



A High Chromium-Nickel Rod For Use In
High Temperature Applications

TigTectic® **670**



- Heat resistant, austenitic, dissimilar and other hard-to-weld steels
- Dense, porosity and spatter free deposits
- Excellent for rebuilding or as cushioning for other coatings
- Resistant to scaling up to 1950°F (1065°C)
- Dilution tolerant

TigTectic® 670

TigTectic 670 can be used to weld heat resistant austenitic steels and to join steels of unknown composition. Weld deposits are suitable for parts subject to sulphurous atmospheres up to 1950°F (1065°C). Deposits are also dilution-tolerant when used for dissimilar metal joining.

TECHNICAL DATA

Typical Values

Tensile Strength:	90,000 psi (620 N/mm ²)
Yield Strength:	62,000 psi (427 N/mm ²)
Elongation (1=5d):	min. 43%
Hardness As-Deposited:	85 HRB
Maximum Temperature:	1200°F in reducing atmospheres
Current & Polarity:	DCEN (-) or AC
Shielding Gas & Flows:	Pure Argon @ 20 cfh.
Tungsten Electrode Type:	1% or 2% Thoriated Size will depend on part thickness

SUGGESTED WELDING PARAMETERS:

Diameter	Amperage
3/32" (2.4mm)	90 - 120
1/8" (3.2mm)	105 - 150

PROCEDURE FOR USE

PREPARATION: Clean weld area of scale and oxide. Remove grease and oil by using a suitable VOC-free solvent. Grind a lengthwise taper on the tungsten electrode and set so that about 1/8" of the electrode protrudes past the gas cup edge. Preheating is generally not needed when welding stainless steels. For hardenable tool steels check the preheat/inter-pass temperature guidelines in the Reference Section.

TECHNIQUE: Start the arc by using impulse high-frequency or by using a copper startblock. Do not use a carbon block as this will contaminate the weld deposit! Deposit stringer beads. Do not weave more than 2x, as wide beads can cause distortion.

POST WELDING: Parts which have been preheated should be wrapped or covered with heat-retardant material to help with slow cooling. Series 300 stainless steels should cool naturally in air.

TYPICAL APPLICATIONS

Suitable for welding heat-treating baskets and handling equipment, heating and exhausting gas assemblies, thin-walled fully austenitic tubing used in the Pulp & Paper Industry, exhaust valves, acid pump vanes & discharge outlets.



Eutectic Corporation:
N94 W14355 Garwin Mace Dr.
Menomonee Falls WI, 53051 USA
+1 800. 558. 8524 • eutectic.com

Eutectic Canada:
428, rue Aimé-Vincent Vaudreuil-Dorion,
Québec J7V 5V5 Canada
+1 800. 361. 9439 • eutectic.ca



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