

# Eureka Welding Alloys

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## TECHNICAL DATA FOR EUREKA ULTRA TECH 505 ELECTRODE

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**Revised:** July 8, 2013

## INTRODUCTION

**Eureka Ultra Tech 505 Electrode** is a smooth running rutile coated stick electrode with a AWS 312 chemistry. The electrodes are designed for superior weldability having no spatter, a stable arc, good wet out, and easy slag removal.

## METALLURGICAL CHARACTERISTICS

**Eureka Ultra Tech 505 Electrodes** has a duplex microstructure of delta ferrite in a matrix of austenite. The large quantity of delta ferrite induces a high level of ductility which enables crack free welds in highly constrained sections of virtually all types of iron base chemistries. The weld deposits have very high strength, work harden, and have good corrosion resistance.

## RECOMMENDED APPLICATIONS

**Eureka Ultra Tech 505 Electrodes** are used for joining of all types of steels, tool steels, stainless steels, cast steels and any type of unknown steels. It has excellent strength, high impact resistance and high crack resistance. Eureka Ultra Tech 505 is a great general purpose maintenance alloy. It is often used as an underlay weld deposit.

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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	Ni
.11	1.5	.50	29.0	9.0

## PHYSICAL AND OR MECHANICAL PROPERTIES

**TENSILE STRENGTH** 116,000 psi

**YIELD STRENGTH** 80,000 psi

**ELONGATION** 25%

**WORK HARDENS UP TO** 40 HRC