



Industrial
Lubricants



Automotive
Lubricants



Biodegradable
Lubricants



Agricultural
Lubricants



Cleaning &
Maintenance



Greases &
Pastes



Foodsafe
Lubricants



Heritage Oils



Lubrication
Equipment



Metalworking
Fluids



Metasol E-50

Mineral Oil Free Ester Based Soluble Metalworking Fluid

Product Description

Pennine Metasol E-50 is a superior new generation soluble metalworking fluid based on ethically sourced, renewable plant based esters. The product is free from; mineral oils, boron, chlorinated paraffin, sulphur and formaldehyde release biocides offering the highest levels of health, safety and environmental compliance.

Metasol E-50 is a very high performance water soluble metalworking fluid designed to offer excellent performance in moderate to heavy duty machining applications. The product forms an extremely robust micro emulsion in both soft to hard make up water qualities providing a long and trouble free service life. Metasol E-50 offers excellent low foaming qualities along with outstanding detergency characteristics helping to keep machine tools clean.

Applications

Metasol E-50 is designed for applications where outstanding surface finish and maximized tool life are required, including the machining of high silicon aluminium, nickel alloys, titanium and other difficult to machine exotic alloys. Metasol E-50 is recommended for difficult drilling and tapping applications where the products inherent lubricity offers significant advantages over conventional semi synthetic and high mineral oil based emulsions along with turning, milling and deep hole boring operations.

Features & Benefits

- | | | |
|---------------------------------|---|--|
| • Mineral oil free | ~ | Improved EHS profile |
| • Biostable emulsion | ~ | Extended sump life / fewer fluid changes |
| • Low foaming | ~ | Reduced anti-foam additions |
| • Chlorine & sulphur free | ~ | Improved environmental profile |
| • Excellent tramp oil rejection | ~ | Clean running emulsion |
| • Boron & biocide free | ~ | Good REACH profile |
| • Outstanding cleanliness | ~ | Excellent operator acceptability |





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Typical Test Data

Characteristic / Test	Data
Appearance (concentrate)	Amber
Appearance (emulsion)	Translucent
Specific Gravity @ 15°C	0.976
pH @ 5%	9.5
IP 287 Breakpoint Corrosion	2.0 %
IP 125 Herbert Corrosion Test	N/A
Dilution Range (min ~ max)	5 ~ 10 %
Refractometer Conversion Factor	1.5
Water Hardness Range ppm CaCO ₃ (min ~ max)	80 ~ 350

Actual dilution rates may vary depending on application. Please consult with Technical Services to determine the most suitable dilution for your application.

Coolant Care

To promote maximum service life, it is strongly advised that coolant systems are thoroughly sterilised with Bioflush System Cleaner prior to coolant changes (see Bioflush Technical Data Sheet for further information and guidelines).

To maintain the efficiency of the coolant, daily checks for concentration with a hand refractometer is recommended. Maintaining a consistent concentration is paramount to prolonging the fluid sump life. Further tests for bacteria, fungus, pH and tramp oil contamination are available through our PROCARE Fluid Management Service and helps users to comply with current HSE legislative requirements. Please contact us for further details.

Availability & Storage

Metasol E-50 is available in 1000 litre IBC's, 205 litre barrels, 25 litre drums and 5 litre plastic bottles. Barrels of lubricant should always be stored in such a way that will prevent the ingress of water when stored in the open. Protect from frost.

Health and Safety

Please refer to the relevant Safety Data Sheet, a copy of which is freely available to all our customers. Data represented is typical of that obtained with normal production tolerances and does not constitute a specification. The policy of Pennine Lubricants is one of continual improvement; we therefore reserve the right to change specifications without notice.

