MEGAFIL® 550 R

AWS A5.29: M21: E91T1-K2M-J H4

EN ISO 18276-A: T 55 6 Mn1,5Ni P M21 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 • Virtually no slag coverage • Smooth arc characteristic	• Minimized risk of hydrogen-induced cracking • Excellent all position welding • Resists cracking in severe applications • Reduces clean-up time, minimizes risk of inclusions • Increases productivity, reduces part rework/ rejection • Root welding with ceramic backing • Automatic root welding with ceramic backing	• Steel structures • Offshore structures • Pipelines • Non-alloy and fine grain steels • Vessels • General fabrication • Heavy equipment • Single and multi-pass welding

WIRE TYPE	Gas shielded rutile flux-cored wire with rapidly solidifying slag
SHIELDING GAS	75-85% Argon (Ar) / Balance Carbon Dioxid (CO_2);
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*

Shipbuilding steels		AH 32 - EH 46
Unalloyed structural steels	Rel ≤ 550 MPa	S185 - S550, A 106 Gr.B, A 333 Gr. 6
Boiler steels	Rel ≤ 550 MPa	P235GH - P550GH bis A516; A537; A455
Pipe steels	Rel ≤ 550 MPa	P235T1/T2 - P550NL2; L210 - L550MB bis A 572
Fine grain structural steels	Rel ≤ 550 MPa	S235 - S550QL1 bis A572
Steels to API-standard	Rel ≤ 550 MPa	X42 - X80
*) 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)	1.5
Manganese (Mn)	1.5	Molybdenum (Mo)	< 0.2
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	680 (99)	640 - 820 (93 - 119)
Yield strength Rp0.2	600 (87)	> 550 (80)
Expansion A5	23%	18%

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)
-60 °C	70 (52)	> 47 (35)

APPROVALS: LR, DNV, ABS, TÜV Please contact the manufacturer to learn the present scope of approvals