

# FUNCTIONAL PRODUCTS INC.

Innovative Chemistry for Lubricants

## Technical Data Sheet

### FUNCTIONAL PD-570

#### Medium Viscosity Cold Flow Improver and PPD for Biobased

##### APPLICATION:

**FUNCTIONAL PD-570** is a polymer-based cold flow improver and PPD similar to polymethacrylate cold flow improvers **FUNCTIONAL PD-585** and **FUNCTIONAL PD-590**. **FUNCTIONAL PD-570** is intended for making low temperature eco-friendly and environmentally acceptable lubricants.

**FUNCTIONAL PD-570** contains no mineral oil or aromatic carbon.

##### COMPOSITION:

**FUNCTIONAL PD-570** is a polymer diluted in ester.

Typical Properties	
Flash Point (ASTM D92, COC)	>200°C / 392°F
Specific Gravity	0.97 g/mL
Pounds Per Gallon	8.1 – 8.2
Color (ASTM D1500)	Orange, $\leq$ 3.5
Typical Kinematic Viscosity (ASTM D445)	400 cSt @ 40°C
Renewable Content, wt%	>90% Approx.

##### TREATMENT LEVEL:

0.5 or 1.0wt% **FUNCTIONAL PD-570** is recommended to reduce the pour point of vegetable and fatty triglyceride based oils and plant based methyl esters. Treat rate and performance is comparable to polymethacrylate-based technology though typically 3°C warmer in pour point. Exact performance depends on the total formulation including viscosity modifiers, base stock, and additive packages.

##### Benchmarking Pour Point Performance of **FUNCTIONAL PD-570** vs. **PD-585** and **PD-590**

Treat Rate	Canola Oil		Soybean Oil		Methyl Soyate
	PD-570	PD-585 / PD-590	PD-570	PD-585 / PD-590	PD-570
0.0wt%	-24°C	-24°C	-12°C	-12°C	-9°C
0.5wt%	-30°C	-33°C	-18°C	-21°C	-18°C
1.0wt%	-30°C	-36°C	-18°C	-24°C	-21°C

##### HANDLING:

Store in a cool, dry place. Avoid freezing conditions. If frozen, heat drum to 100-140°F (40-60°C) to thaw before use. **FUNCTIONAL PD-570** is a non-hazardous material.

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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Functional Products, Inc. 8282 Bavaria Rd. Macedonia, Ohio 44056

Ph: 330.963.3060 Fax: 330.963.3322