

Eureka Welding Alloys

2000 E. Avis Drive

Madison Heights, MI 48071

Phone: 248-588-0001 Fax: 248-585-7711 Toll Free: 800-962-8560

E-mail: info@eurekaweldingalloys.com Website: www.eurekaweldingalloys.com

TECHNICAL DATA FOR EUREKA 450 METAL CORED WIRE

Dated: March 31, 1995

Revised: July 8, 2013

INTRODUCTION

Eureka 450 Metal Cored Wire is a martensitic stainless steel alloy. The wire has a smooth spray transfer arc with nearly no slag to contend with. 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 450 Metal Cored Wire is a martensitic stainless steel Chromium, Molybdenum and Nickel hot working alloy. It has excellent crack resistance, moderate wear resistance and displays reasonable impact resistance. The as welded hardness is 44-48 HRC.

RECOMMENDED APPLICATIONS

Eureka 450 Metal Cored Wire is used for the welding of forging die impressions in both hammer and press forging dies requiring strength and toughness. In many cases it is used in the lower half of impressions which are then overlaid with a higher wear resistant alloy. Typical applications are crankshaft dies, connecting rods and yokes.

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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

TYPICAL CHEMISTRY

C	Mn	Si	Cr	Mo	Ni
.35	.60	.40	10.5	2.0	1.8

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PHYSICAL AND OR MECHANICAL PROPERTIES

TENSILE STRENGTH 165,500 psi

YIELD STRENGTH 129,500 psi

ELONGATION 9.6%

REDUCTION IN AREA 30.5%

CHARPY "V" NOTCH 20.7 Ft/lbs.

AS WELDED HARDNESS

44-48 HRC

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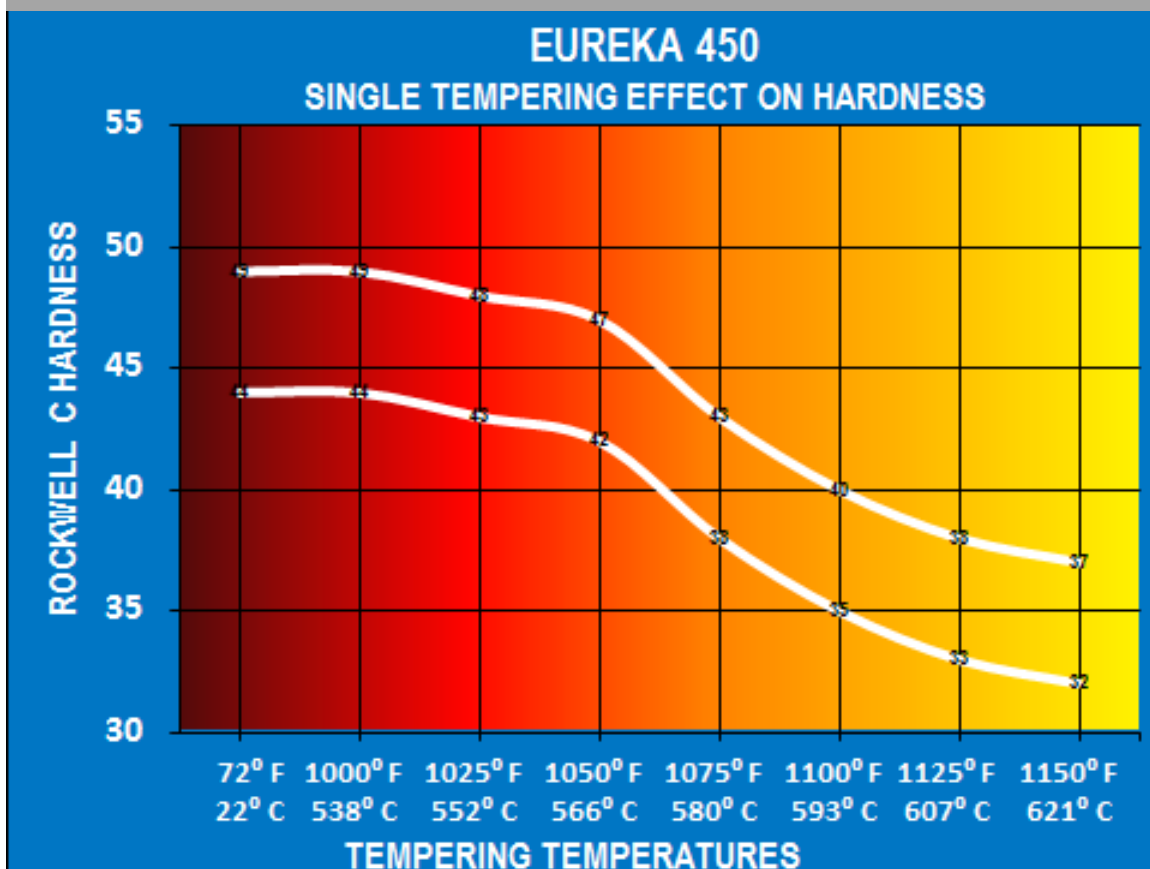
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TEMPERING DATA

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.



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