Product Information Sheet

ALLOY 905

A. W. Fraser Alloy 905 is a Tin Bronze or "G" Bronze conforming to the requirements of ASTM B505/B271 alloy C90500

905 has good machining properties, medium hardness, good strength and good wear resistance. This material has good corrosion resistance, especially to seawater, making it suitable for marine applications requiring a higher strength material.

Bearings manufactured from 905 require good reliable lubrication and a hard shaft, and are suitable for medium to heavy loadings at low speed.

The composition of A. W. Fraser alloy 905 is strictly controlled as are the casting conditions. 905 products are manufactured using the latest continuous and centrifugal casting technology.

ALLOY C90500   - GUNMETAL/ "G" BRONZE   SUMMARY OF PROPERTIES

Chemical Composition - percent

Element

Tin	Sn	9.0 – 11.0
Lead	Pb	0.30 maximum
Zinc	Zn	1.0 – 3.0
Nickel	Ni	1.0 maximum
Iron	Fe	0.20 maximum
Aluminium	Al	0.005 maximum
Phosphorus	P	0.1 maximum
Antimony	Sb	0.2 maximum
Copper	Cu	86.0 – 89.0

Mechanical Properties   [Typical]

	Continuous Cast	Centrifugal Cast
Yield Strength	172 MPa (24,500 psi)	130 MPa (18,500 psi)
Ultimate Tensile Strength	305 MPa (44,000 psi)	280 MPa (40,500 psi)
Elongation	11%	20%
Typical Hardness	100 BHN	80 BHN

Compressive Strength 0.1% Permanent Set	275 MPa (39,500 psi)
Specific Gravity	8.72
Machinability Rating (Free Machining Brass=100)	30
Max. Operating Temperature	230°C (446°F)
Stress Relieving Temperature	260°C (500°F)
Time at Temperature	1 hour per 25mm of section thickness

Comparative Specifications

BS1400 - G1; AS1565 - C92610; SAE 62*; JIS (Japan) H5121 – CAC403C (BC3)*;
DIN 1705 - CuSn10Zn*; ISO 1338 - CuSn10Zn2 (Note: * = similar, but not identical)