

MEGAFIL® 836 R



AWS A5.29: E81T1-B2M H4

AWS A5.36: E81T1-M21PY-B2-H4

EN ISO 17634-A: T CrMo1 P M21 1 H5

WELDING POSITIONS:



FEATURES

- Extremely low diffusible hydrogen weld deposit
- Excellent weld puddle manipulation
- Particularly suited for mechanized MAG welding
- Ideal for all-position welding on ceramic backing
- Low spatter loss
- Easy slag removal
- Smooth arc characteristic

BENEFITS

- Minimizes risk of hydrogen-induced cracking
- Efficient out-of-position welding
- Economic production
- High flexibility
- No additives needed
- Reduced cleaning time
- Easy handling

APPLICATIONS

- Mechanized welding
- Construction of containers
- Steam boilers and turbines (CrMo steels up to 550° C (1022° F))
- Pipelines
- Single and multi-pass welding
- Mechanical engineering

WIRE TYPE

SHIELDING GAS

TYPE OF CURRENT

STANDARD DIAMETERS

TYPICAL DIFFUSIBLE HYDROGEN*

RE-DRYING

STORAGE

Gas shielded rutile flux-cored wire with rapidly solidifying slag
 75-85% Argon (Ar)/Balance Carbon Dioxide (CO₂)
 Gas Flow 12-18 l/min (25-38 cfm)
 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)
 Not required due to seamless wire design
 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 ≤ 460 MPa	Chemical Composition
Boiler steels	Rel ≤ 460 MPa	13CrMo4-5
Cast steels	Rel ≤ 460 MPa	G17CrMo5-5, G22CrMo5-4

*) 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% CO₂)

Element	Value (%)	Element	Value (%)
Carbon (C)	0.05	Nickel (Ni)	-
Manganese (Mn)	1.0	Molybdenum (Mo)	0.5
Silicon (Si)	0.3	Chromium (Cr)	1.1
Sulphur (S)	0.015		
Phosphorus (P)	0.015		

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

Mechanical tests	Typical values MPa (ksi)	ISO Specification MPa (ksi)
Tensile Strength Rm	620 (90)	550 - 680 (80 - 99)
Yield strength Rp0.2	540 (78)	> 470 (68)
Expansion A5	21%	20%

The specified values apply to the stress-relieved condition (690° C / 60 min)

CHARPY V-NOTCH IMPACT VALUES (for mixed gas 82% Ar / 18% CO₂)

Mechanical Tests	Typical values [J] (ft.lbf)	ISO Specification [J] (ft.lbf)
RT	70 (52)	> 47 (35)

The specified values apply to the stress-relieved condition (690° C / 60 min)