



PRODUCT DATA SHEET

ECONOLUBE METAL LUBRICANT

DESCRIPTION

ECONOLUBE is an organic polymer lubricant for water based drilling fluids as well as for Olefin enhanced muds (OEM).

ECONOLUBE allows the formulation of muds with exceptional friction reduction properties where steel-to-steel and steel-to-formation contact is present. Using **ECONOLUBE** creates a unique type of drilling fluid showing both excellent dynamic and static performance that is indicated by low friction factors and improved rheology values. Return permeability tests show no formation damage and in some cases an improvement in return permeability. When used in Coil Tubing and Snubbing operations, Friction is reduced to levels that have previously not been achieved, especially by North Sea operators.

PRODUCT BENEFITS

Drill longer horizontal sections

Increased (improved) rate of penetration

Cut total drilling cost

Reduce pump pressure by more than 15%

Reduced rotating torque inside casing and open hole.

Reduced friction problems to drill in oriented mode.

Reduced drag and wall sticking

- HTHP operational to Max. 270°C
- Wells turn cost effective with water based muds (Replaces OBM)
- Will keep your shale shaker screens clean and reduce screen costs.
- Acts like a corrosion inhibitor.
- Environmentally acceptable for North Sea area.
- **Low friction where steel is present**

APPLICATIONS

Horizontal Drilling: Using **ECONOLUBE** in drilling fluids is ideal for horizontal and deviated wells. When drilling horizontally with conventional fluids, friction may occur as torque, drag and stacking up of weight causing “slide” problems for the drill string.

The problems with “sliding” will be minimized since **ECONOLUBE** has a high affinity for metal surfaces and forms a lubricating film on the drillpipe that adheres tenaciously.

Therefore, due to the superior friction reduction properties of **ECONOLUBE**, horizontal and deviated wells will be drilled faster at a lesser cost due to the reduction of torque, drag and a better control of bit weight. PDC bits may be used more frequently instead of tricone bits, as bit weight and stall outs can be controlled in a better manner.

Multilateral Wells: **ECONOLUBE** will give you the best friction reduction due to its extremely high attraction to metal surfaces. This (polar) attraction increases the efficiency of **ECONOLUBE** as it initially adheres to metal instead of other surfaces such as drill solids. This metal affinity allows the bottom hole assembly and drill pipe to coat much quicker than standard water soluble or dispersible lubricants. This allows for a more effective and efficient lubricating process.



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ECONOLUBE

ECONOLUBE was created to reduce friction where metal is present and this effect is excellent for multilateral wells. The polar effect is long lasting and can sustain temperatures up to 270°C. Therefore, **ECONOLUBE** is the optimum choice for multilateral operations since it will insure friction reduction with sea water, bromides, brines, water based and pseudo oil base muds.

Liner Operation: **ECONOLUBE** will improve friction conditions when running liners with minimum tolerances and/or slotted production liners. Simply place the pill with **ECONOLUBE** inside the casing shoe and run the liner through the pill. **ECONOLUBE** will reduce the friction drastically, aid installation of the liner and obtain rotation prior to cementing.

Well Clean Out Operation: After the well washing train has been displaced out of the well and the well is clean, **ECONOLUBE** may be pumped around to reduce well friction prior to the next operation such as Coil Tubing perforating runs or completion tool runs. It is advisable to leave **ECONOLUBE** in wells prior to re-entry work due to **ECONOLUBE'S** superior ability to maintain the lubricity regardless of high temperature and pressure (see Falex test). The film of friction reducer will remain on metal surfaces. The **ECONOLUBE** film will react with the negatively charged ions on metal and protect against corrosion.

Drill-in Fluid: **ECONOLUBE** is an excellent non-damaging lubricant for Drill-in Fluids, allowing the maximization of production rates. Return permeabilities of 95% or higher are achieved (see return permeability test). **ECONOLUBE** is non-damaging because it is insoluble in water and appears as particles in the fluid. A fluid loss test shows a reduction of Spurt Loss and also indicates thin filtercake protection from Spurt Loss to the formation.

ECONOLUBE is used in small dosages, from 0.5% to 3% by volume and can be added as required to reduce the well friction.

Please read and understand the Material Safety Data Sheet (MSDS) before using this product.

This information relates only to the material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer any warranty against patent infringement.



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