Data Sheet

ENGRAVING BRASS - CZ120/CW608N

CW608N / CZ120 is a duplex phase brass, containing 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 makes 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 for Metelec.

Key Features:
Very good forming properties
Good corrosion resistance
Excellent free cutting properties

Related Specifications:	
CZ120	C37700
CW608N	CuZn39Pb2

Chemical Composition:	
Copper	58.0 - 60.0%
Lead	1.5 - 2.5%
Zinc	Rem
Other	0.3% max

Typical Uses:

Traditional uses for CZ120 / CW608N include signs, nameplates, doors furniture, window fittings, valve and valve parts, decorative metalwork, clock and instrument casings, gears and fasteners.

Typical Physical Properties:	
Melting point	895°C
Density	8.4 g/cm³
Specific heat	380 J/Kg °K
Thermal conductivity	117 W/m°C
Thermal expansion coefficient (20 - 200°C)	20 x 10 - 6 per °C
Electrical conductivity	27% IACS
Electrical resistivity	0.064 ohm mm²/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 butt	Not recommended - Fair

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