SPECIFICATIONS

Commercial	CZ108

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
CZ108 / CW508L is typically used in:
Scientific Applications
Radiators
Heat Exchangers
Decorative

CHEMICAL COMPOSITION

EN 12449:2012
CW508L Brass

Element	% Present
Copper (Cu)	62 - 64
Nickel (Ni)	0.3 max
Iron (Fe)	0.1 max
Lead (Pb)	0.1 max
Others (Total)	0.1 max
Tin (Sn)	0.1 max
Aluminium (Al)	0.05 max
Zinc (Zn)	Balance

ALLOY DESIGNATIONS

CZ108 / CW508L corresponds 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
- Tube

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	8.44 g/cm³
Melting Point	916 °C
Thermal Expansion	20.5 x10^{-6} /K
Modulus of Elasticity	103.4 GPa
Thermal Conductivity	116 W/m.K

MECHANICAL PROPERTIES

EN 12449:2012
Tube
Up to 5.00mm Wall Thickness

Property	Value
Proof Stress	320 Min MPa
Tensile Strength	440 Min MPa
Hardness Vickers	115 Min HV
Hardness Brinell	110 Min HB
Elongation A	10 Min %

Mechanical properties listed are for material condition R440 / H115

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

Cold working of 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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CONTACT

Address:	Please make contact directly with your local service centre, which can be found via the Locations page of our web site
Web:	www.aalco.co.uk

REVISION HISTORY

Datasheet Updated	18 July 2019

DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

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Advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. All transactions are subject to the Company's current Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.