# Eureka Welding Alloys

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#### TECHNICAL DATA FOR EUREKA 62 FLUX CORED WIRE

**Dated:** March 31, 1995 **Revised:** July 8, 2013

#### INTRODUCTION

Eureka 62 Flux Cored Wire is a nickel base 625 type alloy. The wire has a smooth spray transfer arc with a thin slag system that is easily removable. The wire is formulated to develop high quality weld deposits that are porous and crack free. The wire is designed for multi-pass welding which greatly increases productivity.

#### METALLURGICAL CHARACTERISTICS

Eureka 62 Flux Cored Wire is a Nickel base, Chromium, Molybdenum, Niobium alloy that can be work hardened up to 46 HRC for high wear or abrasive environments. It has outstanding strength and toughness up to 2000F., which is derived from the solid solution strengthening effects of the refractory metals, columbium and molybdenum. Eureka 62 nickel base has excellent fatigue strength, which resists heat checking from alternating heating and cooling cycles.

#### RECOMMENDED APPLICATIONS

Eureka 62 Flux Cored Wire is for welding 625, 600, and 800 type nickel base alloys. It is also used for making high strength welds on 9% nickel steels and for overlaying carbon steel. It has outstanding strength and toughness up to 2000° F. Eureka 62 weld deposits perform excellent in many hot working applications. In the steel mill industry it is used on tongs, entry roll guides, hot shear applications, and furnace parts. In the ring industry, it has found great success on axial cones and in the

forging and extrusion industry, it is used for hard facing impressions and dummy blocks.

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### **WELDING PARAMETERS**

TYPE	SIZE	AMPERAGE	VOLTS
Metal Cored Wire	.045" 1.2 mm	125 – 225	16 – 28
Metal Cored Wire	1/16" 1.6mm	180 – 400	25 – 33
Flux Cored Wire	1/16" 1.6mm	180 – 400	25 – 33
Flux Cored Wire	3/32" 2.4mm	350 – 600	27 – 35
Flux Cored Wire	1/8" 3.2mm	500 – 900	30 – 38

Use DC Current with a Stick Out of 1/4"-1 1/4" (6mm-32mm)

#### **RECOMMENDED SHIELDING GASES**

75% Argon, 25% Co2 90% Argon, 10% Co2 92% Argon, 8% Co2

100% CO2 may produce lower quality arc conditions

### **GAS FLOW RATE**

.045" 1.2 mm 20-50 CFH 1/16" 1.6mm 30-60 CFH 3/32" 2.4mm 80-120 CFH 1/8" 3.2mm 80-120 CFH

## TYPICAL CHEMISTRY

С	Mn	Si	Cr	Мо	Nb	Ni
.02	.50	.50	21.5	8.5	2.5	Bal

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### PHYSICAL AND OR MECHANICAL PROPERTIES

TENSILE STRENGTH 80,000 psi

ELONGATION 40%

WORK HARDENS Up to 46 HRC