

FUNCTIONAL PRODUCTS INC.

Innovative Chemistry for Lubricants

Technical Data Sheet

FUNCTIONAL RD-540CP

Multifunctional Rock Drilling Additive Package
for biodegradable base oils

APPLICATION:

FUNCTIONAL RD-540CP is a high-performance additive package for industrial rock drill applications having EP/antiwear, corrosion inhibition, demulsification and oxidation inhibition especially designed to meet the requirements of pneumatic tools, down-hole and surface drilling equipment. Lubricants made from **FUNCTIONAL RD-540CP** are readily biodegradable when formulated with natural triglyceride base stocks. A tackifier/viscosity modifier such as Functional V-515 should be used with a triglyceride base oil to build the viscosity to the desired ISO grade and to allow the lubricant to adhere to tooling surfaces further reducing corrosion and wear in the presence of compressed air. **FUNCTIONAL RD-540CP** is compatible in a wide range of base oils including vegetable oils, Groups I, II, and III mineral oils, synthetic esters, and PAO's.

If water emulsification is required then use **Functional RD-540**.

COMPOSITION:

FUNCTIONAL RD-540CP is a proprietary formulation recommended for triglyceride oil base stocks.

Typical Properties	
Appearance	Hazy liquid
Demulsibility (D1401) at 30 min (Canola oil)	39/41/0
Lbs per Gallon	8.4
Flash Point (COC)	150°C
Kinematic Viscosity at 40°C	65 cSt
Copper Strip Corrosion (D130), 3 hr/100°C	1b
Sulfur	16.1 wt%
Phosphorous	0.8 wt%

Test Results - 2.4wt% in ISO 100 thickened triglyceride oil	
Turbine Oil Rust Test (D665A and B)	Pass
4-Ball Wear Scar (D4172, 20 kg)	0.30 mm
4-Ball Weld Load (D2783)	250 kg
• Load wear Index (LWI)	53
Timken OK Load (D2782)	> 60 lbs
FZG A/8.3/90 (D5182), Load stage	> 12
Demulsibility (D1401) at 30 min	39/41/0

TREATMENT LEVEL:

FUNCTIONAL RD-540 recommended initial treat level is 2.4% weight. The optimum treat level will depend on the base oil type, viscosity, and the severity of the application. Always test the additive package and the base oil for compatibility and desired performance. Certain natural and synthetic base oils may require an additional yellow metal corrosion inhibitor, demulsifier and foam inhibitor.

HANDLING:

FUNCTIONAL RD-540CP is a skin and eye irritant, and should be handled with suitable personal protection in a well-ventilated area. The maximum heating temperature is 140° F to prevent release of fumes which may cause respiratory irritation.

This Technical Data Sheet and the Safety Data Sheet contain information believed to be accurate and reliable. No warranty is made, however, to information beyond the control of FUNCTIONAL PRODUCTS INC. The engineering and management personnel of the user are responsible for determining the suitability of this or any product for any specific application, and this information is offered to them for that purpose.

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