

FUNCTIONAL V-736

ETHYLENE-PROPYLENE OLIGOMER (EPO) – 600 cSt

APPLICATION:

FUNCTIONAL V-736 is a pure liquid viscosity modifier and synthetic base stock with high thickening efficiency, excellent shear stability, and low temperature fluidity for high performance at lower cost per treat. **FUNCTIONAL V-736** is effective in high VI hydraulic fluids, industrial gear oils, automotive gear oils (75W), and grease.

FUNCTIONAL V-736 is NSF HX-1 and Ecolabel LuSC listed.

COMPOSITION:

FUNCTIONAL V-736 is a liquid, low molecular weight ethylene-propylene copolymer with no diluent.

Typical Properties	
Appearance, Visual	Clear to Slight Haze Slight Yellow to Yellow
Color, ASTM D1500	1.0
Kinematic Viscosity, ASTM D445	550 cSt @ 100°C 9,000 cSt @ 40°C
Viscosity Index, ASTM D2270	235
Density (lb/gal), ASTM D1475	7.1 lb/gal
Density (g/mL) @ 20°C/68°F	0.85 g/mL
Flash Point, ASTM D92 COC	280°C (536°F)
Thickening Efficiency, 10wt% in ISO 32 Group I	10.8 cSt @ 100°C
Shear Stability Index (PSSI), ASTM D6278	0 SSI
20hr KRL Shear Stability, CEC L-45-A-99	4.5 SSI

TREATMENT LEVEL:

Treatment levels of 2 – 30% are typical in industrial lubricants and greases. **FUNCTIONAL V-736** can be used as either a VI improver or a shear stable base stock depending on the need. **FUNCTIONAL V-736** is compatible in most petroleum oils, synthetic oils, PAO, and esters.

Full synthetic formulas using EPO viscosity modifiers may require 5-10wt% ester for solubility.

HANDLING:

Dissolving is best accomplished with continuous agitation at temperatures of 104-140°F (40-60°C). **FUNCTIONAL V-736** may be preheated in a hot room or tank at up to 176°F (80°C) to aid in pumping but long term storage should remain below 140°F (60°C).

FUNCTIONAL V-736 is a non-hazardous material; see the current Safety Data Sheet

Suggested* Treat Levels for FUNCTIONAL V-736:

Treat Rates in V-736 in 4 cSt Group III Oil for Highly Shear-Stable Hydraulic Fluids, Gear Oils, and EV Fluid:

Target Grade		wt% V-736	40°C Viscosity, cSt	100°C Viscosity, cSt	Viscosity Index
ISO VG	SAE Gear				
ISO 32	SAE 75	5.7	32.16	6.58	166
ISO 46	SAE 80	10.1	46.5	8.75	170
ISO 68	SAE 85	15.0	68.05	11.81	171
ISO 100	SAE 90	20.4	99.81	16.11	174
ISO 150	SAE 110	25.9	150.6	21.86	172
ISO 220	SAE 140	31.8	223.2	29.79	174
ISO 320	SAE 190	38.3	321.5	40.97	182
ISO 460	SAE 250	44.6	461.4	55.29	187

Treat Rates for V-736 in 600N Group II Oil in Heavy Gear Oils or Greases:

Treat Level (wt%)	40°C Viscosity, cSt	100°C Viscosity, cSt	Viscosity Index
5	147.67	16.65	121
10	204.2	21.72	128
20	367.4	36.12	143
30	615.12	56.29	156

* These treat levels are approximates. Exact treat levels will require experimentation in a full formulation and will vary due to base oil and other additive packages (anti-wear, EP, corrosion inhibitors, AO, pour point depressants, etc.).



Nonfood Compounds
Program Listed HX-1, HX-2
Registration No. 173078

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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