

CW608N / CZ120 is a duplex brass that contains a 2% lead addition finely dispersed throughout the microstructure to offer free cutting properties. Primarily a sheet grade it is often referred to as engraving brass due to its excellent machining qualities.

Traditionally used for machine engraved nameplates and signs it also offers a good combination of strength, corrosion resistance and hot formability. This combination of attributes make it very desirable for many applications including architectural metal work and decorative items. If rod material is required in addition to the sheet grade CW617N / CZ122 is the equivalent grade. This is also available in a comprehensive range of sizes in round and hexagon from Holme Dodsworth stocks.

Related Specifications

CZ120	C37700
CW608N	CuZn39Pb2

Nominal Composition

Copper	58.0-60.0%
Lead	1.5-2.5%
Zinc	Rem
Others	0.3% max

Key Features

- Very good hot forming properties
- Good Corrosion resistance
- Excellent free cutting properties

Typical Physical Properties

Melting Point	895°C
Density	8.4 g/cm ³
Specific Heat	380 J/Kg°K
Thermal conductivity (RT)	117 W/m°K
Thermal expansion coefficient (20-200°C)	20 x 10 ⁻⁶
Electrical conductivity	27% IACS
Electrical Resistivity	0.064 ohm mm ² /m

Fabrication Properties

Hot Working Temperature Range	650-775°C
Hot Formability	Excellent
Cold Formability	Limited
Machinability rating (free cutting brass = 100)	85%
Annealing Temp. Range	450-600°C
Stress Relieving Temp. Range	250-350°C

Joining Methods

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

Typical Uses:

Traditional uses for CZ120 / CW608N include Signs, nameplates, door furniture, window fittings, valve and valve parts, decorative metalwork, clock and instrument casings, gears, cams and 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.