

# Eureka Welding Alloys

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## TECHNICAL DATA FOR EUREKA 434 ELECTRODE

**Dated:** March 31, 1995

**Revised:** July 8, 2013

## INTRODUCTION

**Eureka 434 Electrode** is a smooth running rutile coated stick electrode with a 4340 chemistry. The electrodes are designed for superior weldability having no spatter, a stable arc, good wet out, and easy slag removal.

## METALLURGICAL CHARACTERISTICS

**Eureka 434 Electrodes** is a AISI type 4340 low alloy steel. The as welded hardness of the deposits are typically around 41-48 HRC. The hardness is highly dependent on preheat temperature and length of time welding (cooling rate).

## RECOMMENDED APPLICATIONS

**Eureka 434 Electrodes** is for welding 4100 or 4300 series steels such as stamping dies, cast steels, plastic molds and composite dies. It is also used for overlaying and build-up of certain types of rolls and other components that must be hardened.

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## WELDING PARAMETERS

SIZE	AMPERAGE RANGE
3/32" 2.4mm	70 – 120
1/8" 3.2mm	100 – 140
5/32" 4.0mm	140 – 170
3/16" 4.8mm	170 – 225
1/4" 6.35mm	225 – 300
5/16" 7.94mm	300 – 375
3/8" 9.5mm	350 – 425

## TYPICAL CHEMISTRY

C	Mn	Si	Cr	Mo	Ni
.40	.70	.25	.80	.25	1.8

## PHYSICAL AND OR MECHANICAL PROPERTIES

### AS WELDED HARDNESS

41-48 HRC

### FULLY HARDENED

50-55 HRC