



Excellfluid AL

A water-mix metalworking fluid designed for the machining of aluminium alloys

Product code: S047

Product Description:

Although the use of aluminium alloys in engineering has increased significantly over recent years, the variety of alloying materials used and the severity of machining operations employed has increased in complexity more recently.

More typically, high stock removal rates are employed in finish to size operations. In such environments the cutting fluid has to withstand high rates of flow and be capable of providing outstanding hydrodynamic lubrication.

Excellfluid AL has been designed with these more recent trends in mind, particularly where machining performance is critical on the more difficult high silicon alloys. Excellfluid AL is unique in its provision of lubrication in extreme pressure situations without the use of traditional surface active components. The design approach taken has produced a product which is particularly suitable for the aerospace industry where inter-granular corrosion is of concern, whilst providing a fluid which gives maximum protection from staining on high magnesium and copper alloyed materials.

Fluids providing such levels of performance have traditionally been more susceptible to foam generation in low hardness waters where associated machining operations demand high coolant flow and pressure. The use of intrinsically low foaming components ensures that foaming is kept under control even in waters of less than 20 ppm total hardness.

Application:

Excellfluid AL should not be used at concentrations less than its specified break point.

Maximum machining performance can be achieved at concentrations up to 12% however, most operations will be completed with concentrations in the range 4 - 10%.

Typical Test Data:

Appearance of Concentrate	Amber liquid
Specific Gravity @ 20°C	0.937
pH @ 3% (Distilled Water)	9.0
Cast Iron Corrosion B.P. (%)	3.0
Aluminium Stain Tests – 7 Day Clear Pass in 200ppm Water	L93 / L97 / L117 / L118 / L168 / Lithium Alloy / 7010
Refractometer Correction Factor	1.2