CARBO WELD
SCHWEISSMATERIALIEN GMBH

CARBOWELD 82

International standards

Material No.	2.4648
DIN 1736	EL-NiCr 19 Nb
AWS A5.11	E NiCrFe-2 / MOD.

Typical applications and characteristics

Nickel base electrode with excellent weldability on AC. Suitable for joining and cladding low alloyed and alloyed steels, welding iron- and nickel base alloys and for dissimilar joints.
The austenitic deposit is insensitive to hot-cracking and free of embrittlement at high as well as at low temperatures, non-scaling up to 1000° C, and cold tough down to –196° C.
No diffusion of carbon into the weld metal at high temperatures.
Used for service-temperatures of more than 300° C in Chemical Industry, Petrochemical Industry, glassworks, civil engineering, repairing and maintenance workshops.

Operating temperature

- 196° C up to 550° C

Base materials

2.4605	NiCr23Mo16Al	2.4856	NiCr22 Mo9Nb	2.4952	NiCr20TiAl
2.4630	NiCr20Ti			1.4876	X10NiCrAlTi32-20
2.4631	NiCr20TiAl	2.4858	NiCr21Mo		(Alloy 800)
2.4669	NiCr15Fe7TiAl	2.4867	NiCr60-15	1.4958	X5NiCrAlTi31-20
2.4816	NiCr15Fe	2.4858	NiCr21Mo	1.4959	X8NiCrAlTi32-21
2.4817	LC-NiCr15Fe	2.4869	NiCr80-20		(Alloy 800 HT)
2.4851	NiCr23Fe	2.4870	NiCr 10		
		2.4851	NiCr23Fe		

Dissimilar joints:
Ni-base alloys to austenitic steels/ Ni-base alloys to ferritic steels/ austenitic to ferritic steels up to 550° C

Mechanical properties of all-weld metal

(typical values)

Tensile strength R_m N/mm²	Yield strength $R_{p0,2}$ N/mm²	Elongation A_5 %	Impact strength ISO – V J at -196 ° C
650	380	35	> 32

Weld metal analysis
(typical, wt. %)

C	Mn	Mo	Cr	Ni	Fe	Nb
< 0,04	3,5	<1	19	Bal.	< 4	2

Current

= + / ~ , 50 V

Welding positions

PA, PB, PC, PD, PE, PF

Rebaking

1 h, 350 °C + / - 10 °C (if required)

Dia./Length	Amperage (A)	Pcs./ packet	Pcs./ carton	kg / 1000	kg / packet	kg / carton
2,5 x 300	60 - 100	209	838	19,1	4,0	16,0
3,2 x 350	80 – 140	133	531	37,7	5,0	20,0
4,0 x 350	120 - 180	88	351	57,0	5,0	20,0
5,0 x 450	150 - 240	52	209	114,6	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.