

# *Eureka Welding Alloys*

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## TECHNICAL DATA FOR EUREKA 45 FLUX CORED WIRE

**Dated:** March 31, 1995

**Revised:** July 8, 2013

## INTRODUCTION

**Eureka 45 Flux Cored Wire** is a modified low carbon H-12 hot working tool 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 45 Flux Cored Wire** is a tough Chromium, Molybdenum, Tungsten and Vanadium tool steel alloy having excellent resistance to abrasion, heat checking and wear, yet still machinable as welded. This alloy can accept water spray while in service without excessive checking. This alloy would be classified as a medium hot working grade of tool steel.

## RECOMMENDED APPLICATIONS

**Eureka 45 Flux Cored Wire** is utilized where press and hammer forging dies are to be reclaimed or partially repaired and conventionally machined. Its properties exceed that of die block material but still remain machinable. It is also used as a tough build-up alloy when a higher alloy is to be deposited on top for increased wear at the flash line.

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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

C	Mn	Si	Cr	Mo	W	V
.10	.60	.50	5.0	1.5	1.3	.30

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## PHYSICAL AND OR MECHANICAL PROPERTIES

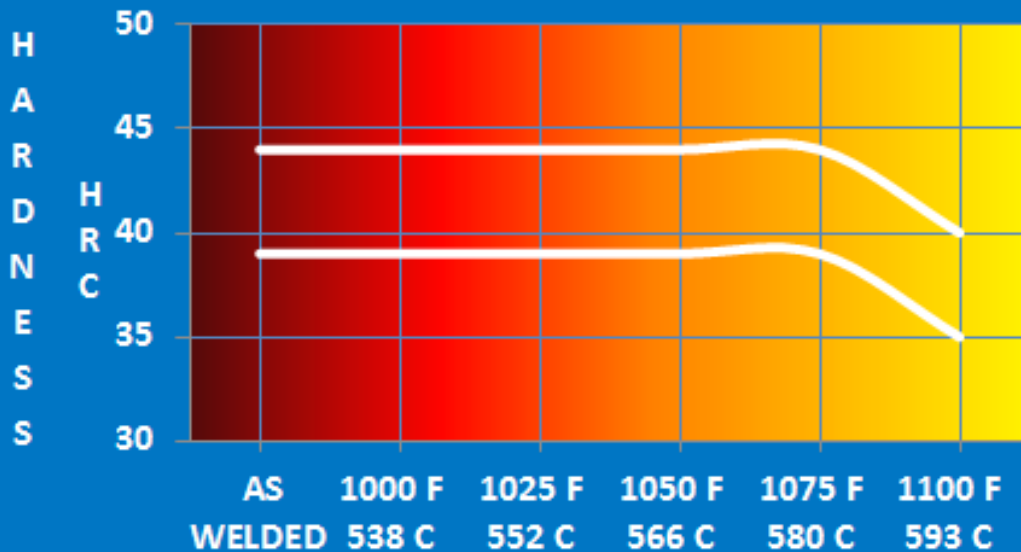
### AS WELDED HARDNESS

**38-43 HRC**

### TEMPERING DATA

The tempering data is to be used as a guide. Your results may differ due to the many variables in the utilization of this product.

### SINGLE TEMPER CURVE EUREKA 45



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## DOUBLE TEMPER CURVE EUREKA 45

