

MEGAFIL® 281 M



AWS 5.18: E80C-W2 H4
ISO 17632: T 46 4 Z M M 1 H5

WELDING POSITIONS:



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

BENEFITS

- Minimized risk of hydrogen-induced cracking
- No re-drying
- Suitable for robot applications
- Reduces clean-up time, improved productivity
- Root welding without any backing
- Automatic root welding possible

APPLICATIONS

- Weather resistant steels
- Steel structures
- Offshore structures
- Non-alloy and fine grain steels
- General fabrication
- Pipelines
- Single and multi-pass welding
- Automatic and mechanized welding

WIRE TYPE

Gas shielded metal-cored wire

SHIELDING GAS

75-95% Argon (Ar)/Balance Carbon Dioxide (CO₂); 100% Carbon Dioxide (CO₂); Gas flow see Annex

TYPE OF CURRENT

Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS

Ø 1.0 - 1.2 mm (0.039 - 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

Material	Strength	Material
Weather resistant steels	CuNi-alloyed steels	S235JRW - S355JRW; 9CrNiCuP3-2-4, A 572, A 588, or A 709 Gr 50W
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

ALL WELD METAL CHEMISTRY (%) (typical values for mixed gas 82% Ar / 18% CO₂)

Carbon (C)	0.05	Nickel (Ni)	1.1
Manganese (Mn)	1.5	Molybdenum (Mo)	-
Silicon (Si)	0.7	Chromium (Cr)	0.5
Sulphur (S)	0.015	Copper (Cu)	0.5
Phosphorus (P)	0.015		

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

	Rp0.2 MPa (ksi)	Rm MPa (ksi)	A5 %	Charpy V Notch [J] (ft-lbf)	
				-20° C (-4° F)	-40° C (-40° F)
AW	> 460 (67)	550 - 680 (80 - 99)	22	60 (44)	47 (35)
AW: as welded					