CARBO WELD
SCHWEISSMATERIALIEN GMBH

CARBOTRODE 91

International Standards

Material No.	~ 1.4337
EN 1600	E 29 9 1 R 12
AWS A 5.4	E312-17 mod.
DIN 8555	E 9-UM-200-CTZ

Typical applications and characteristics

CARBOTRODE 91 is an AC weldable electrode with an alloyed core, suitable for joining difficult-to-weld steels.
Austenitic-ferritic stainless steel welding deposit (high ferrite content). The weld metal remains ferritic, even after dilution with an austenitic base metal forming elements such as Mn, Ni und C and is thus highly crack resistant. Plastic weld metal of high tensile strength, impact proof, tough, acid resistant and heat resistant up to 1,000° C.
Hardness after strain-hardening: ca. 360 HB
Soft, intense fusion, easy slag removal, finely rippled beads. Suitable for AC welding.
Joint weld with a short arc using stringer bead techniques. Maximum wall thickness < 30 mm. The weld metal alloy strain-hardens during use.

Operating temperature

20°C up to 300° C

Base materials

Difficult-to-weld base materials such as: high-carbon steel, tool steel, spring steel, manganese steel, case-hardening steel, high-speed steels, cast steels, screening steels, Suitable for joining these materials to each other or to dissimilar steels.
Also suitable for surfacing and repair welding rails, shafts, couplings, impellers, hot work tools, pressing and trimming tools, as well as stamping dies.

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 DVM J + 20°C	Hardness HB
870	700	16	28	ca. 200

Weld metal analysis (typical, wt %)

C	Si	Mn	Cr	Ni	Mo
0,10	1,1	0,7	28	10	1

Current

= + / ~ , 42 V

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 pcs.	kg/packet	kg/carton
2,5 x 300	60 - 80	225	899	17,8	4,0	16,0
3,2 x 350	70 - 100	142	570	35,1	5,0	20,0
4,0 x 350	100 - 140	94	376	53,2	5,0	20,0

Rev. 000