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# ERNiCrMo-10

| TYPICAL DEPOSIT COMPOSITION | | |
|---|---|---|
| **Element** | **AWS Spec (%)** | **Weld Metal Analysis (%)** |
| Carbon (C) | ≤ 0.015 | 0.007 |
| Chromium (Cr) | 20.0 - 22.5 | 22.2 |
| Cobalt (Co) | ≤ 2.50 | 0.027 |
| Copper (Cu) | ≤ 0.50 | 0.01 |
| Iron (Fe) | 2.0 - 6.0 | 4.03 |
| Manganese (Mn) | ≤ 0.50 | 0.19 |
| Molybdenum (Mo) | 12.5 - 14.5 | 13.9 |
| Nickel (Ni) | Balance | 55.74 |
| Phosphorus (P) | ≤ 0.02 | 0.005 |
| Silicon (Si) | ≤ 0.08 | 0.049 |
| Sulfur (S) | ≤ 0.01 | 0.001 |
| Tungsten (W) | 2.5 - 3.5 | 3.21 |
| Vanadium (V) | ≤ 0.35 | 0.036 |

## Description

Shanti Metal Supply Corporation ERNiCrMo-10 has a nominal composition of 56% Ni, 22% Cr, 13% Mo, 4% Fe, and 3% W. This filler metal is used for welding nickel-chromium-molybdenum alloys to steel or other nickel-based alloys. It is also ideal for cladding steel using GTAW, GMAW, and PAW processes. Known for excellent pitting and crevice corrosion resistance, it is widely used in petroleum, chemical, power generation, offshore, and marine industries for demanding welding applications.

| TYPICAL MECHANICAL PROPERTIES | | |
|---|---|---|
| **Property** | **AWS Spec (Min)** | **As Welded** |
| Ultimate Tensile Strength | Not Required | 105,000 psi (720 MPa) |
| Percent Elongation in 2” | Not Required | 40% |

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| TYPICAL WELDING PARAMETERS | | | | |
|---|---|---|---|---|
| **Process** | **Diameter** | **Amperage (A)** | **Volts (V)** | **Shielding Gas** |
| **GTAW** | 1/16” | 90-130 | - | 100% Ar |
| | 3/32” | 120-175 | - | 100% Ar |
| | 1/8” | 150-220 | - | 100% Ar |
| **GMAW** | .035” | 150-190 | 26-29 | 75% Ar / 25% He |
| | .045” | 180-220 | 28-32 | 75% Ar / 25% He |
| | 1/16” | 200-250 | 29-33 | 75% Ar / 25% He |
| **SAW** | 3/32” | 275-350 | 28-30 | Suitable Flux |
| | 1/8” | 350-450 | 29-32 | Suitable Flux |
| | 5/32” | 400-550 | 30-33 | Suitable Flux |

# Notice

The results are based on laboratory testing under controlled conditions per American Welding Society standards. Actual field performance may vary due to factors like electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedures, and service requirements. These results are not guarantees for field applications. The manufacturer makes no warranties, including merchantability or fitness for a specific purpose, regarding its products. Users should evaluate suitability based on their specific conditions and requirements.