

DURASOL HD-M (Magnesium Fluid)

Durasol HD-M has been designed to remain stable in the machining of highly reactive alloys where the in-use emulsion must be capable of performing in the presence of high levels of conductivity and magnesium salts.

FEATURES & BENEFITS

- ✓ Excellent Medium Severity Performance Characteristics
- ✓ Chlorine Free
- ✓ Secondary Amine Free
- ✓ NP Ethoxylates Free Multi-Functional
- ✓ Good levels of Boundary Lubrication
- ✓ Specifically Designed for machining Magnesium



CREATED TO TAKE ON THE DIFFICULT

Suitable for use in both soft and hard water and for the use on a wide range of difficult materials. The product is truly a 'multi-metal' fluid and is the perfect choice for all modern manufacturing, including automotive, aerospace and high end manufactured components.

DESIGNED TO GIVE OUTSTANDING PERFORMANCE

Although the use of magnesium alloys in engineering has increased significantly over recent years, the variety of alloying materials utilised and the severity of machining operations employed have 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.

Durasol HD-M produces a micro emulsion which allows for excellent visibility for the machine operator and has a low foaming tendency which allows for use in the most arduous modern day machining centres

MULTI FUNCTIONAL AS STANDARD

Durasol GP has been developed to exhibit full multi-metal compatibility and is suitable for use on critical aerospace materials and alloys that are used in today's aircraft industry. To be used in both soft and hard water conditions from 50ppm – 500ppm

MATERIALS & PERFORMANCE

Material types	Performance rating	Applications	Dilution
Titanium		Tapping	8-10%
Aluminium		Milling	5-7%
Aero aluminium alloys		Turning	5-7%
High alloy/stainless steel		Reaming	8-10%
Copper/brass		Sawing	5-7%
Cast iron		Drilling	8-10%
Ferrous Materials		Grinding	4-6%

TYPICAL PHYSICAL PROPERTIES

Appearance	Amber liquid
Emulsion Type	Micro - white
Foaming Tendency @ 5% emulsion in 50ppm water	Nil foam after 5 seconds
Specific Gravity at 20°C	1.030 typical
pH @ 5%	9.1 typical
Refractometer Factor	2.0
IP 287 Corrosion Break Point, % Volume:	2.0
Reichert Lubricity Characteristics at 10% dilution;	
Noise Reduction (metres)	39
Load Bearing Capacity (Kg/mm ²)	1.55

PRODUCT MANAGEMENT

Teklube advise the use of automated mixing systems. If mixing manually, always add the concentrate to the water with maximum agitation, if water is added to the concentrate, the emulsions may prove unstable. Avoid mixing with very cold concentrate or water. Check emulsion strength using a calibrated refractometer. Details of where to purchase equipment and how to use it are available from the Teklube Technical Department.

PRODUCT MANAGEMENT

The working concentration should be carefully controlled and monitored on a daily basis as higher and lower working concentrations have health and safety implications. Machines should be cleaned out regularly. Fluid and particulate contaminants should be kept to a minimum. This is important especially in terms of bacterial control and is in line with the latest advice from government and professional sources. Detailed reference sources are quoted in the

STORAGE

- ✓ Store in a cool, well ventilated area
- ✓ Store inside, between 10°C and 30°C
- ✓ Store away from direct heat and frost
- ✓ Avoid water collecting on the barrel top
- ✓ Shelf life 12 months from the date of manufacture