FUNCTIONAL PRODUCTS INC.

Innovative Chemistry for Lubricants

Technical Data Sheet

FUNCTIONAL V-4270

EXTRA ENHANCED MULTIFUNCTIONAL LIQUID GREASE POLYMER

APPLICATION:

FUNCTIONAL V-4270 is a synergistic blend of reactive and multifunctional polymers delivered in petroleum oil for use in greases to improve water resistance and mechanical stability. Its liquid form allows quick dissolution into grease. It is conveniently added to the grease during cooling and oil adjustment. **FUNCTIONAL V-4270** also increases the tackiness of the grease and reduces the soap content (higher yields).

FUNCTIONAL V-4270 and **V-4033** are similar additives with different balances of performance. Use **FUNCTIONAL V-4033** to enhance water resistance when low temperature fluidity is critical or ambient temperatures may vary (i.e. outdoors or multi-season); **FUNCTIONAL V-4270** can achieve better overall water resistance for applications but may begin to affect low temperature pumpability (i.e. steel mills are ideal).

For synthetic greases where there is low solubility for additives, use **FUNCTIONAL V-4700**.

COMPOSITION:

FUNCTIONAL V-4270 is a unique mixture of polymers in naphthenic oil.

Typical properties	
Specific Gravity (ASTM D1298)	0.88
Lbs per Gallon (TM-04)	7.30
Flash Point (ASTM D92)	130°C (270°F)
Kinematic Viscosity (ASTM D445)	3700 cSt at 100°C
Color (ASTM D1500)	5.0 (Brown)
Water Spray-off, 4% Treat (ASTM D4049)	7% (Base grease 52%)
Water Wash-out, 4% Treat (ASTM D1264)	1.75% (Base grease 23.5%)

TREATMENT LEVEL:

The required concentration is best determined by the formulator through experimentation. Test at 2wt%, 3wt%, and 4wt% in a base grease. 2.0wt% is most often used to confer water resistance and mechanical stability. 4.0wt% is typically sufficient to eliminate most water spray off and washout.

Add to kettle after the acid/base mixture before saponification; or add to grease at 80-100C when cooling and mix for 1 hour.

HANDLING:

Due to the high viscosity of **FUNCTIONAL V-4270**, elevated temperature about 150°F (65°C) can facilitate handling, but temperatures over 200°F (95°C) should be avoided. Safe handling precautions are the same as those to be taken with the base oil; see the current Safety Data Sheet.

Issued: 2025.03.13

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

Ph: 330.963.3060 Fax: 330.963.3322