HOLME DODSWORTH METALS LIMITED
www.holmedodsworth.com

BS1400:LB4 is a leaded Bronze LB4 containing approximately 9% lead and 5% Tin. These additions create an alloy with excellent machining properties, good wear properties, a medium strength and a good corrosion resistance. It will withstand some weaker acids in contaminated waters.

Suitable for bearings where low to moderate loads are used the LB4 is also ideal for applications with little lubrication or possible miss-alignment for short periods. The LB4 is most suitable for mild steel shafts with low loadings or hard shafts with moderate or low loads and speed.

Related Specifications

BS1400: LB4	AS1565 93500
ASTM B505 - C93500	

Nominal Composition

Cu	Remainder	Sn	4.0 - 6.0%
Zn	2.0% max	Pb	8.0 - 10.0%
P	0.10% max	Ni	2.0% max
Sb	0.5% max	Fe	0.25% max
Others	0.5% max		

Mechanical Properties (Continuous Cast)

Ultimate Tensile Strength	230 N/mm^2
0.2% Proof Strength	130 N/mm^2
Elongation	9 %

Key Features

- Excellent machinability
- Good corrosion resistance
- High wear resistance
- Reasonable strength levels

Typical Physical Properties

Density	8.87 g/cm^3
Melting Point	1000^{0}C
Electrical Conductivity	15% IACS
Coefficient of Thermal Expansion 20-300^{0}C	18 x 10-6
Thermal Conductivity	70 W/m^{0}C

Fabrication Properties

Stress Relieving temperature	260^{0}C
Max operating temperature	230^{0}C

Hot working temperature	Not recommended
Hot formability	Not recommended
Cold Formability	Not recommended
Machinability Rating	70%

Joining Methods

Soldering	Good
Brazing	Good*
MIG Welding	Not recommended
TIG Welding	Not recommended
Resistance Welding	Not recommended

* Since brazing is performed at temperatures within the hot short range, strain must be avoided during the brazing and cooling of this alloy.

Typical Uses

The main application areas for the LB4 material are low load and low speed bearings for mild steel shafts.