

CC491K / LG2 is the most commonly used leaded gunmetal offering excellent machining properties and a very good wear resistance. It is a medium strength alloy with good pressure tightness, is resistant to dezincification and offers a reasonable corrosion resistance in sea water and brine.

CC491K / LG2 is mainly utilised for pump and valve components (bodies and fittings) and is ideally suited for bearings having light loads and low to medium speeds under adequate lubrication or for very light duty gears when loading is negligible.

### Related Standards

BS1400 LG2	CC491K
C83600	CuSn5Pb5Zn5

### Chemical Composition (nominal)

Copper	85.0%
Tin	5.0%
Lead	5.0%
Zinc	5.0%
Phosphorus	0.025%
Others	0.5% max

### Mechanical Properties (Minima all sizes Continuous Cast)

UTS	270 N/mm <sup>2</sup>
0.2% Proof Strength	100 N/mm <sup>2</sup>
Elongation	13%
Hardness	75 HB

### Key Features

- High wear resistance
- Good corrosion resistance
- Excellent Machinability
- Good pressure tightness

### Typical Physical Properties

Melting Point	1010°C
Density	8.83 g/cm <sup>3</sup>
Thermal conductivity (RT)	71.9 W/m°K
Thermal expansion coefficient (20-200°C)	18 x 10 <sup>-6</sup> / °C
Electrical conductivity	15% IACS
Modulus of Elasticity	93 GPa

## **Fabrication Properties**

Hot Formability	Not Recommended
Cold Formability	Not Recommended
Machinability rating (free cutting brass = 100)	85%
Stress Relieving Temp. Range	260°C (1hr per inch thickness)
Maximum operating temperature	230°C

## **Joining Methods**

Soldering	Excellent
Brazing	Good
Oxy-acetylene welding	Not recommended
Gas-shielded arc welding	Not recommended

## **Typical Uses**

Valve bodies, gears, bearings, valve bodies, pump trim and other general engineering components requiring good machinability and good wear resistance.

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