

Technical data sheet <small>011121MBA</small>	Cored welding wire CAVITALLOY	
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CLASSIFICATION

EN ISO 17633-A: T Z 18 10 10 CrCoMnN M M12 3
EN 14700: T ZFe9

DESCRIPTION

- Metal cored-gas shielded wire for cavitation, corrosion and erosion resistant surfacing.
- CAVITALLOY deposit is a nitrogen strengthened austenitic stainless steel with superior cavitation resistance, comparable to that of Co-base alloys.
- The weld metal has a high strain hardening rate which favours the formation of a hard surface layer on exposure to cavitation. This works in combination with the softer substrate to absorb cavitation stresses very efficiently, drastically reducing damage rate.

APPLICATIONS

CAVITALLOY is used for the rebuilding of hydro-turbines when increased corrosion resistance and fatigue properties are required compared to martensitic stainless steels or austenitic stainless steels of the 300 series. Other applications include pumps, valves and ducts for various liquids in industry, agriculture and water distribution and propellers.

Examples of materials to be surfaced:

EN Symbol	Material number	UNS designation
Cast CMn steels, austenitic stainless steels, duplex stainless steels, ferritic stainless steels or martensitic stainless steels such as:		
X4 CrNi 13 4 - X3 CrNi 13-4	1.4313	J91540
GX5 CrNi 13 4	1.4313	J91540
GX5 CrNiMo 13-4	1.4407	J91550
X4 CrNiMo 16 5	1.4418	

TYPICAL ALL-WELD METAL ANALYSIS

C	Mn	Si	Cr	Co	Mo	N	S	P	Fe
0.20	9.50	1.30	19.0	10.5	0.25	0.3	0.010	0.020	Bal.

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES

Hardness, as welded: 240 HB
Hardness, work-hardened: 50 HRC

CONDITIONS OF USE

Current type	Shielding gas	
DC+ Pulsed current	EN ISO 14175	M12: 0.5 - 5% CO ₂ with or without helium
		M20: Ar + 5 - 15% CO ₂

OPERATING CONDITIONS

Diameter [mm]	Amperage [A]		Voltage [V]		Stick-out [mm]	
	Range	Optimum	Range	Optimum	Range	Optimum
1.3	150 - 260	200	25 - 27	26	10 - 20	15
1.6	120 - 350	250	17 - 33	28	10 - 20	15

Recovery: 98 %

WELDING POSITIONS

CAVITALLOY is primarily used in the flat and horizontal positions. However, welds in other positions are also possible using the short-circuiting or pulsed arc modes of transfer in automatic.

PACKAGING

Diameter	1.2 mm	1.6 mm
	EN ISO 544 – ASME II C SFA-5.2 M	
Spool type	BS300	
Weight	15 kg	

Other packaging and other diameters: please consult us