

# CZ120 (CW612N)

## Technical Datasheet



Service. Quality. Value.

### Engraving Brass

#### Applications

- Nameplates
- Valves
- Gears
- Fasteners
- Signs
- Decorative metalwork

#### Product Description

CZ120 is commonly known as an engraving brass which is primarily available in sheet form. The alloy has excellent free-cutting properties by virtue of a 2% addition in lead content. With a good combination of strength and corrosion resistance, this alpha beta brass also has good hot formability. This alloy however, is not suitable for acid etched work due to its duplex phase structure.

#### Corrosion Resistance

Good

#### Availability

Sheet

#### Alloy Attributes

- Good corrosion resistance
- Excellent hot formability
- Free-cutting characteristics
- Excellent machining qualities

#### Related Material Specifications

- C37700 • CW608N
- BS2870 • 2.0380
- NF A51-101 • CuZn38Pb2

#### Weldability

Soldering	- Excellent
Brazing	- Good
Oxyacetylene welding	- Not recommended
Gas shielded arc welding	- Not recommended
Resistance welding: Spot & Seam	- Not recommended
Butt	- Fair

#### Chemical Composition (weight %)

Weight (%)	Cu	Pb	Zn	Other
min.	58.0	1.5		
max.	60.0	2.5	Rem	0.3% max

#### Mechanical Properties

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

#### Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

#### UK Service Centres:

Smiths Belfast 02895 908 897  
Smiths Biggleswade 01767 604 704  
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#### Quality & Testing:



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