

# **EXECUTIVE 82**

# **NICKEL ALLOY**

SOLID WIRE TECHNICAL DATA SHEET

# **DESCRIPTION**

Executive 82 is a nickel-chromium-iron alloy designed for welding alloys 600, 601, 690, alloy 800, 800HT using TIG, MIG and SAW welding processes. This alloy is also used for many dissimilar Inconel® alloy joints. The high alloy content of Executive 82 produces high strength weld material with good corrosion resistance and strength at elevated service temperatures.

Executive 82 filler metal is produced using high quality raw materials and tightly controlled chemistry to provide top quality, exceptionally clean wires that deliver the results fabricators demand. Use Executive 72/20/3 where flux cored wire is suited to the application.

# **APPLICATIONS & FEATURES**

Executive 82 is used for joining Inconel® and is an excellent choice for joining dissimilar alloys, such as nickel to stainless and stainless to carbon steels. Executive 82 can also be used to join nickel and Monel® alloys as well as Monel alloys to carbon steel.

It maintains strength and resists corrosion and oxidation up to 900°F and is also an excellent alternative to 330 stainless for joining applications.

#### **TYPICAL WIRE CHEMISTRY & MECHANICAL PROPERTIES**

C S Mn Fe Ρ Si Cu Ni Αl Τi Cr Nb+Ta Co 0.008 3.27 0.61 0.13 0.01 0.004 0.003 0.01 74.3 0.08 0.42 18.42 2.69

**Tensile Strength:** 86,000 PSI Min **Yield Strength:** 52,000 PSI Min **Elongation:** 38%

# **TYPICAL WELDING PARAMETERS**

| Process      | Diameter | Voltage                     | Amperage | Gas Flow     | Shielding Gas / Flux  |
|--------------|----------|-----------------------------|----------|--------------|---|
| GMAW - Short | .035"    | 17-20                       | 70-90    | 30 to 50 CFH | 1000/ 4 ~   |
|              | .045"    | 19-22                       | 75-160   |              | 100% Ar<br>75% Ar / 25% He<br>90% He / 7.5% Ar / 2.5% CO <sub>2</sub> |
| - Spray      | .045"    | 30-32                       | 190-250  |              |   |
| - Pulse      | .045"    | 18-20                       | 120-150  |              |   |
| GTAW         | .093"    | Direct Current; Electrode - |          | 30 to 40 CFH | 100% Ar   |
| SAW          | .062"    | 28-32                       | 250-280  |              |   |
|              | .093"    | 28-33                       | 275-350  |              | NiCr-W Flux   |
|              | .125"    | 29-34                       | 350-450  |              |   |

#### **STANDARD PACKAGING**

**GMAW** (MIG) 33-lb wire baskets 500-lb Drum **GTAW** (TIG) 10-lb plastic tube 40-lb box

**SAW** 60-lb wire coil

60-lb Acro Pak

# **CLASSIFICATION**

AWS/SFA 5.14, Class ERNiCr-3

Certified by the Canadian Welding Bureau (CWB) to AWS A5.14.

