MEGAFIL® 716 R

AWS A5.20: E71T-9M-J H4

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

WELDING POSITIONS:

FEATURES	BENEFITS	APPLICATIONS
• Extremely low diffusible hydrogen weld deposit • Low fumes and spatter • Easy slag removal • Able to bridge poor fit-up without burn-through • Good impact toughness • Smooth arc characteristic	• Minimized risk of hydrogen-induced cracking • No re-drying • Excellent all position welding • Resists cracking in severe applications • Reduces clean-up time, minimizes risk of inclusions • Increases productivity, reduces part rework/ rejection • CTOD tested –20 °C	• Steel structures • Offshore structures • Pipelines • Non-alloy and fine grain steels • Vessels • General fabrications • Heavy equipment • Single and multi-pass welding

WIRE TYPE **SHIELDING GAS**	Gas shielded rutile flux-cored wire with rapidly solidifying 75-85% Argon (Ar) / Balance Carbon Dioxid (CO_2);
TYPE OF CURRENT **STANDARD DIAMETERS** **TYPICAL DIFFUSIBLE HYDROGEN***	Direct Current Electrode Positive (DCEP) Ø 1.2 mm (0.045“) < 3.0 ml / 100 g; Guaranteed for the total processing time < 4.0 ml / 100 g maximum (AWS Spec)
RE-DRYING **STORAGE**	Not required due to seamless wire design. The same conditions as for solid wire. Product should be stored in a dry, enclosed environment, in ist original unda-meged 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 CHEMESTRY (%) (typical values for mixed gas 82% Ar / 18% CO_2)

Carbon (C)	0.05	Nickel (Ni)	0.4
Manganese (Mn)	1.3	Molybdenum (Mo)	-
Silicon (Si)	0.5	Chromium (Cr)	-
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	600 (87)	550 - 670 (80 - 97)
Yield strength Rp0.2	530 (77)	> 460 (67)
Expansion A5	27%	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)
-40 °C	100 (74)	> 47 (35)
-60 °C	70 (52)	> 47 (35)

APPROVALS: CE, TÜV, DB, DNV·GL Please contact the manufacturer to learn the present scope of approvals