# MIG CUMN13

*Old reference*: MIG Cu118

## Classification

AWS A5.7 : ERCuMnNiAl ISO 24373 : S Cu 6338 (CuMn13Al8Fe3Ni2)

## Description & Applications

Solid wire for GMAW of Copper-Aluminium, for surfacing on steels and cast iron as well as for cavitation resistant overlayers. It has high resistance to wear and marine / sea water corrosion.

**Main applications:** Ship building, chemical industry, surfacing of wearing surfaces, assemblies exposed to sea water, exchanger for petrochemical and electrical plant.

**Base materials:**

| UNS | DIN | Material N° |
|---|---|---|
| C62300 | CuAl10Fe3Mn2 | 2.0936 |
| C63000 | CuAl10Ni5Fe4 | 2.0966 |
| | G-CuAl10Fe | 2.0940 |
| | CuAl9Mn2 | 2.0960 |
| | G-CuAl8Mn | 2.0962 |

## Typical Chemical Composition ( % )

| | Al | Fe | Mn | Ni+Co | Pb | Si | Zn | O/T | Cu |
|---|---|---|---|---|---|---|---|---|---|
| Min | 7.0 | 2.0 | 11.0 | 1.5 | | | | | |
| Max | 8.5 | 4.0 | 14.0 | 3.0 | 0.02 | 0.10 | 0.15 | 0.50 | Rem. |
| Type | 8.0 | 2.3 | 12.0 | 2.1 | 0.005 | 0.04 | 0.005 | <0.50 | Rem. |

## All Weld Metal Mechanical Properties

| | $R_{p0.2}$ ( MPa ) | $R_m$ ( MPa ) | $A_5$ ( % ) |
|---|---|---|---|
| Min | - | - | - |
| Max | | | |
| Type | 400 | 650 | 20 |

## Welding Current & Instructions

| | Ø (mm) | Welding parameters | | Shielding gas |
|---|---|---|---|---|
| | | Current (A) | Voltage (V) | |
| GMAW<br>= + | 0.8<br>1.0<br>1.2 | 120 - 180<br>180 - 220<br>220 - 250 | 20 - 22<br>22 - 24<br>24 - 26 | ISO 14175:<br>I1 (100% Ar)<br>I2 (100% He)<br>I3 (Ar+ 5-30%He)<br>12-18 l/min |

Preheating of massive parts between 200°C (>6mm) up to 500°C (>15mm).

FT En-MU11-200302



**Fumes:** Consult information on MSDS, available upon request.