

# Royal 119-T

Oxyfuel Gas Welding  
(OFW)

Gas Tungsten Arc Welding  
(GTAW) TIG Alloy

Hard-Facing Alloy



"The Royal Line"

**CROWN** ALLOYS COMPANY

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## Nickel-Based Hard Overlay for Torch or TIG

### Typical Applications

**Royal 119-T** is a nickel-based, high-chromium and boride-rich hard surfacing alloy which also exhibits excellent corrosion resistance. It will also retain its hardness even at elevated temperatures. **Royal 119-T** has excellent metal-to-metal wear resistance and takes on a high polish under wearing conditions.

**Royal 119-T** is widely used on roller surfaces, seal rings, cement pump screws, valves, cams, rocker arms, augers, pump sleeves, pistons, impellers, capstan rings, glass mold faces, centrifuge filters and sucker pump rods. It is used for building up and overlaying surfaces subjected to extreme abrasive wear. It holds an edge extremely well for industrial knives and tools such as sugar cane blades, debarker tools, paper and textile cutters.

**Royal 119-T** bonds well to mild and alloyed steels, high chromium steels, nickel alloys and cast iron and even some copper based alloys. **Royal 119-T** is self-fluxing and exhibits excellent flow while welding. Deposits are thin and precise.

### Specifications

AWS A5.21  
ER NiCr-C

- Hardness as welded
- Oxidation Resistance
- Corrosion Resistance

56 – 62 (Rockwell C). Retains its hardness up to 1000°F.  
Good up to 1800°F

Completely resistant to steam, salt water and salt spray corrosion. Also resistant to milder acids and corrosive chemicals.

### Procedure

#### For oxyacetylene welding:

Clean base metal of oil, rust and scale. Use a torch tip size 4. Heat base metal to a dull red color. Apply alloy with a brazing technique using a neutral flame. **Royal 119-T** will flow out at 1800°F to 1900°F. **Royal 119-T** is completely self-fluxing and can be melted and remelted without any loss of mechanical properties. A preheat and postheat are required for high carbon and alloy steels only. Cover the hot weld deposit to slow cooling in order to avoid stress cracking.

#### For Gas Tungsten Arc Welding (TIG):

Use DC straight polarity (DCEN) and argon shielding gas. Use a large blunt electrode and maintain a long arc gap. Current should be between 120 – 180 amps. Cover the hot weld deposit to slow cooling in order to avoid stress cracking.

### Size and Part Numbers

Diameter	Part Numbers	
	1# Package	5# Package
3/16 x 36"	RT119/TQ-BP	RT119/TQ



**!!!! 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.**

