

CARBOCAST 1

International Standards

EN ISO 1071	E C Ni-CI 3
AWS A 5.15	E Ni-CI

Typical applications and characteristics

CARBOCAST 1 is a basic-graphite non conductiv special coated electrode with a pure nickel core wire. Suitable for cold welding on grey cast iron, malleable cast iron, and cast steel as well as repair welding on castings showing symptoms of fatigue. Especially designed to weld in deep holes or on parts where the coating may touch the casting. The electrode has excellent welding properties on the positive and negative pole, also for welding with low amperage. Quietly and intensely flowing weld metal with easily removable slag. The weld seam is file-soft and machinable even in the transitional zone between the seam and the base material.

Welding instructions/ Base materials

Thoroughly clean the surface of the work-piece make sure it is exempt from grease (previous grinding). When welding on cast iron, heat input should as low as possible (max. temperature 70°C). The bead must not be wider than twice the core wire diameter and not be longer than ten times the core wire diameter. To limit internal stress of the base metal, hammering of the beads is recommended after each pass.

When welding on DC - the weld metal flows very neatly and produces a flat bead while beads welded on the positive pole are cambered, due to the high amount of weld metal deposited as a consequence of low heat input. The aspect of the weld produced with alternate current and the welding characteristics of the electrode are something in-between the results obtained on direct current. On DC + the weld metal flows more uniformly.

Mechanical properties of all-weld metal (typical values

Tensile strength Rm N/mm ²	Elongation A5 %	Hardness
>300	26	ca. 180 HB

Weld metal analysis (typical, wt %)

C	Si	Ni	Fe	Cu
0,7	0,6	Basis	5,0	0,5

Current

= +/-, ~ 40 V

Welding positions

PA, PB, PC, PE, PF, PG

Rebaking

1 h, 120° C + / - 10° C (if necessary)

Dia./Length	Amperage (A)	Pcs./packet	Pcs./carton	kg /1000 pcs.	kg / packet	kg / carton
2,5 x 350	55 - 70	250	1000	20,0	5,0	20,0
3,2 x 350	80 - 110	147	590	33,9	5,0	20,0
4,0 x 350	120 - 150	97	390	51,3	5,0	20,0
5,0 x 450	140 - 180	58	233	103,1	6,0	24,0