

FUNCTIONAL V-515 **THICKENER for FATTY OIL BASED LUBRICANTS**

APPLICATION:

Triglyceride oils are sometimes to be preferred as base stocks for blending hydraulic fluids and lubricants intended for use in environmentally sensitive applications. A drawback, however, is that they are all of a similar light viscosity, only about 40 cSt at 40°C. **FUNCTIONAL V-515** is a thickener for vegetable-based or animal-based fatty oils, to blend lubricants of ISO 46, ISO 68 or ISO 100 viscosity grade. Functional V-515 dose not make the lubricant tacky. Use **FUNCTIONAL V-570** or **FUNCTIONAL V-584** where the tackiness is desired. For application requiring higher oxidative stability **FUNCTIONAL V-516** is recommended.

COMPOSITION:

The active additive in **FUNCTIONAL V-515** is a polymer selected for its shear stability and effectiveness in thickening. This polymer component is itself not readily biodegradable, but permits the viscosity adjustment of lubricants from biodegradable base oil systems. The diluent in **FUNCTIONAL V-515** is a biodegradable vegetable oil. **FUNCTIONAL V-515** is biodegradable under all widely used standards.

Typical Properties	
Specific Gravity	0.93
Lbs per Gallon	7.75
Flash Point	150°C (300°F)
Kinematic Viscosity	7000-9000 cSt at 100°C
Color	yellow (<4 ASTM)
Biodegradable Content	approx. 85%

TREATMENT LEVEL:

A typical treatment level for an ISO 46 blend is 2.0% in canola oil, 6.0% is required for an ISO 68 and 15% for an ISO 100. For hydraulic fluids or other high-shear service, the recommendation is 2.5%, 7.0% and 16% respectively. **FUNCTIONAL V-515** does not affect either the pour point or the water-shedding properties of the finished lubricant.

HANDLING:

While warming **FUNCTIONAL V-515** to about 65°C (150°F) may facilitate pumping and handling, extended storage of this, or any other vegetable oil-derived product, at elevated temperatures is not recommended. Safe handling precautions are the same as those to be taken with vegetable oils; see the current Material Safety Data Sheet.

This Technical Data Sheet and the Material 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.

8/13/2004