MEGAFIL® 742 B

AWS A5.29: E110T5-K4M H4

EN ISO 18276-A: T 69 6 Mn2NiCrMo B M21 3 H5

WELDING POSITIONS:

FEATURES	BENEFITS	APPLICATIONS
• Basic slag system • Low hydrogen weld deposit • Ideal for use of short arc and spray arc • Excellent low temperature impacts • Low splatter loss • Easy slag removal	• Minimizes risk of hydrogen-induced cracking • No re-drying • Provides increased toughness	• Automatic and mechanized welding • Steel structures • Heavy fabrication • Non-alloy and fine grain steels • Vessels • General fabrication • Single and multi-pass welding • Earthmoving equipment

WIRE TYPE	Gas shielded basic flux-cored wire
SHIELDING GAS	75-85% Argon (Ar) / Balance Carbon Dioxid (CO_2); Gas Flow 12-18 l/min (25-38 cfh)
TYPE OF CURRENT	Direct Current Electrode Positive (DCEP)
STANDARD DIAMETERS	Ø 1.2 mm (0.0.45“)
TYPICAL DIFFUSIBLE HYDROGEN*	< 3.0 ml / 100 g; Guaranteed for the total processing time < 4.0 ml / 100 g maximum (AWS Spec)
RE-DRYING	Not required due to seamless wire design.
STORAGE	The same conditions as for solid wire. Product should be stored in a dry, enclosed environment, in its original undamaged packaging

**Measurement technique is the carrier gas method according to AWS and ISO*

MATERIALS TO BE WELDED*

Unalloyed structural steels	Rel ≤ 690 MPa	S620 - S690, A 106, A 600
Boiler steels	Rel ≤ 690 MPa	P620GH - P690GH up to A517; A537; A625
Pipe steels	Rel ≤ 690 MPa	P6205T1/T2 - P690NL2; up to A625
Fine grain structural steels	Rel ≤ 690 MPa	S620 - S690NL2; up to A 625
Steels to API-standard	Rel ≤ 690 MPa	X70 - X100 / HY100
*) The specified base materials are not complete and should only be seen as examples. The selection of the appropriate combination of steel and welding consumable should follow the specific mechanical strength and toughness requirements.		

ALL WELD METAL CHEMESTRY (%) (typical values for mixed gas 82% Ar / 18% CO_2)

Carbon (C)	0.05	Nickel (Ni)	2.2
Manganese (Mn)	1.6	Molybdenum (Mo)	0.5
Silicon (Si)	0.4	Chromium (Cr)	0.5
Sulphur (S)	0.015		
Phosphorus (P)	0.015		

ALL WELD METAL MECHANICAL PROPERTIES (for mixed gas 82% Ar / 18% CO_2)

Mechanical tests	Typical values MPa (ksi)	ISO Specification MPa (ksi)
Tensile Strength Rm	820 (119) (with due regard of the 8/5 time)	770 - 900 (112 - 131)
Yield strength Rp0.2	750 (109) (with due regard of the 8/5 time)	> 690 (100)
Expansion A5	20%	17%

CHARPY V-NOTCH IMPACT VALUES (for mixed gas 82% Ar / 18% CO_2)

Mechanical Tests	Typical values [J] (ft.lbf)	ISO Specification [J] (ft.lbf)
-40 °C	120 (89)	> 69 (51)
-60 °C	90 (66)	> 69 (51)

APPROVALS: TÜV, DB, BV, LR, ABS, DNV Please contact the manufacturer to learn the present scope of approvals

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