

# Crown 15

Gas Tungsten Arc Welding  
(GTAW) TIG Alloy

Chrome-Moly Steel

All Position



"The Royal Line"

**CROWN** ALLOYS COMPANY

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## 1 ¼ Chrome – ½ Moly Steel for GTAW (TIG)

### Typical Applications

**Crown 15** is a chrome-moly TIG rod used for joining creep resistant steels whose chemistries are either ½ percent Cr – ½ percent Mo, 1 percent Cr – ½ percent Mo, or 1¼ percent Cr – ½ percent Mo. These steels are often used for elevated temperatures and corrosive service. **Crown 15** is used primarily for TIG welding chrome-moly steels used in pressure vessels, high pressure steam piping, turbine castings and boilers used in the power generation industry. **Crown 15** is also used for welding dissimilar combinations of chrome-moly steels and carbon steels. **Crown 15** is heat-treatable.

### Specifications

AWS A 5.28

ER 80S-B2

#### Chemical Composition

Silicon	0.40 - 0.70%	Nickel	0.200% max
Carbon	0.07 - 0.12%	Chromium	1.20 - 1.50%
Manganese	0.40 - 0.70%	Molybdenum	0.40 - 0.65%
Phosphorus	0.025% max	Copper	0.350% max
Sulfur	0.025% max	Iron	Remainder
Others, Total	0.500% max		

- Tensile Strength\* up to 95,000 psi
- Yield Strength\* up to 81,000 psi
- Elongation in 2"\* up to 29%

\*Post weld heat treated (stress relieved) between 1125°F and 1175°F for one hour.

### Procedure

Clean joint area thoroughly. Remove all fatigued metal. Bevel heavy sections. Preheat parts to be welded from 250°F to 300°F. Maintain an interpass temperature of not less than 300°F during welding. See **chart below** for specific TIG parameters.

#### (GTAW) TIG Welding Parameters

Use DC straight polarity (DCEN)

Diameter	Shielding Gas	Welding Current (amps)	Arc Voltage (volts)	Gas Flow (cfh)
1/16 x 36"	100% Argon	75 – 160	7 – 13	20 – 25
3/32 x 36"	100% Argon	120 – 210	10 – 18	20 – 30
1/8 x 36"	100% Argon	150 – 250	12 – 20	25 – 30
5/32 x 36"	100% Argon	170 – 300	14 – 22	25 – 30

All suggested settings are approximate. Inverter-based welders generally require less heat input (lower amps). Welds should be tested to comply to your specifications.

### Sizes and Part Numbers

TIG Diameter	Part Numbers	
	1# Package	5# Package
1/16 x 36"	MTCR15/TL-BP	MTCR15/TL
3/32 x 36"	MTCR15/TN-BP	MTCR15/TN
1/8 x 36"	MTCR15/TO-BP	MTCR15/TO
5/32 x 36"	MTCR15/TP-BP	MTCR15/TP



**!!!! WARNING !!!!**



**WELDING FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.**

**BEFORE USING THIS PRODUCT THE WELDER (END-USER) MUST READ AND UNDERSTAND THE COMPLETE PRODUCT WARNING LABEL AND THE NEW 16 SECTION SAFETY DATA SHEET (SDS).**

**THE SAFETY DATA SHEET (SDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE SDS PORTION OF THIS WEBSITE. IT IS ALSO AVAILABLE FROM YOUR EMPLOYER AND WELDING SUPPLY DISTRIBUTOR.**

**DO NOT PROCEED WITH USE OF THIS PRODUCT UNTIL YOU READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) AND PRODUCT WARNING STATEMENT.**

**BE SURE TO CONSULT THE LATEST VERSION OF THE SDS.**

**SEE THE PRODUCT WARNING LABEL AND SDS FOR COMPLETE WARNING INFORMATION.**

