MEGAFIL® 281 M

AWS A5.28: E80C-W2 H4

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

WELDING POSITIONS:

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

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 (0.039 - 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*

Weather resistant steels	CuNi-alloyed steels	S235JRW - S355JRW; 9CrNiCuP3-2-4, 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
*) 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)	0.7
Manganese (Mn)	1.2	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 (for mixed gas 82% Ar / 18% CO_2)

Mechanical tests	Typical values MPa (ksi)	ISO Specification MPa (ksi)
Tensile Strength Rm	630 (91)	550 - 680 (80 - 99)
Yield strength Rp0.2	550 (80)	> 470 (68)
Expansion A5	25%	22%

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)
-20 °C	100 (74)	
-60 °C	70 (52)	> 47 (35)

APPROVALS: CE