



CuNi18Zn27

Cupronickel Alloy

Standardization:
Cupronickel Alloy

ALLOY DESCRIPTION

A Cupronickel alloy created by combining copper and nickel in a homogeneous solid solution phase, offering exceptionally high erosion-corrosion resistance.

CHEMICAL COMPOSITION (% WEIGHT)

| Fe (%) | Mn (%) | Ni (%) | Cu (%) | Pb (%) | Sn (%) |
|---------|---------|---------|---------|----------|----------|
| max 0.3 | max 0.5 | 17 - 19 | 53 - 56 | max 0.03 | max 0.03 |

MECHANICAL PROPERTIES (MIN.)

| | |
|----------------|-----------------|
| Elongation (A) | 40 |
| Hardness (HB) | 90 - 120 |

PHYSICAL PROPERTIES

| | |
|---------------------|---------------------------------|
| Density | 8.90 [kg/dm³] |
| Melting Temperature | ~1100 - 1150 [°C] |
| Elk. Conductivity | ~4 - 5 [MS/m] |
| Elasticity Modulus | 140 [kN/mm²] |

CASTING / MANUFACTURING METHODS

| | |
|----|--------------------------------|
| EK | Extrusion (Rod/Profile) |
| GS | sand casting |
| GM | Permanent mold casting |
| GZ | Centrifugal casting |

AREAS OF APPLICATION

| | |
|------------------------------------|------------------------------|
| Heat Exchanger Tubes | Seawater Valves/Pumps |
| Offshore Platform Equipment | |
| Desalination Plants | Ship Condensers |

MACHINABILITY & CHARACTERISTICS

Unmatched defense against seawater, acids, and biofouling. A key engineering material with long service lives in ship cooling pipes and offshore platforms.

The technical information specified in this document reflects the standard reference values of international EN and DIN norms. Deviations may be observed depending on final production conditions.

CORUM BRONZE

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