FUNCTIONAL PRODUCTS INC.

Innovative Chemistry for Lubricants

Technical Data Sheet

FUNCTIONAL PD-585

Cold Flow Improver and Thickener for Vegetable Oil-Based Lubricants

APPLICATION:

FUNCTIONAL PD-585 is a pour point depressant and cold flow improver for vegetable oil based lubricants. **FUNCTIONAL PD-585** is effective in hydraulic fluids, chain saw oils, pneumatic-tool lubricants, and other lubricants made from canola oil, soybean oil, or other triglyceride oils. The high viscosity of **FUNCTIONAL PD-585** also makes this product useful as a shear stable viscosity modifier.

COMPOSITION:

The active components in **FUNCTIONAL PD-585** are a proprietary mixture of copolymers.

Typical properties	
Appearance	Colorless to light yellow liquid
Odor	Mild
Specific Gravity	0.93
Lbs per Gallon	7.7
Flash Point, ASTM D92	>135°C (275°F)
Kinematic Viscosity, ASTM D445	1200 cSt at 100°C
Thickening Efficiency, 10wt% in Canola	16.7 cSt @ 100°C
Shear Stability Index (PSSI), ASTM D6278 (10wt% in Canola)	4 SSI
20hr KRL Shear Stability, CEC L-45-A-99 (10wt% in Canola)	56%

TREATMENT LEVEL:

0.5 to 1.0wt% **FUNCTIONAL PD-585** is usually sufficient to reduce the pour point of canola, soybean, or other low-saturate triglyceride oils and increase storage stability at low temperatures. Since the responsiveness of triglyceride oils to wax-crystal modifiers is extremely variable, the user must determine the treatment level. See next page for sample data in canola oil and soybean oil.

FUNCTIONAL PD-585 may be used as a highly shear stable biobased viscosity modifier for most synthetic esters, blown vegetable oils, low viscosity PAOs, and oil soluble PAG. See next page for treat rates.

HANDLING:

FUNCTIONAL PD-585 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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FORMULATION GUIDE:

FUNCTIONAL PD-585 Pour Point Depression in Canola and Soybean Oils

wt%	**Pour Point, D97**	
PD-585	Canola Oil	Soybean Oil
0.0%	-24C	-12C
0.5%	-33C	-21C
1.0%	-36C	-24C

FUNCTIONAL PD-585 Treat Rates in Canola Oil (Starting From ISO 32-36)

ISO VG	46	68	100	150	220
wt%	2.5	8	13	18.5	24

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