MEGAFIL® 742 M

AWS A5.28: E110C-K4 H4

EN ISO 18276-A: T 69 6 Mn2NiCrMo M M21 1 H5

WELDING POSITIONS:

FEATURES	BENEFITS	APPLICATIONS
• Extremely low diffusible hydrogen weld deposit	• BWB-WIWEB Approval	• Automatic and mechanized welding
• Good reignition characteristics	• Minimized risk of hydrogen-induced cracking	• Steel structures
• Ideal for use of short arc and spray arc	• No re-drying	• Offshore structures
• Excellent gap bridging for root welding	• Suitable for robot applications	• Pipelines
• High deposition rate and efficiencies	• Reduces clean-up time, improves productivity	• Non-alloy and fine grain steels
• Virtually no slag coverage	• Root welding without any backing	• Vessels
• Smooth arc characteristic	• Automatic root welding possible	• General fabrication
		• Heavy equipment
		• Single and multi-pass welding

WIRE TYPE	Gas shielded metal-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 (0.045“)
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 - P620GH up to A517; A 537; A625
Pipe steels	Rel ≤ 690 MPa	P620 - P690
Fine grain structural steels	Rel ≤ 690 MPa	S620 - S 620QLI 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 - 940 (112 - 136)
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, BV, LR, ABS, DNV·GL, BWB-WIWEB

Please contact the manufacturer to learn the present scope of approvals