

# Product Information Sheet

**ISSUE E**

## ALLOY 673 Extrusions

A W Fraser Ltd Alloy 673 is a leaded manganese-silicon bronze conforming to the requirements of UNS 67300. Alloy 673 has excellent wear due to the formation of manganese silicide particles.

This alloy is available in an extruded and drawn form.

All extrusions are manufactured from continuous cast billet stock ensuring uniform dispersion of lead particles and freedom from porosity.

### ALLOY 673 - Manganese Silicon Bronze

### SUMMARY OF PROPERTIES

#### Chemical Composition - percent [Typical 1" – 2" diameter]

Element		
Copper	Cu	60.5
Lead	Pb	1.2
Manganese	Mn	2.3
Silicon	Si	1.1
Iron	Fe	<0.35
Tin	Sn	<0.3
Zinc	Zn	Balance

#### Typical Drawn Properties

##### Geometry Dependent

Yield Strength  
Ultimate Tensile Strength  
Elongation

##### [<2" diameter]

340 MPa (49,000 psi).  
470 MPa (68,000 psi).  
20 %.

##### [>2" diameter]

275 MPa (40,000 psi).  
440 MPa (63,000 psi).  
20 %.

##### Geometry Independent

Typical Hardness  
Specific Gravity  
Thermal conductivity  
Specific Heat  
Thermal Expansion  
Machining properties

130 - 160 BHN. (74 - 84 Rockwell B)  
8.3  
58 BTU (sqft-ft-hr-f)  
0.09 BTU/lb/°F at 68°F  
0.000011 Per °F from 68°F to 572°F  
Good

Note: Mechanical properties will vary depending on diameter or cross section area of extrusion.

