Technical data sheet 011121MBA	Coated SMAW Electrode **WA CHROMECORE B 410NiMo-E**	Welding Alloys

CLASSIFICATION

ASME IIC SFA 5.4 / AWS A 5.4:	E410NiMo-15
EN ISO 3581-A:	E 13 4 B 42
ASME IX Qualification	QW-432 F-N° 1 QW-442 A-N° 6

DESCRIPTION

- Basic coated electrode
- 12Cr-4,5Ni-0,5Mo soft martensitic stainless steel deposit
- Complements Welding Alloys cored wires CHROMECORE M 410NiMo-G and CHROMECORE B 13 4-G

APPLICATIONS

WA CHROMECORE B 410NiMo-E is used for the fabrication and rebuilding of turbines in the hydropower industry. The deposit is martensitic. It combines good toughness with excellent resistance to cavitation and to stress corrosion cracking.
Joining martensitic stainless steels
Overlaying mild and CMn steels.

Examples of materials to be welded (non exhaustive list):

- EN Symbol: X4 CrNi 13 4, X3 CrNiMo 13 4, X3 CrNi 13-4, GX4 CrNiMo 13-4, GX5 CrNi 13 4, GX5 CrNiMo 13-4
- Material number: 1.4313, 1.4407, 1.4413, 1.4414
- UNS: S41500, J91540, J91550
- Wrought: F6NM, Cast CA6NM, ASTM A352, A487, A743, A757

A post-weld heat treatment at 580°C - 620°C is recommended to obtain a tempered martensite that combines strength and ductility with corrosion and cavitation resistance.

TYPICAL ALL-WELD METAL ANALYSIS [%]

C	Mn	Si	Cr	Ni	Mo
0.04	0.6	0.3	12.0	4.2	0.5

MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES (with 98% Ar – 2% CO_2 shielding)

PWHT	Rm [MPa]	Rp0.2% [MPa]	A_5 [%]	CVN [J]
8 hours at 580°C	830	630	15	+20°C: 47

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES (with 98% Ar / 2% CO_2 shielding)

PWHT	Rm [MPa]	Rp0.2% [MPa]	A_5 [%]	CVN [J]
8 hours at 580°C	900	710	18	+20°C: 70

OPERATING CONDITIONS

Electrode ØxL [mm]	2.5 x 350	3.2 x 450	4.0 x 450
Current [A]	70 - 90	110 - 145	130 - 170
= +			

Re-baking before use: 2 hours at 300°C.

WELDING POSITIONS

EN ISO 6947:	PA, PB, PC, PF, PE
ASME IX:	1G, 2F, 2G, 3G, 4G

PACKAGING

Electrode ØxL [mm]	2.5x350	3.2x350	4.0x450
Weight/box [kg]	5		

Other packaging and other diameters: please consult us