

Product Information Sheet

ISSUE A

ALLOY LB4

A. W. Fraser Alloy LB4 is a leaded tin bronze conforming to the requirements of B.S. 1400 - 1985 alloy LB4.

LB4 has excellent machining properties, medium strength and good corrosion resistance and will withstand mild acids as found in mine water.

Bearings manufactured from LB4 are suitable for low to moderate loads where there may be slight misalignment or doubtful lubrication for short periods. Adequate backing for the bearing should be provided. LB4 is suitable for mild steel shafts with low loadings or hard to moderately hard shafts with moderate or low loads and speed.

The composition of A. W. Fraser alloy LB4 is strictly controlled as are the casting conditions. Alloy LB4 products are manufactured using the latest continuous and centrifugal casting technology.

ALLOY LB4 - LEADED TIN BRONZE

SUMMARY OF PROPERTIES

Chemical Composition - percent

Element		Nominal
Tin	Sn	4.0 - 6.0 5.0
Lead	Pb	8.0 - 10.0 9.0
Zinc	Zn	2.0 maximum
Nickel	Ni	2.0 maximum
Iron	Fe	0.25 maximum
Aluminium	Al	0.01 maximum
Phosphorus	P	0.10 maximum
Antimony	Sb	0.5 maximum
Copper	Cu	Balance
Total Impurities		0.5 maximum

Mechanical Properties [Typical]

Yield Strength
Ultimate Tensile Strength
Elongation
Typical Hardness

Continuous Cast

130 MPa (18,800 psi)
230 MPa (33,300 psi)
9% minimum
60-80 BHN

Compressive Strength 0.001 inch set/inch
Specific Gravity
Machinability Rating (Free Machining Brass=100)
Max. Operating Temperature
Stress Relieving Temperature
Time at Temperature

90 MPa (13,000 psi)
9.0
70
230°C (446°F)
260°C (500°F)
1 hour per 25mm of section thickness

Comparative Specifications

BS1400 - LB4; AS1565 93500; ASTM B505 - C93500