



!!!! 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 MATERIAL SAFETY DATA SHEET (MSDS) .

THE MATERIAL SAFETY DATA SHEET (MSDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE MSDS 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 MATERIAL SAFETY DATA SHEET (MSDS) AND PRODUCT WARNING STATEMENT.

BE SURE TO CONSULT THE LATEST VERSION OF THE MSDS .

SEE THE PRODUCT WARNING LABEL AND MSDS FOR COMPLETE WARNING INFORMATION.



CROWN ALLOYS

COMPANY

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CROWN 8

Superior High Strength Low-Alloy Steel Welding Wire (TIG)

Typical Applications:

Crown 8 (ER 80S-D2) is a premium low-alloy cut length TIG filler metal that contains ½ percent molybdenum (for increased strength) and high levels of manganese and silicon to provide good wetting and good rust and scale tolerance. The higher level of deoxidizers (Mn and Si) help to control porosity. **Crown 8** (ER 80S-D2) will yield radiographic quality welds with excellent bead appearance in both ordinary and difficult-to-weld carbon and low alloy steels. **Crown 8** is *THE* recommended TIG alloy for welding **4130 tubing** up to .120" wall thickness.

The combination of weld soundness and strength makes the **Crown 8** suitable for single and multiple-pass welding of a variety of carbon and low-alloy, higher strength steels in both the as welded and postweld heat-treated conditions. Maximum mechanical properties are achieved when using a preheat and interpass temperature of 275°F minimum.

Specifications: TIG (GTAW)

AWS A5.28/A5.28M

Crown 8 (ER 80S-D2)	AWS Specification Minimum	Typical Mechanical Properties
Tensile Strength	80,000 psi (min)	Up to 95,000 psi (typical)
Yield Strength	68,000 psi (min)	Up to 81,000 psi (typical)
Elongation % in 2"	17.0% (min)	19.8% (typical)
Charpy V-Notch @ -20°F	20 ft.lbs. (min)	27 ft.lbs. (typical)

Procedure: TIG (GTAW)

Manual Welding - Direct Current - Straight Polarity					
Metal Thickness	Gas Cup	Tungsten Diameter	Filler Rod Diameter	Amps	Argon Gas Flow-CFH
1/16"	3/8"	1/16"	1/16"	100 - 140	20
3/32"	3/8"	1/16"	1/16"	100 - 160	20
1/8"	7/16"	3/32"	1/16"	125 - 200	20
3/16"	7/16"	3/32"	3/32"	150 - 250	25
1/4"	1/2"	1/8"	1/8"	150 - 250	25
3/8"	1/2"	1/8"	1/8"	150 - 275	25
1/2"	1/2"	1/8"	1/8"	150 - 300	25

Use a 2% thoriated tungsten (Th-2) Red Band

DISCLAIMER: The above "typical" results are based upon testing of the product under controlled laboratory conditions in accordance with AWS specifications. Actual use of the product may produce different results due to varying conditions. Conditions that could effect results would be wire diameter, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Therefore, the "typical" results are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, expressed or implied, regarding the products described herein or their use or applicability.