

Eureka Welding Alloys

2000 E. Avis Drive

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TECHNICAL DATA FOR EUREKA 551 METAL CORED WIRE

Dated: March 31, 1995

Revised: July 8, 2013

INTRODUCTION

Eureka 551 Metal Cored Wire is a heavily alloyed hot working tool 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 551 Metal Cored Wire is a high wearing Chromium, Cobalt, Tungsten, Molybdenum, and Vanadium hot working alloy. It is designed to resist extreme metal to metal wear. This alloy is highly resistance to softening at elevated temperatures. This alloy has an as welded hardness of 43-50 HRC and a large secondary hardening affect after tempering.

RECOMMENDED APPLICATIONS

Eureka 551 Metal Cored Wire is an excellent choice for press forging type dies where abrasion and high heats are encountered. Typical applications would be high volume shallow impressions such as connecting rods and hand tools. It also performs well on punches and shears.

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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	Co
.20	.50	.50	10.5	4.5	4.5	.50	9.0

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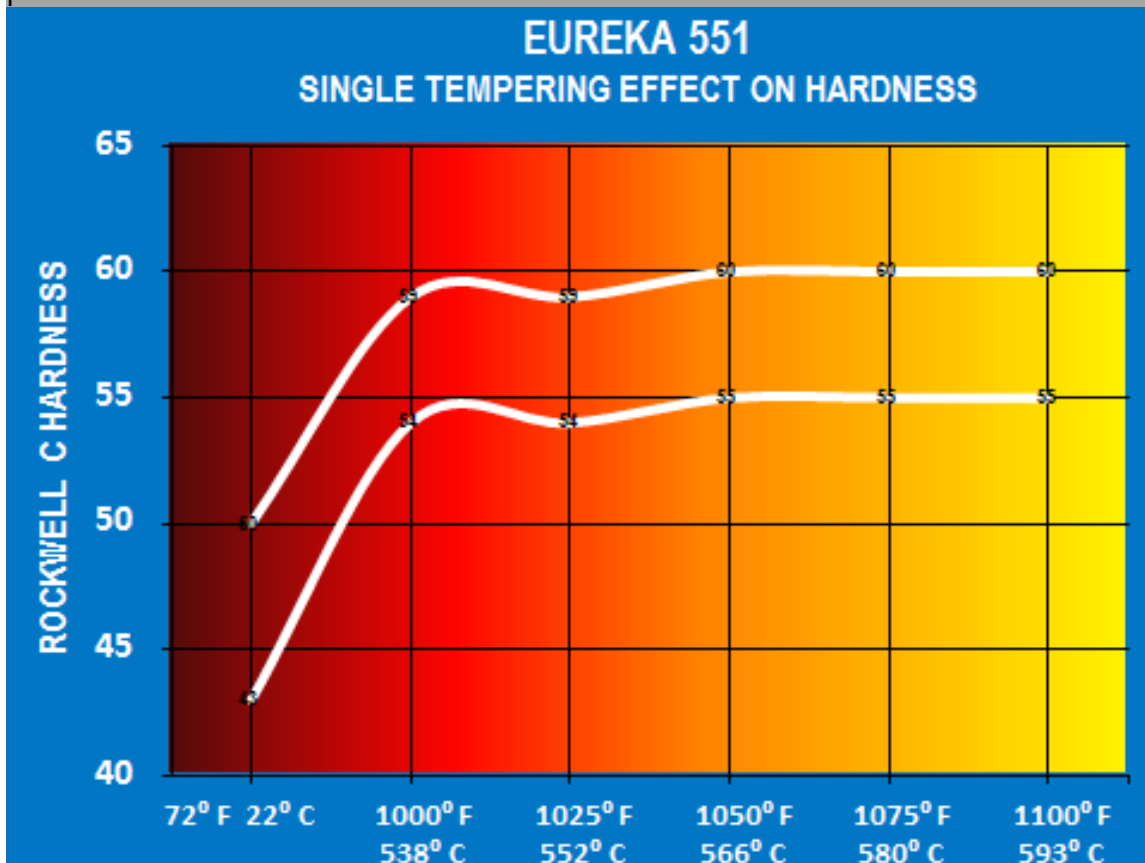
PHYSICAL AND OR MECHANICAL PROPERTIES

AS WELDED HARDNESS

43-50 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.



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