CASTWELD NiFeB

Electrodes MMA [SMAW]

Cast iron

CLASSIFICATION:	APPROVALS:	APPLICATION:
EN ISO 1071-A : E C NiFe-Cl DIN 8573 : E NiFe BG1 AWS A-5.15 : E NiFe-Cl	UDT	Power generation industry Hardfacing and repairing Constructions & Engineering Metallurgy (Steelworks) Mining Agriculture Light construction and hobby

- Universal electrode with a bimetal Ni-Fe core, designed for cold welding of all types of cast iron (nodular, gray, malleable) and for joining cast iron with steel.
- The bimetal core enables welding at very low intensities.
- For welding high-strength cast iron.
- It performs exceptionally well in creating the first layers in connections with cast iron.
- Excellent welding parameters, does not overheat during welding.
- Very low spatter, easily removable slag, and a weld bead with a fine scale.
- High-strength weld deposit, resistant to cracking.
- Fully machinable weld.
- Can be welded with AC Uo < 50V as well as DC (+) and (-).
- The most fracture-resistant weld metal in cast irons with a high phosphorus content.
- Good weldability on greasy cast iron surfaces.

Application

Machine and engine bodies, valve regeneration and welding. Welding cast iron to steel.

Base material

DIN / EN 1561	DIN	DIN / EN 1563
GG-10	GTS-35	G GG-40 EN-GJS-400-15
		EN-GJS-400-18
GG-15 EN-GJL-150	GTS-45	G GG-45 EN-GJS-450-10
GG-20 EN-GJL-200	GTS-55	G GG-50 EN-GJS-500-7
GG-25 EN-GJL-250	GTW-35	G GG-60 EN-GJS-600-3
GG-30 EN-GJL-300	GTW-40	G GG-70 EN-GJS-700-2
GG-35 EN-GJL-350	GTW-45	G GG-80
GG-40	GTW-S-38	
Gray cast irons, nodular cast irons	Dissimilar connections with steel or cast steel, etc.	Malleable cast iron from EN GJMB 350 to ENGJMB 650

Typical chemical composition %

Ni	Fe
54,0	42,0

Typical mechanical properties

Yield strength Re [N/mm2]	290
Tensile strength Rm [N/mm2]	420
Elongation A5 [%]	6
Hardness	130-170 HB /
Coating type	basic-graphite

Welding current	
Welding positions	
Redrying	180°C / 1 h
Additional description	Heating: Large castings can be heated slowly to 100-300°C. After welding, cool slowly under mineral blankets. To remove liquid from the cast iron, the material should be heated to the appropriate temperature for the specific grade before welding. When welding pearlite-structured cast iron, it is recommended to preheat the material to approximately 200°C. Recommendations: Clean the material thoroughly before welding. Remove all impurities. Wash all cracks with penetrol. Weld slowly with a bead length of 25-50 mm. Weld with the shortest possible arc and the lowest possible amperage. Create the next piece of stitching when the material can be touched with your hand. Remove any slag, hammer each piece of weld. Use the correct welding sequence. Subsequent arc strikes always on the weld metal, never on the bonded material.

Welding parameters and packing

ø	Length [mm]	Welding current [A]	Weight of packet [kg]	Weight of carton [kg]	Pcs/1 kg
2,5	300 /	60-80	1,6	9,6	61
3,2	350 /	80-110	2,0	12,0	32
4,0	350 /	110-150	2,0	12,0	20-21

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