# Eureka Welding Alloys

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#### TECHNICAL DATA FOR EUREKA 74 METAL CORED WIRE

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

## **INTRODUCTION**

**Eureka 74 Metal Cored Wire** is a S-7 shock resisting 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 74 Metal Cored Wire is a AISI type S-7 shock resisting tool steel alloy. The as welded hardness of the deposits will typically be 55–60 HRC which can be tempered to lower hardness when necessary. This alloy works well in cutting or shearing environments at room temperature due to its unique ability of having high strength and being tough.

#### **RECOMMENDED APPLICATIONS**

Eureka 74 Metal Cored Wire are recommended for welding A.I.S.I. S-7 tool steel, however, because its weld deposits can be tempered to various hardness values, it can also be used to repair other shock-resisting grades plus many types of water-hardening tool steel. Eureka 74 work exceptionally well on metal stamping blank trim and pierce dies where edge chipping causes burr on parts. Eureka 74 is an ideal electrode for building cutting edges on composite cold and hot trim sections and punches.

Page 1 of 3 The data herein 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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#### **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 V .50 .50 .60 3.3 1.5 .25

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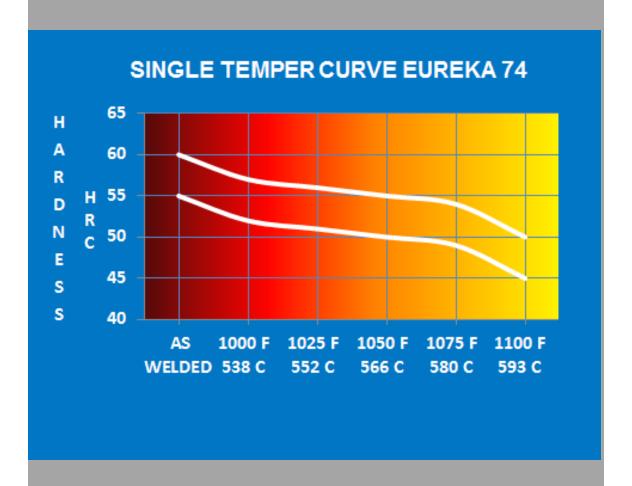
## PHYSICAL AND OR MECHANICAL PROPERTIES

#### **AS WELDED HARDNESS**

55-60 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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