

# TM-58

AWS A5.18 ER70S-G  
EN ISO 14341-A-G 46 3 C1 Z  
JIS Z 3312 YGW11

## Characteristics and Applications:

TM-58 is a solid wire for butt or fillet MAG welding of mild steel and 490N/mm<sup>2</sup> grade high tensile steel. Due to the pick-up of Ti, The refinement of traveling spheroidal structure can be obtained. The arc is stable. Deep penetration and well spread at high current range TM-58 provides higher deposition efficiency in welding of thick plate. It features less fume generation (25% less than YGW-12) and smooth bead appearance.

It is suitable for welding vehicles, bridges, industrial machinery and buildings.

## Notes on usage:

1. E.S.O. (Electrode Stick Out) must be kept between 15-25mm.
2. The proper welding conditions must be adopted according to the purpose as the bead appearance and penetration are varied widely depending on the welding conditions.
3. Use 100% CO<sub>2</sub> or Ar +CO<sub>2</sub> gas mixture as shielding gas.
4. Control within the optimal range of welding conditions for this wire as possible.

## Typical chemical composition of wire metal (wt%):

	C	Mn	Si	P	S	Ti
AWS	Not Specified					
EN ISO	Not Specified					
Typical value	0.075	1.60	0.80	0.020	0.02	0.200

## Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -30°C (-20°F)
AWS	≥ 400(58)	≥ 490(70)	≥ 22	≥ 27(20)
EN ISO	≥ 460(67)	530-680(77-99)	≥ 20	≥ 47(36)
Typical value	460(67)	550(80)	31	65(48)

## Sizes and recommended current range (DC <+>) :

Diameter (mm)	1.2	1.6
Amps	90-350	170-400

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