

Eureka Welding Alloys

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INTRODUCTION

Eurekalloy X Bare Rod is a Cobalt base, hard facing filler metal that conforms to AMS.5385. This alloy in bare rod form is generally applied by the oxyacetylene or gas tungsten arc welding process.

METALLURGICAL CHARACTERISTICS

Chemical Composition Range for Eurekalloy X

C:	0.20 – 0.30
Mn:	1.00 max.
Si:	1.00 max.
Cr:	25.50 – 29.00
Mo:	5.00 – 6.00
W:	0.50 max.
Fe:	2.00 max.
Ni:	1.75 – 3.25
Co:	Balance

The room temperature hardness of **Eurekalloy X** (undiluted weld metal) is typically 30 - 35 HRC. This alloy is most noted for resistance to softening at elevated temperatures. Hot hardness values of 22 HRC are maintained at 1200 °F. This alloy displays good abrasion resistance due to the moderate carbide formation and its work hardening abilities. The metal to metal wear is outstanding due to the low coefficient of friction because of its ability to take a high polish. The large addition of Chromium imparts good oxidation and corrosion resistance up to 1800 °F. The impact resistance and machinability of this alloy is generally considered good.

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RECOMMENDED APPLICATIONS

Commonly used on press forging dies, hot trimming, punching and shearing dies, extrusion dies, and dummy blocks. Also used in high pressure, high temperature and corrosive environments.

OXYACETYLENE WELDING

Use a carburizing flame 3X feather to cone. Sweat the surface (just melting the surface) of the base metal before adding filler metal. This will minimize heat input and dilution.

GAS TUNGSTEN ARC WELDING (TIG)

Use direct current, straight polarity. Use lowest amperage as possible to minimize dilution.

AVAILABILITY

Size	Size mm	Standard Package
3/32" x 14" & 36"	2.4 mm x 354 & 1.42 mm	10 lbs.
1/8" x 14"	3.2 mm x 354 mm	10 lbs.
5/32" x 14"	4.0 mm x 354 mm	10 lbs.
3/16" x 14"	4.8 mm x 354 mm	10 lbs.
1/4" x 14"	6.4 mm x 354 mm	10 lbs.