

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 CWD MOD SOLID WIRE

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INTRODUCTION

Eureka CWD MOD Solid Wire is a nickel based alloy filler metal that has a smooth spray transfer arc when welded with helium - argon gas. The wire will develop high quality weld deposits that are porous and crack free. The wire can be used for multi-pass welding which greatly increases productivity.

METALLURGICAL CHARACTERISTICS

Eureka CWD MOD Solid Wire is a Nickel base alloy that can be work hardened up to 50 HRC. The weld metal deposits provide high strength and oxidation resistance from 1200 F up to 2000 F. This chemistry also exhibits good resistance to wear at these higher working temperatures. These features are derived from its solid solution strengthening and work hardening affects.

RECOMMENDED APPLICATIONS

Eureka CWD MOD Solid Wire weld deposits will perform excellent in extreme heat and pressure applications such as rotary dies and flat open face dies. The alloy will perform well in shallow closed press forging dies. CHD is commonly used as an underlay for the CWD MOD weld deposits.

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SIZES AVAILABLE

MIG .035" .045" 1/16"

TIG 1/16" 3/32" 1/8" 5/52"

SAW 1/8"

MIG WELDING PARAMETERS

| TYPE | SIZE | AMPERAGE | VOLTS |
|------------|--------------|-----------|---------|
| Solid Wire | .035" .9 mm | 125 – 225 | 15 – 26 |
| Solid Wire | .045" 1.2 mm | 125 – 300 | 16 – 32 |
| Solid Wire | 1/16" 1.6mm | 180 – 400 | 25 – 33 |

Use DC Current with a Stick Out of
1/4"-3/4" (6mm-18mm)

RECOMMENDED SHIELDING GAS FOR MIG WELDING

100% Ar

GAS FLOW RATE

.045" 1.2 mm 40-60 CFH

1/16" 1.6mm 50-80 CFH

TYPICAL CHEMISTRY

| | | | | | | | | |
|-----|-----|-----|------|-----|------|-----|-----|-----|
| C | Mn | Si | Cr | Mo | Co | Ti | Al | Ni |
| .07 | .40 | .30 | 22.0 | 9.0 | 12.0 | .40 | 1.0 | Bal |

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PHYSICAL AND OR MECHANICAL PROPERTIES

TENSILE PROPERTIES AT ROOM TEMPERATURE

IN THE AS WELDED CONDITION

TENSILE STRENGTH 120,000 psi

YIELD STRENGTH 80,000 psi

ELONGATION 37%

REDUCTION IN AREA 39%

AS WELDED HARDNESS 22 HRC MAXIMUM

WORK HARDENS UP TO 50 HRC

HEAT TREATMENT

In general a stress relief from 1000F to 1100F is used. If an iron base alloy is used as an underlay, it must be allowed to cool to room temperature and be tempered prior to applying the CWD MOD alloy