

# Royal Kirkrod

Bare Rod for Brazing (TB) and Gas Tungsten Arc Welding (GTAW)

Zinc Alloy



"The Royal Line"

**CROWN** ALLOYS COMPANY

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## Alloy for Welding Zinc-Based Metals or Brazing Aluminum

### Typical Applications

**Royal Kirkrod** is the most widely used alloy for welding zinc-based metals, white metal and pot metal. These include carburetors, power mower housings, kirksite dies, power tools, trophies and ornaments, vacuum cleaners, antique car parts, models and patterns. **Royal Kirkrod** is also a very useful self-fluxing brazing alloy for aluminum parts such as boat hulls, propellers, aluminum radiators, doors and furniture. Because the **Royal Kirkrod** is alloyed from pure, virgin metals, deposits are clean and free from slag. Joints made with **Royal Kirkrod** are permanent, non-corrosive and stronger than the parent metal.

### Specifications

- Tensile Strength 39,000 PSI
- Compressive Strength 93,100 PSI
- Hardness 100 Brinell
- Elongation in 2" 8.4%
- Melting Range 715°F to 735°F

### Procedure

#### Brazing:

**For zinc-based metals:** Vee the broken edges to 45°. Clean weld area thoroughly. Heat fracture directly with a neutral flame until the surface oxides of the base metal can be scratched open by jabbing it with the **Royal Kirkrod**. Keep the rod away from the flame as much as possible when starting to weld. Finish by puddling the **Royal Kirkrod** in the base metal. COOL SLOWLY!

**For Aluminum:** It is critical that the tough aluminum oxides are removed with a clean stainless steel wire brush before brazing and then are penetrated by scratching the rod across the heated aluminum surface. Keep the flame in constant motion. COOL SLOWLY!

#### GTAW or TIG Welding (zinc-based metals):

The TIG settings for the **Royal Kirkrod** are very similar to the settings used for TIG welding aluminum. Clean surface with a stainless steel wire brush or die grinder. Use a pure tungsten electrode (balled end) and set the machine for alternating current (AC). With a 3/32 electrode the machine should be set at roughly 70-100 amps. Be sure to add the **Royal Kirkrod** to the very leading edge of the weld pool only. BE CAREFULL: zinc based metals have very low melting temperatures. Some thin sections might vaporize when exposed to an electric arc.

### Sizes and Part Numbers

Product	Size	Part Numbers		
		1# Package	5# Package	25# Package
Royal Kirkrod <b>18"</b> Length	1/16 x 18"	RTKIRK/EL-BP	RTKIRK/EL	Same as 5# Package
	3/32 x 18"	RTKIRK/EN-BP	RTKIRK/EN	
	1/8 x 18"	RTKIRK/EO-BP	RTKIRK/EO	
	5/32 x 18"	RTKIRK/EP-BP	RTKIRK/EP	
	3/16 x 18"	RTKIRK/EQ-BP	RTKIRK/EQ	
	1/4 x 18"	RTKIRK/ER-BP	RTKIRK/ER	
Royal Kirkrod <b>36"</b> Length	1/16 x 36"	RTKIRK/TL-BP	Same as 1# Package	RTKIRK/TL
	3/32 x 36"	RTKIRK/TN-BP		RTKIRK/TN
	1/8 x 36"	RTKIRK/TO-BP		RTKIRK/TO
	5/32 x 36"	RTKIRK/TP-BP		RTKIRK/TP
	3/16 x 36"	RTKIRK/TQ-BP		RTKIRK/TQ
	1/4 x 36"	RTKIRK/TR-BP		RTKIRK/TR



**!!!! 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.**

