

### FUNCTIONAL PD-590

#### COLD-FLOW IMPROVER for VEGETABLE-OIL-BASED LUBRICANTS

##### APPLICATION:

**FUNCTIONAL PD-590** is a wax-crystal modifier and pour point depressant. The primary use of PD-590 is to improve the cold-flow properties of vegetable oil-based lubricants at temperatures below their cloud points. It is effective under both rapid-cooling and extended cold storage conditions. **FUNCTIONAL PD-590** is effective in hydraulic fluids, chain saw oils, pneumatic-tool lubricants, and other lubricants made from canola oil, soybean oil, or other triglyceride oils.

##### COMPOSITION:

The active components in **FUNCTIONAL PD-590** are a proprietary mixture of copolymers. Products made using **FUNCTIONAL PD-590** may be classified as readily biodegradable due to the large percentage of biodegradable diluents available.

Typical properties	
Appearance	Colorless to light yellow liquid
Odor	Mild
Specific Gravity	0.95
Lbs per Gallon	7.9
Flash Point	>150°C (300°F)
Kinematic Viscosity	600 - 900 cSt at 100°C

##### TREATMENT LEVEL:

A treat level of 0.5 to 1.2% is usually sufficient to reduce the pour point of canola, soybean, or other low-saturate triglyceride oils to below -21°C and to add stability in extended storage at -21°C. By using a 1.2% treat level of **FUNCTIONAL PD-590**, the pour point of Canola oil can be lowered to -30 to -33°C. Since the responsiveness of triglyceride oils to wax-crystal modifiers is extremely variable, the user must determine the treatment level.

##### HANDLING:

**FUNCTIONAL PD-590** can be warmed to 100°F - 130°F to facilitate pouring. Any suitable technique may be used for blending. Store in a cool, dry area preferably indoors. See the current Safety Data Sheet before use.

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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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