



**!!!! 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**

30105 STEPHENSON HWY.  
MADISON HEIGHTS, MI. 48071  
(248) 588-3790 • (800) 521-7878

## **Mild Steels**

### **Crown 2 - AWS A 5.18 - ER 70S-2**

This is a triple deoxidized mild steel wire, which will give quality welds on most grades of steel. Good for TIG pipe welding.

- Tensile Strength                      70,000 psi (minimum)
- Elongation in 2"                      22% (minimum)

**Sizes:**

.045 x 36"  
1/16 x 36"  
3/32 x 36"  
1/8 x 36"  
3/16 x 36"

### **Crown 3 - AWS A 5.18 - ER 70S-3**

Most commonly used mild steel wire. Works well on clean steels.

- Tensile Strength                      70,000 psi (minimum)
- Elongation in 2"                      22% (minimum)

**Sizes (TIG):**

.045 x 36"  
1/16 x 36"  
3/32 x 36"  
1/8 x 36"

**Sizes (MIG):**

.023  
.030  
.035  
.045

} Some sizes are available in 2# and 8" and 30# spools

### **Crown 5 - AWS A 5.2 - R45**

This is the rod the old time welders come to buy when they run out of coat hangers.

- Tensile Strength                      45,000 psi (minimum)
- Elongation in 1"                      22% (minimum)

**Size:**

1/16 x 36"

### **Crown 4 - AWS A 5.2 - R60**

The Crown 4 is used for the oxyfuel gas welding of carbon steels, where the minimum tensile strength requirement does not exceed 60,000 psi.

- Tensile Strength                      60,000 psi (minimum)
- Elongation in 1"                      20% (minimum)

**Size:**

5/32 x 36"

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## LOW ALLOY STEEL

### TIG(GTAW) Welding Parameters

for

Crown 2, Crown 3 & Crown 7

(ER 70S-2) (ER 70S-3) (ER 70S-6)

Manual Welding - Direct Current - Straight Polarity - Argon Gas

Metal Thickness	Joint Type	Tungsten Diameter	Filler Rod Diameter	Arc Voltage (volts)	Welding Current (amperage)	Gas Flow (cfh)
.045	All	.040	.045	8 - 14	60 - 100	15
1/16"	Butt / Corner	1/16"	1/16"	10 - 17	70 - 120	15
1/16"	Lap / Fillet	1/16"	1/16"	10 - 17	90 - 130	15
1/8"	Butt / Corner	1/16" - 3/32"	3/32"	12 - 18	110 - 175	15
1/8"	Lap / Fillet	1/16" - 3/32"	3/32"	12 - 18	120 - 185	15
3/16"	Butt / Corner	3/32"	1/8"	13 - 20	140 - 210	20
3/16"	Lap	3/32"	1/8"	15 - 20	150 - 220	20
3/16"	Fillet	3/32"	1/8"	15 - 20	150 - 225	20
1/4"	Butt / Corner	1/8"	5/32"	15 - 22	170 - 270	20
1/4"	Lap	1/8"	5/32"	16 - 22	180 - 280	20
1/4"	Fillet	1/8"	5/32"	16 - 22	180 - 285	20

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

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