# TIG-CO6

**Bare Cobalt Grade 6**

## INTERNATIONAL CLASSIFICATIONS

**AWS A5.13 ERCoCr-A**

## FEATURES & APPLICATIONS

TIG-CO6 is the most versatile and widely used cobalt alloy. It provides resistance to many forms of chemical and mechanical degradation over a wide temperature range. It exhibits a good balance of abrasion and impact resistance with outstanding anti-galling properties, high temperature hardness and high resistance to cavitation erosion. It is used to for valve seat material, chemical and refinery valve trim, bearing and bushing areas, zinc tanks, plastic extrusion screws, forging dies, diesel engine valves and pump shafts and sleeves. It bonds well to most weldable alloy steel and stainless.

## ALL WELD METAL ANALYSIS (TYPICAL WEIGHT %)

| C | Mn | Fe | Si | Cr | W | Ni | Mo | Co |
|---|---|---|---|---|---|---|---|---|
| 1.2 | .90 | 4.0 | .60 | 28.1 | 4.0 | .20 | .10 | Bal. |

## TYPICAL MECHANICAL PROPERTIES

| **Undiluted Weld Metal** | **Maximum Value Up to:** |
|---|---|
| Tensile Strength | 115,000 PSI (793 N/mm2) |
| Yield Strength | 60,000 PSI (414 N/mm2) |
| Elongation | 1.5% |
| Hardness | 35-48 RC |

## WELDING CURRENT & INSTRUCTIONS

**Recommended Current:** DC Straight (-) Gas: 100% Argon

| Diameter (mm) | 1/16 (1.6) | 3/32 (2.5) | 1/8 (3.25) | 5/32 (4.0) |
|---|---|---|---|---|
| Minimum Amperage | 55 | 75 | 90 | 120 |
| Maximum Amperage | 90 | 100 | 120 | 140 |
| Volts | 15-25 | 15/25 | 15-30 | 15-30 |