroughly clean the welding zone. It should be exempt from grease, scale, corrosion, and similar contamination.

Preheat the work piece to 300 - 500° C. During the welding process the local base material temperature has to be increased to 650°C, however, overheating should be avoided.

Hardness

(typical values)

Fused tungsten carbide HV	Matrix HRC
> 2300	47

Weld metal analysis (typical, wt. %)

NiSiB-Matrix	WSC
ca. 45	ca. 55

Gas types EN 439

M13: 99% Argon with 1% Oxygen

Current

= +

Current intensity

DIA (mm)	DIA (inch)	Volt	Amps	Delivering form
1,2	3/64	19 - 22	120 - 160	G
1,6	1/16	18 - 20	150 - 180	G
2,0	5/64	21 - 23	200 - 230	G
2,4	3/32	21 - 23	220 - 260	G
2,8	7/64	23 - 25	240 - 280	G

Delivering form

O = Flux cored wire self shielding
G = Flux cored wire for shielded arc welding

Coils, weight

B/BS 300 = 15 kg B 450 = 30 kg

Rev. 000