

MG 690 TIG



Universal alloy for high heat and cryogenic applications

GENERAL CHARACTERISTICS:

The weld metal of MG 690 TIG has excellent strength and oxidization resistance at extreme temperatures. The universal properties give it the capability to be used for joining or cladding. Good for dissimilar combinations or cladding of nickel-based alloys and stainless or carbon steels.

APPLICATIONS:

Excellent for use on parts that are subjected to thermal cycling such as flame hardening, heat treat and cryogenic equipment. Used where good weld ductility is needed when joining or repairing massive sections.

TECHNICAL DATA:

Typical Tensile Strength	Up to 85,000 psi (586 N/mm ²)
Typical Yield Strength	Up to 52,000 psi (360 N/mm ²)
Elongation	38%
Current	DC straight polarity (electrode -)
Shielding Gas	100% Argon, 20-30 scfh

Diameter	Amperage	Volts
0.045" (1.2mm)	80-110	13-16
1/16" (1.6mm)	90-130	14-18
3/32" (2.4mm)	120-175	15-20
1/8" (3.2mm)	150-220	15-20

PROCEDURE:

Surface should be cleaned of all contaminants using non-residual chemical cleaners a minimum of 2" to either side of the joint. Care should be taken not to touch the cleaned area or filler with bare hands. Use pure tungsten or 2% thoriated tungsten electrodes and a strike plate to start the arc. Torch and travel angles should be kept perpendicular to the piece with no more than 20° drag. Keep the arc short and both filler rod and puddle shielded until fully solidified to prevent porosity or excess oxidation.

