

CW501L / CZ101 is an alpha brass consisting of approximately 90% copper and 10% zinc. Also known as Gilding Metal the CW501L / CZ101 is primarily offered as a sheet grade due to its excellent cold working properties.

The make-up of CW501L / CZ101 means it is not generally susceptible to dezincification or stress corrosion and due to its formability and its attractive rich golden colour it is widely used for architectural and decorative applications. It is also readily enamelled, soldered and brazed.

Related Specifications

CW501L	BS2870: CZ101
C22000	CuZn10

Chemical Composition

Copper	89.0-91.0%
Lead	0.05% max
Iron	0.10% max
Zinc	Rem
Others	0.40% max

Key Features

- Excellent cold formability
- High resistance to stress corrosion and dezincification
- Excellent base metal for vitreous enamelling

Typical Physical Properties

Melting Point	1045°C
Density	8.80 g/cm ³
Specific Heat	376 J/Kg°K
Thermal conductivity (RT)	188 W/m°K
Thermal expansion coefficient (20-200°C)	18 x 10 ⁻⁶ / °C
Electrical conductivity	44 % IACS
Electrical Resistivity	0.039 ohm mm ² /m

Fabrication Properties

Hot Working Temperature Range	750-900°C
Hot Formability	Good
Cold Formability	Excellent
Cold Reduction Between Anneals	90%
Machinability rating (free cutting brass = 100)	25 %
Annealing Temp. Range	425-600°C

Stress Relieving Temp. Range	200-300°C
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Joining Methods

Soldering	Excellent
Brazing	Excellent
Oxy-acetylene welding	Good
Gas-shielded arc welding	Good
Resistance welding: Spot and Seam	Not Recommended
Butt	Good

Typical Applications

CW501L / CZ101 is most commonly utilized for architectural applications including decorative metalwork, showcase and window fittings, roofing panels, grillwork, weather-strip, cold-formed angles and channels, ornamental pressing and trim. It is also used for decorative items and jewellery including cosmetic compacts, cases, costume jewellery, emblems, medallions and other items requiring vitreous enamelling or for hardware such as, rivets, screws, wire gauzes and slide / zip fasteners.

This technical information is given by Holme Dodsworth Metals without charge and the user shall employ such information at their own discretion and risk. For more detailed technical advice on temper selection, fabrication, joining, machining, physical and mechanical data please contact us as space does not permit the listing of every feature of the material.