



Microtrend HD

Heavy Duty Cutting Fluid

Description; Description

Microtrend HD is a long life, extra heavy duty water miscible cutting fluid concentrate that forms a stable opaque microemulsion on dilution with water. Microtrend HD complies with the latest trends in Health and Safety legislation for Water Miscible Cutting Fluids.

Containing extremely high levels of machining and lubricity additives, Microtrend HD has been formulated to provide benefits of prolonged tool life, enhanced surface finish and higher production rates in arduous machining applications.

Applications; Applications

Microtrend HD is recommended for use when conventional general purpose water miscible fluids have proved to be incapable of providing the required machining performance, tool life or surface finish. Microtrend HD can be used for certain threading, broaching and gear cutting applications on medium and high tensile steels, as well as difficult milling and drilling operations. The potential use of an aqueous based fluid in these types of operations, traditionally reserved for neat oils, brings the added benefit of improved cooling performance and therefore to higher production rates. The use of Microtrend HD is not only restricted to the machining of ferrous metals. The additive blend also encompasses the heavy duty machining of more ductile non ferrous materials, such as alloys of aluminium and copper. Suggested dilution ratios vary according to the application and severity of the operating conditions:

Ferrous metals
Milling, turning, sawing & boring 3-5%
Grinding, deep hole drilling 4-6%

Gear cutting 5-10%
Broaching 10-15%

Nonferrous metals
Milling, turning 4-6%
Tapping, threading 5-10%

Emulsion Preparation - to ensure that satisfactory results can be obtained using Microtrend HD, especially when replacing a polluted fluid, it is recommended that both the sump and the lines are disinfected and cleaned prior to filling using BP System Cleaner. The system should then be thoroughly rinsed to avoid potential foaming problems.

The emulsion is prepared by the simple addition of the concentrate to clean tap water under gentle agitation. Best results are obtained using a mixing device.

Emulsion Monitoring - the concentration of Microtrend HD can be checked quickly and easily by using a pocket refractometer and by correlating its reading with the relevant concentration-refractometer graph.

Main Benefits; Main Benefits

- Excellent sump life
- Long term emulsion stability
- Tolerant to variations of water source
- Excellent cooling power at the tool/workpiece interface
- Synergistic blend of non chlorine containing machining additives

- Capable of machining ferrous and non ferrous metals in difficult machining operations
 - Easy to monitor and maintain
 - Economical compared to neat oils
 - Pleasant to work with
 - Contains no added nitrite, sulphur or silicone
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Storage; Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration

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of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.; of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

Health, Safety and Environment; Health, Safety and Environment

Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.; Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.

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Typical Characteristics; Typical Characteristics

Test Methods; Test Methods	Units; Units	Grade ;; Grade :
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Microtrend HD**Concentrate**

Appearance brown

Density at 15°C ISO3675/ASTMD1298 kg/m³ 1000

Kinematic Viscosity at 20°C ISO3105/ASTMD445 mm²/s 310
at 40°C 100

Mineral Oil Content % 20

Dilution

Dilution Appearance off white

pH value (5.0% dil) 9.2

Herbert Corrosion Test IP 125 0/0-0
(2.5% dil)

Filter Paper Corrosion Test IP 287 % nil
(3.0% dil)

Refractometer Ratio 1.2

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.; The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

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