Product Information Sheet

ISSUE D

ALLOY 660

A. W. Fraser Alloy 660 is a general purpose leaded tin bronze bearing and bushing material conforming to the requirements of UNS C93200.

660 has excellent machining properties, good hardness, strength and wear resistance with excellent antifrictional qualities. The alloy is not subject to dezincification and has reasonable corrosion resistance to seawater and brine making it suitable for pump and valve components.

660 is suitable for bearings having medium loads and speeds with adequate lubrications.

The composition of A. W. Fraser alloy 660 is strictly controlled as are the casting conditions. Alloy 660 products are manufactured using the latest continuous and centrifugal casting technology.

ALLOY 660 - LEADED TIN BRONZE (83-7-7-3) SUMMARY OF PROPERTIES

Chemical Composition - percent

Element			Nominal
Tin	Sn	6.3 -7.5	7.0
Lead	Pb	6.0 - 8.0	7.0
Zinc	Zn	2.0 - 4.0	3.0
Nickel	Ni	1.0 maximum	
Iron	Fe	0.20 maximum	
Aluminium	Al	0.005 maximum	
Antimony	Sb	0.35 maximum	
Phosphorus	P	.15 maximum	
Copper	Cu	Balance	

Mechanical Properties [Typical]	Continuous Cast	Centrifugal Cast
Yield Strength	150 MPa (22,000 psi)	135 Mpa (20,000 psi)
Ultimate Tensile Strength	300 MPa (43,000 psi)	240 Mpa (35,000 psi)
Elongation	20%	20%
Typical Hardness	60 BHN	60 BHN

Specific Gravity	8.9
Machinability Rating (Free Machining Brass=100)	70
Max. Operating Temperature	230^{O}C (450^{O}F)
Stress Relieving Temperature	260^{O}C (500^{O}F)
Time at Temperature	1 hour per 25mm of section thickness

Comparative Specifications

AS1565 C93200; ASTM B505, B271 - C93200; SAE 660