

TM-58

AWS A5.18 ER70S-G
JIS Z 3312 YGW11

Characteristics and Applications:

TM-58 is a solid wire for butt or fillet MAG welding of mild steel and 490N/mm² 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% CO₂ or Ar +CO₂ 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
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)
460(67)	550(80)	31	65(48)

Sizes and recommended current range (DC +):

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

SOLID WIRE