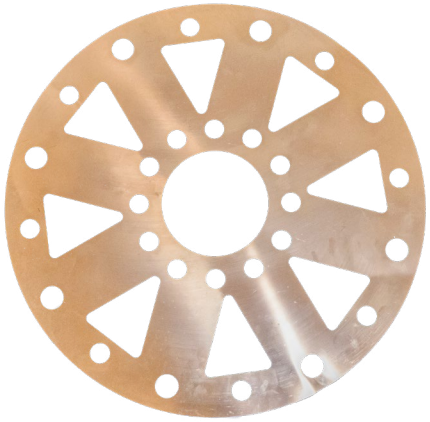
BRASS CZ108/ CW508L

PRODUCT DESCRIPTION



Brasses are alloys of Copper and Zinc. They may also contain small amounts of other alloying elements to impart advantageous properties. Brasses have high corrosion resistance and high tensile strength. They are also suited to hot forging. Free machining brass sets the standard for machining, by which other metals are compared.

Brasses are divided into two classes. The alpha alloys, with less than 37% zinc, and the alpha/beta alloys with 37-45% zinc. Alpha alloys are ductile and can be cold worked. Alpha/beta or duplex alloys have limited cold ductility and are harder and stronger. CZ108 / CW508L, is an alpha alloy. CZ108/CW508L is a high purity cold forming brass. It is used when severe bending properties are required. It can be machined but only with slow speeds and very light feeds.

APPLICATIONS

- Scientific Applications
- Radiators
- Heat Exchangers
- Decorative

CHEMICAL COMPOSITION (CW508L BRASS / EN 1652:1997)

ELEMENT	% PRESENT
Copper (CU)	62.00 – 64.00
Nickel (Ni)	0.0 – 0.30
Others (Total)	0.0 – 0.20
Lead (Pb)	0.0 – 0.10
Iron (Fe)	0.0 – 0.10
Tin (Sn)	0.0 – 0.10
Aluminium (Al)	0.0 – 0.05
Zinc (Zn)	Balance

ALLOY DESIGNATIONS

CZ108 / CW508L correspond to the following designations but may not be a direct equivalent:

- UNS C27200
- ISO CuZn37

SUPPLIED FORMS

CZ108 / CW508L, is typically supplied as Half Hard Tube and Half Hard Sheet.

- Sheet
- Tube

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GENERIC PHYSICAL PROPERTIES

PROPERTY	VALUE
Density	8.44 Kg/m3
Melting Point	9160C
Thermal Expansion	20.5 x 10.6 /K
Modulus of Elasticity	103.4 GPa
Thermal Conductivity	116 W/m.K

MECHANICAL PROPERTIES

EN 1652:1997 Sheet (0.2mm to 5.00mm)	
PROPERTY	**VALUE**
Proof Stress	110 – 500 MPa
Tensile Strength	300 – 550 MPa
Elongation	38 - 3%
Hardness Vickers	55 to 180 HV

Mechanical properties vary widely according to condition (soft / half-hard / etc.)

CORROSION RESISTANCE

The corrosion resistance of CZ108 / CW508L is good to excellent in most environments. It is not suited for use with acetic acid, moist ammonia or ammonia compounds, hydrochloric acid and nitric acid.

COLD WORKING

CZ108 / CW508L, is excellent and it can be readily drawn.

HOT WORKING

Fabrication is rated as fair.

WELDABILITY

Soldering and brazing of CZ108 / CW508L are both rated as “excellent”. Oxyacetylene welding is “good” and gas shielded methods are only “fair”. Resistance flash butt-welding may also be used.

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