

International standards	DIN 8573	E NiCu – BG 21
	AWS A 5.15	E NiCu-B

**Approvals** ---

**Typical applications and characteristics** Basic-graphite special coated electrode with a NiCu-alloyed core wire. This electrode is particularly suitable for safe cold welding of grey cast iron, cast steel and malleable cast iron. The colour of the weld deposit is very similar to cast iron. Therefore, The electrode is primarily suitable for repairing casting or machining defects on new castings.

**Operating temperature** same as 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 cast iron, heat input should as low as possible (low amperage). 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, peening of the beads is recommended after each pass. In some cases preheating to 300°C and slow cooling is recommended.

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 in between the results obtained on direct current.

<b>Mechanical properties of all-weld metal</b>	<b>Tensile strength</b> R <sub>m</sub> N/mm <sup>2</sup>	<b>Yield strength</b> R <sub>p0,2</sub> N/mm	<b>Elongation</b> A <sub>5</sub> %	<b>Hardness</b> HB
	(typical values) 400	300	15	abt. 165

<b>Weld metal analysis</b> (typical, wt. %)	<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>Ni</b>	<b>Cu</b>	<b>Fe</b>
	0,5	0,6	1,8	64	30	3,0

**Current** = + / - , ~ / 50 V

**Welding positions** PA, PB, PC, PD, PE, PF

**Rebaking** 1 h, 120 °C + / - 10 °C ( if required )

Dia./Length	Amperage (A)	Pcs./packet	Pcs./carton	kg/1000	kg/ packet	kg/ carton
2,5 x 300	50 - 100	291	1163	17,2	5,0	20,0
3,2 x 350	60 - 125	147	590	33,9	5,0	20,0
4,0 x 350	90 - 140	97	390	51,3	5,0	20,0