

CZ112 (CW712R)

Technical Datasheet



Service. Quality. Value.

Naval Brass

Applications

- Marine components
- Fasteners in corrosion resistant service
- Subsea hardware applications
- Heat exchangers
- General machined components
- High strength cold headed products

Product Description

CZ112 is commonly referred to as a Naval brass and is used typically in a wide range of marine and subsea applications. This brass alloy offers superior strength and corrosion resistance and offers good property retention at cryogenic temperatures. With excellent hot formability and very good corrosion resistance, the material is used extensively in the marine, oil & gas and petrochemical sector. The composition of the alloy, with 60% copper, 39% zinc and the important addition of 1% tin results in improved corrosion resistance and mechanical properties.

Availability

Bar

Alloy Attributes

- Improved corrosion resistance
- Better strength levels than alpha brasses
- Excellent hot formability
- Harder and stronger duplex structure

Related Material Specifications

CZ112/CW712R correspond to CuZn36Sn1Pb but may not be a direct equivalent

Machinability

The machinability of alloy CZ112/CW712R is 60 to 70% compared to CZ121/CW614N Brass which is rated as 100.

Weldability

| | |
|---------------------------------|-----------|
| Soldering | Excellent |
| Brazing | Good |
| Oxy-acetylene welding | Good |
| Gas-shielded arc welding | Fair |
| Resistance welding: Spot & Seam | Fair |
| Butt | Good |

Corrosion Resistance

Very good

Chemical Composition (weight %)

| Weight (%) | Cu | Ni | Sn | Pb | Fe | Zn | Other |
|------------|------|------|------|------|------|---------|-------|
| min. | 61.0 | | 1.00 | 0.20 | | Balance | |
| max. | 63.0 | 0.20 | 1.50 | 0.60 | 0.10 | Balance | 0.20 |

Mechanical Properties

| | Min. | Max. |
|------------------|---------|---------|
| Proof Stress | 160 MPa | 200 MPa |
| Tensile Strength | 340 MPa | 400 MPa |
| Hardness Brinell | 80 HB | 135 HB |

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

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Quality & Testing:



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