

Eureka Welding Alloys

2000 E. Avis Drive

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TECHNICAL DATA FOR EUREKA MARWELD 250 SOLID MIG WIRE

Dated: March 31, 1995

Revised: July 8, 2013

INTRODUCTION

Eureka Marweld 250 Solid MIG Wires are drawn, cleaned, spooled and packaged to obtain smooth wire feeding with a stable spatter free arc. These wires are designed for the most critical applications where weld metal cleanliness is most important.

METALLURGICAL CHARACTERISTICS

Eureka Marweld 250 Solid MIG Wire are a special 18% nickel alloy developed for repairing of hot working tools and dies manufactured from maraging steels. **Eureka Marweld 250** weld deposits when age hardened develop very high strengths and hardness. The alloy displays good resistance to liquid metal erosion which is seen in the die casting industry.

RECOMMENDED APPLICATIONS

Eureka Marweld 250 Solid MIG Wires are for welding on maraging steels and aluminum and zinc die casting components such as dies, cores, and ejector pins. They are also being recommended for plastic and rubber molds, forging and extrusion dies, extrusion rams and dummy blocks.

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WELDING PARAMETERS

SIZE	AMPERAGE	VOLTS
.035" 1.0mm	100 – 225	14 – 28
.045" 1.2mm	125 – 250	16 – 28
1/16" 1.6mm	180 – 400	22 – 33

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

20-60 CFH

TYPICAL CHEMISTRY

C	Mn	Si	Ni	Co	Mo	Ti	Al
.02	.30	.30	18.5	7.5	4.8	.40	.10

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PHYSICAL AND OR MECHANICAL PROPERTIES

AGING

Eureka Marweld 250 weld deposits respond to aging in an entirely different manner than the regular tool and die steels. Aging at 900F – 950F for two or three hours will increase the strength and hardness of **Eureka Marweld 250** deposits to its ultimate hardness. Additional hardness values that can be expected from Marweld deposits are as follows:

AGING OR MARAGING	
600°F.	34 – 36 HRC
700°F.	38 – 41 HRC
800°F.	42 – 45 HRC
900°F.	46 – 49 HRC
950°F.	48 – 53 HRC

TYPICAL MECHANICAL PROPERTIES	
Room Temperature Testing	925°F. aging
Tensile Strength P.S.I.	260,000
Yield Strength P.S.I.	255,000
Elongation %	11
Reduction in Area %	58
Charpy “V” Notch Ft. Lb.	20

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CHARPY "V" NOTCH IMPACT STRENGTH	
Test Temperature	Ft. Lbs.
-200°F.	15
0°F.	20
200°F.	20
400°F.	20
600°F.	25
800°F.	30
1000°F.	40