# Eureka Welding Alloys

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#### TECHNICAL DATA FOR EUREKA P-20 SOLID MIG WIRE

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

#### INTRODUCTION

**Eureka P-20 Solid MIG Wires** are drawn, cleaned, spooled and packaged to obtain smooth wire feeding with a stable spatter free arc. These wires are designed for the most critical applications where weld metal cleanliness is most important.

### **METALLURGICAL CHARACTERISTICS**

**Eureka P-20** weld deposits are a medium carbon low alloy steel which contain chromium and molybdenum. The deposits are that of a AISI P-20 mold steel. The as welded hardness is 35-45 HRC. The hardness is highly dependent on preheat temperature, length of time welding, and cooling rate. The deposits have the similar etching, graining, and color match characteristics as P-20 when tempered to the low 30 HRC range.

#### RECOMMENDED APPLICATIONS

**Eureka P-20** is used to repair many types of P-20 tools and dies, whether they are die casting dies or plastic injection molds. It is often used for high strength joining of low alloy steels and Chrome Moly steels.

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#### **WELDING PARAMETERS**

SIZE	AMPERAGE	VOLTS
.035" 1.0mm	100 – 225	14 – 28
.045" 1.2mm	125 – 250	16 – 28
1/16" 1.6mm	180 – 400	22 – 33

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**

20-60 CFH

### TYPICAL CHEMISTRY

C Mn Si Cr Mo .35 .30 .50 1.70 .40

## PHYSICAL AND OR MECHANICAL PROPERTIES

**AS WELDED HARDNESS** 

25-35 HRC