THAMES STOCKHOLDERS
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2011 Aluminium

FREE MACHINING ALUMINIUM ALLOY

Product Overview

Known as an 'FMA' alloy (or free machining alloy), **2011 aluminium** offers excellent general machinability and is suitable for automatic lathes.

The material's corrosion resistance is poor, so we recommend anodising, which offers additional surface protection. The alloy represents a highly versatile material that effectively produces intricate, complex parts. In such instances, welding is not required, which is fortunate since the alloy suffers from poor overall weldability. 2011 lends itself well to engineering applications requiring repetitive machining and may replace free-machining brass alloys without needing tooling changes.

Key Features

- Excellent machinability
- Can produce highly complex, detailed parts
- Suitable for use on automatic lathes
- Poor corrosion resistance - anodising may be needed

Applications

- Automotive components
- Machined parts, fasteners and fittings
- Weapons and munitions

Material Specifications:

AlCu6BiPb, A92011, CB60, FC1, 3.1655

* Chemical Composition (weight, %)

	Si	Fe	Cu	Pb	Bi	Zn	Al	Other
Min.			5.00	0.20	0.20		Bal	
Max.	0.40	0.70	6.00	0.60	0.60	0.30	Bal	0.15

* Properties as per BS EN 573-3

Physical Properties

Melting Point	535°C
Thermal Conductivity	138 W/m.K
Modulus of Elasticity	71 GPa
Density	2.82 Kg/m^3
Thermal Expansion Co-efficient	23 x10^{-6}

* Mechanical Properties

	T4 (<200mm)	T6 (<75mm)
Tenslie Strength min,	275 MPa	310 MPa
Proof Strength min,	125 MPa	230 MPa
Elongation min,	12%	6%
Hardness, typical,	95 HBW	110 HB

* Properties as per BS EN 755-2

Availability

- Bar

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