

MEGAFIL[®] 710 M



AWS A5.18: E70C-6M H4

WELDING POSITIONS:

EN ISO 17632-A: T 46 6 M M21 1 H5

CO₂: T 42 2 M C1 3 H5



FEATURES

- Extremely low diffusible hydrogen weld deposit
- Good reignition characteristics
- Ideal for use of short arc and spray arc
- Excellent gap bridging for root welding
- High deposition rate and efficiencies
- Virtually no slag coverage
- Smooth arc characteristic
- Dual Shielding gas

BENEFITS

- Minimized risk of hydrogen-induced cracking
- No re-drying
- Suitable for robot applications
- CTOD tested -20 °C
- Reduces clean-up time, improves productivity
- Root welding without backing
- Automatic root welding possible
- Easy handling and logistic
- Meets NACE (HIC & SSC) requirements for sour service welding application in oil & gas industry

APPLICATIONS

- Automatic and mechanized welding
- Steel structures
- Offshore structures
- Pipelines
- Non-alloy and fine grain steels
- Vessels
- General fabrication
- Heavy equipment
- Single and multi-pass welding

WIRE TYPE SHIELDING GAS

Gas shielded metal-cored wire
75-85% Argon (Ar) / Balance Carbon Dioxide (CO₂); 100% Carbon Dioxide (CO₂); Gas flow 12-20 l/min (25-42) cfm

TYPE OF CURRENT STANDARD DIAMETERS TYPICAL DIFFUSIBLE HYDROGEN*

Direct Current Electrode Positive (DCEP) and Direct Current Electrode Negative (DCEN)

RE-DRYING STORAGE

Ø 1.0 - 1.6 mm (0.039 - 1/16")
< 3.0 ml / 100 g; Guaranteed for the total processing time < 4.0 ml / 100 g maximum (AWS Spec)

Not required due to seamless wire design.

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*

Shipbuilding steels		A, B, D, AH 32 - EH 36
Unalloyed structural steels	Rel ≤ 355 MPa	S185 - S355, A 106 Gr.B, A 333 Gr. 6
Boiler steels	Rel ≤ 355 MPa	P235GH - P355GH
Pipe steels	Rel ≤ 460 MPa	P235T1/T2 - P460NL2; L210 - L445MB
Fine grain structural steels	Rel ≤ 460 MPa	S235 - S460QL1
Steels to API-standard	Rel ≤ 460 MPa	X42 - X60

*) 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 CHEMISTRY (%) (typical values for mixed gas 82% Ar / 18% CO₂)

Carbon (C)	0.05	Nickel (Ni)	-
Manganese (Mn)	1.3	Molybdenum (Mo)	-
Silicon (Si)	0.7	Chromium (Cr)	-
Sulphur (S)	0.015		
Phosphorus (P)	0.015		

ALL WELD METAL MECHANICAL PROPERTIES (for mixed gas 82% Ar / 18% CO₂)

Mechanical tests	Typical values MPa (ksi)		ISO Specification MPa (ksi)
	As welded	heat treated 580°C (1076°F) / 120 min	As welded
Tensile Strength Rm	600 (87)	560 (81)	550 - 680 (80 - 99)
Yield strength Rp0.2	530 (77)	480 (70)	> 460 (67)
Expansion A5	27%	28%	22%

CHARPY V-NOTCH IMPACT VALUES (for mixed gas 82% Ar / 18% CO₂)

Mechanical Tests	Typical values [J] (ft.lbf)		ISO Specification [J] (ft.lbf)
	as welded	heat treated 580°C (1076°F) / 120 min	As welded
-40 °C	140 (103)	120 (89)	> 47 (35)
-60 °C	100 (74)	90 (66)	> 47 (35)

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

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