

# Eureka Welding Alloys

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## TECHNICAL DATA FOR EUREKA 350 FLUX CORED WIRE

**Dated:** March 31, 1995

**Revised:** July 8, 2013

## INTRODUCTION

**Eureka 350 Flux Cored Wire** is a 410NiMo stainless steel 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 350 Flux Cored Wire** is a low carbon martensitic stainless steel alloy. The as welded hardness is 35 - 40 HRC and is readily machinable. **Eureka 350** weld deposits have a high tensile strength and are quite corrosion resistant. The weld deposits are ideally suited for heavy build ups in moderate wear conditions. The weld deposits flow very freely, producing extremely dense, crack, and porosity free weld deposits.

## RECOMMENDED APPLICATIONS

**Eureka 350 Flux Cored Wire** is for the welding of 410 and 410NiMo castings and wrought metals. It is used in the repair, reclamation and joining of die casting dies, forging dies, arbors and shafts. It can be used as an underlay material in crack sensitive areas when a harder alloy is to be used as an overlay. Deposits polish to a high luster with a medium resistance to abrasion and are highly crack resistant due to its high tensile strength.

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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 will produce low 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

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## **TYPICAL CHEMISTRY**

<b>C</b>	<b>Mn</b>	<b>Si</b>	<b>Cr</b>	<b>Ni</b>	<b>Mo</b>
<b>.06</b>	<b>.50</b>	<b>.40</b>	<b>11.5</b>	<b>4.5</b>	<b>.50</b>

## **PHYSICAL AND OR MECHANICAL PROPERTIES**

**TENSILE STRENGTH 165,000 psi**

**ELONGATION 23%**

## **AS WELDED HARDNESS**

**35- 40 HRC**