

Tackifiers		Typical Viscosity cSt @ 100C	Treat Level wt %											
V-176	Good shear stability and good string length. PIB in paraffinic oil.	3,000	0.5 - 2	●	●	●								
V-177	Concentrated PIB tackifier with good shear stability and string length.	10,500	0.5 - 2	●	●	●					●			
V-178	Good shear stability and string length. High concentrate PIB in paraffinic oil. V-378 for synthetics and high temperature.	4,000	0.5 - 2	●	●	●					●			
V-175	Ultra-high molecular weight PIB in oil for low treat, textile/fiber applications. V-475 for HX-1 with high color stability.	6,000	0.5 - 2	●	●	●					●			
PARATAC	Good shear stability and good string length. PIB in paraffinic oil. PARATAC XT for 900 cSt @ 100°C with good string.	3,000	0.5 - 2	●	●		●				●			
V-188	OCP tackifier with excellent shear stability and string length. V-425 for NSF HX-1. V-188P2 for Ecolabel LuSC and VGP.	4,000	0.5 - 2	●	●		●			●	●	●	●	●
V-422	Tackifier for NSF HX-1, PIB in white oil. Good shear stability and good string length.	3,000	0.5 - 2	●	●		●			●	●	●		
V-584	Tackifier for vegetable oil and fatty esters. Ecolabel LuSC/VGP. Provides anti-mist in low viscosity esters.	2,500@40°C	3 - 10	●	●	●	●				●	●	●	●
V-802P	Water-white aqueous tackifier for environmentally friendly water based, PAG, and emulsion lubricants.	40,000@40°C	0.3 - 5			●					●	●		

Viscosity Modifiers & Base Stocks		Shear Stability Index (PSSI) ASTM D6278	Thickening Efficiency in ISO 32, cSt @ 100C	Typical Viscosity cSt @ 100C	Treat Level wt %									
V-158F	Liquid OCP viscosity modifier. V-158FN in naphthenic, V-158P2 in PAO.	50	10% = 12.5	1,600	5 - 10	●	●	●						
V-166	Liquid OCP viscosity modifier.	35	10% = 11.4	1,200	5 - 10	●	●							
V-160F	Liquid OCP viscosity modifier. V-460 for NSF HX-1. V-160P2 in PAO.	22	10% = 13.7	3,000	5 - 10	●	●						●	
V-705	High performance liquid polyolefin base stock. 500 VI. (KRL shear loss = 4%)	0	10% = 20.3	6,500	2 - 20	●	●		●	●		●	●	
V-515	Liquid viscosity modifier for vegetable oil and PAO/ester blends. Slight tack.	50	10% = 12.0	8,000	5 - 15	●	●	●			●	●	●	●
V-521	Liquid viscosity modifier for vegetable oil, esters. Exceptional low temperature fluidity.	30	10% = 16.4	5,000	5 - 15		●			●		●	●	●
V-508F	Liquid viscosity modifier for vegetable oil, esters. Widest compatibility in esters.	28	10% = 22.9	7,000	5 - 15		●	●		●		●	●	●
V-5048	ISO 4800 synthetic ester base stock. Ecolabel LuSC listed. V-5019 for ISO 1900.	0	N/A	4800@40°C	5 - 15		●		●	●		●	●	●
MH-4500	Liquid PMA VII, good shear stability for hydraulic fluid (KRL shear loss = 65%)	15	10% = 12.3	1,500	5 - 20	●	●		●	●		●	●	
MH-2000	Liquid PMA VII, excellent for gear and hydraulic (KRL shear loss = 35%)	1	10% = 11.1	1,000	5 - 20	●	●		●	●		●	●	
MB-1010	Liquid PMA base stock, gear oils and full syn lubricants (KRL shear loss = 15%)	0	10% = 8.6	900	5 - 20	●	●	●	●	●	●	●	●	
V-201	Pellet form OCP viscosity modifier. 5.4wt% = 1000 cSt @ 100°C	60	1% = 21.0	Pellet	0.5 - 2	●	●	●				●		
V-255	Pellet form shear stable OCP viscosity modifier. 12% = 1000 cSt @ 100°C	25	1% = 10.5	Pellet	0.5 - 2	●	●		●	●				
V-820	Water soluble powder to thicken water-based lubricants, emulsions.	N/A	0.5% = ISO 100	Powder	0.1 - 2		●					●	●	

Grease Additives		Treat Level wt %												
V-207	Powder polymer for water resistance, shear stability, and tack. Ideal for calcium and aluminum greases. V-211 for NSF HX-1.	0.5 - 2		●									●	
V-4020	Reactive pellet polymer to improve water resistance, ideal for lithium grease. V-4028 for low color and improved solubility in oil.	0.2 - 1		●										
V-4004A	Pre-dissolved liquid reactive grease polymer. V-4033 for extra concentrated liquid, 1.5 - 2.0wt% treat. V-4051 for Ecolabel LuSC.	3 - 5		●								●		●
V-191	Polymer emulsion stable against water during and after production. Improved water spray-off and tack in organic and synthetic greases.	0.5 - 2		●								●	●	
V-4700	Liquid grease polymer for improving water resistance of synthetic-based greases (mPAO, PB, etc.) which are tough to fix.	1 - 5		●								●		
V-508S	Pellet form viscosity modifier for building base oil viscosity in veg oil, ester, or PAG greases. Improves water resistance, yield, and tack.	1 - 5		●	●		●				●	●	●	●

Specialty Packages & Additives		Treat Level wt %												
CI-426	Corrosion inhibitor and anti-wear additive for HX-1. CI-427 for low color and wide read-across. CI-426EP for improved EP.	0.5 - 2	●	●	●	●	●	●	●	●	●	●	●	
GA-614	Ashless industrial/auto gear oil package. GA-307 for economical zinc-free industrial/auto gear. GA-400 for NSF HX-1.	1.5 - 5	●	●		●				●	●	●	●	
HF-595	Biobased ashless AW hydraulic fluid package. Ecolabel LuSC. HF-580 for ashless industrial hydraulic fluids, variable treat.	2.2	●					●				●		●
RD-540	Biobased rock drill, air tool, and open gear package. Emulsifying. RD-540CP for demulsifying.	2.2	●	●	●	●					●	●	●	
WA-64	Light color, low odor, compatible in a range of base oils. Cincinnati Fives stick-slip test. WA-60SF for colorless sulfur-free way oils.	1.75	●	●	●	●	●	●	●	●	●	●	●	
SGP-563	Low friction AW/R&O package for saw/chain/forestry. Reduced operating temperatures. Ecolabel LuSC. SGP-567 for more AW/EP.	1.5	●	●	●		●			●	●	●	●	
V-162	Anti-mist additive for oil based coolants. Use MW-612 for aqueous or oil-water fluids.	0.02 - 0.1	●					●			●			
DF-500	Defoamer for veg oil, fatty esters. Ecolabel LuSC. DF-400 is NSF HX-1 and Ecolabel LuSC for petroleum/ester. DF-110 for Gr. III and IV.	0.05 - 0.5	●		●	●	●	●	●	●	●	●	●	●
PD-585	Pour point depressant for vegetable oil. Ecolabel LuSC, US EPA Safer Choice. PD-590 for low viscosity. PD-571 economy biobased PPD.	0.1 - 1	●	●	●	●	●	●	●	●	●	●	●	●
PD-620	Pour point depressant for light Gr. I/II paraffinic oils. PD-610 for medium to heavy Gr. I/II oils. PD-630 for Gr. III oils.	0.1 - 0.5	●	●	●	●	●	●	●	●	●	●	●	

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