

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 FLUX CORED WIRE

Dated: March 31, 1995

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INTRODUCTION

Eureka CWD Flux Cored Wire is a nickel based alloy filler metal. 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 CWD Flux Cored Wire is a Nickel base, Chromium, Molybdenum, Tungsten, Cobalt alloy that can be work hardened up to 35-45 HRC. The deposits are for high strength and wear high at high temperatures up to 2000F. This is derived from its solid solution strengthening and work hardening affects. The weld deposits may stress relieve itself in the form of cracking.

RECOMMENDED APPLICATIONS

Eureka CWD Flux Cored Wire weld deposits perform excellent in hot working hard facing applications such as rotary dies and flat open face dies. CHD is commonly used as an underlay for the CWD weld deposits.

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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

90% Argon, 10% Co2

92% Argon, 8% Co2

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

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TYPICAL CHEMISTRY

C	Mn	Si	Cr	Mo	Co	Ti	Al	Ni
.01	1.0	.30	16.0	6.4	12.0	2.0	1.0	Bal

PHYSICAL AND OR MECHANICAL PROPERTIES

AS WELDED 25-30 HRC

WORK HARDENS UP TO 40 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 alloy.