

# MEGAFIL® 940 M



**AWS A5.36: E91T15-M21A8-K7-H4**

**EN ISO 18276-A: T 55 6 Mn2,5Ni M M21 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

- BWB-WIWEB Approval
- CTOD tested -40°C
- Minimizes risk of hydrogen-induced cracking
- No re-drying
- Suitable for robot applications
- Reduces clean-up time, improves productivity
- Root welding without any backing
- Automatic root welding possible

## 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

Gas shielded metal-cored wire

## SHIELDING GAS

75-85% Argon (Ar)/Balance Carbon Dioxide (CO<sub>2</sub>)

Gas Flow 12-18 l/min (25-38 cfh)

## 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 \*)

Material	Rel ≤ 550 MPa	Material
Shipbuilding steels	Rel ≤ 550 MPa	15NiCrMo10-6, G19NiCrMo12-6 (HY80)
Pipe steels	Rel ≤ 550 MPa	P235T1/T2 - P460N - L2; L210 - L550MB
Fine grain structural steels	Rel ≤ 550 MPa	S255(NL 1/2) - S550(QL /1)
Steels to API-standard	Rel ≤ 550 MPa	up to 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 CHEMISTRY (%) (typical values for mixed gas 82% Ar / 18% CO<sub>2</sub>)

Element	Value (%)	Element	Value (%)
Carbon (C)	0.05	Nickel (Ni)	2.2
Manganese (Mn)	1.4	Molybdenum (Mo)	-
Silicon (Si)	0.6	Chromium (Cr)	-
Sulphur (S)	0.010		
Phosphorus (P)	0.010		

## ALL WELD METAL MECHANICAL PROPERTIES (for mixed gas 82% Ar / 18% CO<sub>2</sub>)

Mechanical tests	Typical values MPa (ksi)	ISO Specification MPa (ksi)
Tensile Strength Rm	690 (100)	640 - 780 (93 - 113)
Yield strength Rp0.2	600 (87)	> 550 (80)
Expansion A5	23%	18%

## CHARPY V-NOTCH IMPACT VALUES (for mixed gas 82% Ar / 18% CO<sub>2</sub>)

Mechanical Tests	Typical values [J] (ft.lbf)	ISO Specification [J] (ft.lbf)
-40° C	120 (89)	> 47 (35)
-60° C	100 (74)	> 47 (35)

## APPROVALS: BWB-WIWEB

Please contact the manufacturer to learn the present scope of approvals