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SPARCOOL Bio 70XAL² LU 330

A water-mix metalworking fluid designed for the dedicated machining of aluminium alloys. Free from short chain Chlorinated Paraffin, Terazine free, Boron Free

Background

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.

Sparcool Bio 70XAL² has been designed with these more recent trends in mind, particularly where machining performance is critical on the more difficult high silicon alloys. Sparcool Bio 70XAL² 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 p.p.m. total hardness.

Specification

| | |
|----------------------------------|----------------------|
| Appearance of Concentrate | Amber liquid |
| Specific Gravity @ 20°C | 0.925 |
| pH @ 5% (Distilled Water) | 8.8 |
| Anti-corrosion by IP 125 @3% dil | 0/0-0 (No corrosion) |
| De-foam in 50p.p.m. water | Nil after 10 seconds |
| Refractometer Correction Factor | 1.0 |
| Appearance of Concentrate | Amber liquid |

Application

Sparcool Bio 70XAL² should not be used at concentrations less than its specified break point. Maximum machining performance can be achieved at concentrations up to 10% however, the majority of operations will be completed with concentrations in the range 3 - 6%.

Note The life and performance of any water-mix metalworking fluid is affected greatly by external factors such as water quality, atmospheric contamination and ingress of machine oils etc. Maximum benefit and lowest operating costs are achieved by correct monitoring and control

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