

### FUNCTIONAL V-33

#### VISCOSITY INDEX AND COLD-FLOW IMPROVER for MINERAL-OIL-and Vegetable BASED LUBRICANTS

#### APPLICATION:

**FUNCTIONAL V-33** is a VI improver and wax-crystal modifier. It is primary used to increase of the Viscosity Index and to decrease of the Pour Point of mineral or vegetable oil-based lubricants. **FUNCTIONAL V-33** provides good lubricity and it is effective under both: rapid-cooling and extended cold storage conditions. **FUNCTIONAL V-33** performs well in hydraulic fluids, chain saw oils, pneumatic-tool lubricants and other lubricants made from mineral oils.

#### COMPOSITION:

The active additive in **FUNCTIONAL V-33** is a proprietary copolymer dissolved in oil.

Typical properties	
Appearance	light-colored liquid
Odor	mild fatty
Specific Gravity	0.93
Lbs per Gallon	7.75
Flash Point	160 °C (320 °F), min.
Kinematic Viscosity	200 cSt at 100 °C, 1200 cSt at 40 °C

#### TREATMENT LEVEL:

To reduce the pour point of mineral oil to below -35°F and to increase VI to above 140, a treatment of 3-5% is usually sufficient. For vegetable oil, a treat rate of 1.5% reduces the pour point of soybean or high oleic canola oil to -21 C in a 72 hour cold and hold test

#### HANDLING:

Due to the viscosity of **FUNCTIONAL V-33** it should be stored indoors in the winter months. Any convenient technique may be used for blending. Safe handling precautions are the same as those to be taken with vegetable oils; see the current Material Safety Data Sheet.

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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.

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