

# Eureka Welding Alloys

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## TECHNICAL DATA FOR EUREKA 718 FLUX CORED WIRE

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## INTRODUCTION

**Eureka 718 Flux Cored Wire** is a nickel base AWS ERNiFeCr-2 type alloy. The wire can be run in smooth spray transfer arc. 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 718 Flux Cored Wire** is a precipitation hardening nickel-based alloy designed to display exceptionally high tensile and creep-rupture properties at temperatures up to 1300°F. This alloy has excellent fatigue strength, which resists heat checking from alternating heating and cooling cycles.

## RECOMMENDED APPLICATIONS

**Eureka 718 Flux Cored Wire** is for welding 718 and similar type nickel base alloys. Eureka 718 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  
1/2"-1 1/4" (6mm-32mm)

## RECOMMENDED SHIELDING GASES

75% Argon, 25% Helium

75% Argon, 25% Co2

90% Argon, 10% Co2

92% Argon, 8% Co2

## 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

C	Mn	Si	Cr	Mo	Nb	Ti	Al
.02	1.0	.50	19.0	3.0	5.0	.90	.60

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## **PHYSICAL AND OR MECHANICAL PROPERTIES**

**TENSILE STRENGTH 180,000 psi**

**YIELD STRENGTH 150,000 psi**

**ELONGATION 12%**

**HARDNESS 330 HB**