


Technical data sheet <small>EN050325GB</small>	Cored welding wire CHROME CORE B 16 5 1-G	
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CLASSIFICATION

EN ISO 17633-A:	T Z 16 5 1 B M12 1
EN 14700 :	T Fe7
Equivalent material number	1.4405

DESCRIPTION

- Basic flux cored wire for gas shielded arc welding
- 16% Cr – 5% Ni – 1% Mo soft martensitic deposit
- Excellent resistance to cavitation and to stress corrosion cracking
- Attractive weldability, very good wetting and penetration
- H_{DM} guaranteed ≤ 4 ml/ 100g deposited metal over the whole parameter range, typical values ≤ 2 ml
- Extra low oxygen content, no moisture pick, good mechanical properties

APPLICATIONS

Welding corrosion resistant martensitic-ferritic rolled, forged and cast steels of similar composition.

Rebuilding and repairing casting defects, fabrication and rebuilding work on propellers, shafts and parts used in the water turbine and pump construction.

The deposit is predominantly martensitic. It combines good toughness with excellent resistance to cavitation and to stress corrosion cracking.

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

Examples of materials to be welded:

EN Designation	Material number
X4 CrNiMo 16-5-1	1.4418
X5 CrNiMo 16 5	1.4405

TYPICAL ALL-WELD METAL ANALYSIS [%]

C	Mn	Si	Cr	Ni	Mo	Fe
0.03	1.0	0.45	15.7	4.5	0.9	Bal.

MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES (with 98% Ar – 2% CO₂ shielding)

PWHT	R _m [MPa]	R _{p0.2%} [MPa]	A ₅ [%]	CVN [J]
8 hours at 590°C	760	550	15	+20°C: 80 -20°C: 50

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES (with 98% Ar / 2% CO₂ shielding)

PWHT	R _m [MPa]	R _{p0.2%} [MPa]	A ₅ [%]	CVN [J]
8 hours at 590°C	860	670	17	+20°C: 90 -20°C: 60

Hardness:	As welded:	360 HV10
	Annealed 8 hours at 590°C:	320 HV10

SHIELDING GAS

EN ISO 14175: M12: Ar + 0.5 % < CO₂ ≤ 2.5%, with or without helium

OPERATING CONDITIONS

Diameter [mm]	Current type	Current [A]	Voltage [V]	Stick-out [mm]
1.2	DC+	100 - 280	23 - 33	10 - 25
1.6	DC+	150 - 400	23 - 33	10 - 25

WELDING POSITIONS

CHROME CORE B 16 5 1-G is primarily used in the flat and horizontal-vertical positions. However, out of position welding also possible using short circuit or pulsed arc modes of transfer.

PACKAGING

Diameter	1.2 mm	1.6 mm
Spool type	EN ISO 544: BS 300	
Weight	15 kg	

Other packaging and other diameters: please consult us

Welding products and techniques evolve constantly. All descriptions, illustrations and properties given in this data sheet are subject to change without notice and can only be considered as suitable for general guidance. This document is intended to help the user make the correct choice of product. It is his responsibility to assess its suitability for his intended application.