

# 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](mailto:info@eurekaweldingalloys.com) Website: [www.eurekaweldingalloys.com](http://www.eurekaweldingalloys.com)

## TECHNICAL DATA FOR EUREKA 706 TIG RODS

**Dated:** March 31, 1995

**Revised:** July 8, 2013

## INTRODUCTION

**Eureka 706 TIG Rods** are cast, cut to length, then cleaned and packaged to obtain microscopically clean weld deposits. These rods are designed for the most critical applications where weld metal cleanliness is most important.

## METALLURGICAL CHARACTERISTICS

**Eureka 706 TIG Rod** is a cobalt base, hard facing filler metal that is more wear resistant and less crack sensitive than standard #6. This alloy in bare rod form is generally applied by the oxyacetylene or gas tungsten arc welding processes. The room temperature hardness is typically 40 - 45 HRC. This alloy is most noted for resistance to softening at elevated temperatures. Hot hardness values of 35 HRC are maintained at 1200 F. This alloy displays exceptional abrasion resistance due to the massive amount of carbide formation. The metal to metal wear is also 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 fair.

## RECOMMENDED APPLICATIONS

**Eureka 706** is commonly used on contact surfaces of exhaust valves, cams, saw bars, chains, crushers, petrochemical valves, and extrusion screws. Also used on hot trimming, shearing or punching dies associated with the forging and extrusion industries.

# *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](mailto:info@eurekaweldingalloys.com) Website: [www.eurekaweldingalloys.com](http://www.eurekaweldingalloys.com)

## **RECOMMENDED SHIELDING GASES**

**100% Argon**

## **GAS FLOW RATE**

**20-40 CFH**

## **OXYACETYLENE WELDING**

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

## **TYPICAL CHEMISTRY**

C	Mn	Si	Cr	Mo	Co
1.3	.30	1.0	30.0	4.5	Bal

## **PHYSICAL AND OR MECHANICAL PROPERTIES**

### **AS WELDED HARDNESS**

**40-45 HRC**

