

FUNCTIONAL V-4311

CONCENTRATED SHEAR STABLE STYRENE-BASED VISCOSITY MODIFIER (7 P-SSI)

APPLICATION:

FUNCTIONAL V-4311 is a viscosity modifier with exceptional shear stability and viscosity modification for a wide range of high-performance lubricants and greases. The styrene structure provides dispersancy for soot in heavy-duty applications.

FUNCTIONAL V-4311 provides excellent body and hold to finished greases and can help to improve water resistance. At high treat rate **FUNCTIONAL V-4311** may be used for assembly lubes, rust preventatives, and semi-fluid coatings.

COMPOSITION:

FUNCTIONAL V-4311 is a styrene copolymer in light petroleum oil.

Typical Properties	
Appearance	Amber Liquid
Density (lb/gal)	6.9 lb/gal
Specific Gravity	0.83 g/mL
Dynamic Viscosity at Room Temperature	36,000 cP @ 25°C
Flash Point, Cleveland Open Cup (ASTM D92)	>120°C (248°F)
Shear Stability Index (PSSI), ASTM D6278 (15wt% in 100N)	7 SSI

TREATMENT LEVEL:

Treatment levels of 10 – 20% are typical in lubricants and greases.

FUNCTIONAL V-4311 Treat Rates in 110N Group II

	10wt%	12.5wt%	15wt%	17.5wt%	20wt%
KV40, cSt	37.3	48.3	80.9	83.3	113.1
KV100, cSt	7.6	9.5	13.5	15.6	20.5
Viscosity Index	178	185	171	200	207

FUNCTIONAL V-4311 Treat Rates in 750 SUS Naphthenic Oil

	ISO 220	ISO 320	ISO 460	ISO 680	ISO 1000	ISO 1500
ISO VG	9%	13%	17%	21%	25%	30%

HANDLING:

Due to the viscosity of **FUNCTIONAL V-4311**, elevated temperature (up to approximately 90°C or 200°F) can facilitate handling. Safe handling precautions are the same as those to be taken with the base oil; see the current Safety Data Sheet.

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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