

Complex Esters Technical Data Sheet

Complex esters are polymeric ester chains made from diacids and diols or polyols. As the chain grows, molecular weight and viscosity increase, making it possible to produce complex esters with a wide range of viscometrics and performance characteristics. Different feedstocks are used to modify the basic fluid characteristics such as polarity, lubricity, stability and cost. They are shear stable and most are bio-based and biodegradable even at the high end of the viscosity range. Most regulatory schemes classify complex esters as polymers.

By controlling the viscosity and fluid characteristics, Zschimmer & Schwarz produces complex esters that are tailored for optimal performance. Complex esters provide excellent lubricity and boundary lubrication as base stocks or additives in grease, gear oils and metalworking. Complex esters offer natural high viscosity index that boosts lubrication efficiency.

Complex esters can also be used to raise the viscosity of a lubricant. Lexolube CG-3000 is a bio-based complex ester designed to thicken vegetable oil based fluids while Lexolube CQ-3000 is most compatible with mineral oil, PAO and polyol ester based formulas.

Synthetic Ester	Chemistry	Viscosity @ 40°C (cSt)	Viscosity @ 100°C (cSt)	Viscosity Index	Flash Pt. (°C)	Pour Pt. (°C)
LEXOLUBE CPE-70	Polyol	68	11	150	280	-15
LUBRICIT 9522	Dimer	140	19	145	310	-50
LUBRICIT 9538	Dimer	140	22	180	290	-20
LEXOLUBE CPE-220	Polyol	220	30	160	300	-15
LUBRICIT 9526	Polyol	330	45	185	320	-40
LUBRICIT 9538/1	Dimer	330	45	185	325	-40
LEXOLUBE KL-435	Dimer	435	38	125	320	-30
LEXOLUBE CLG-460	Polyol	460	40	135	285	-20
LEXOLUBE CP-460LC	Polyol	460	46	160	290	-25
LUBRICIT 9468/1	Dimer	475	55	185	310	-35
LEXOLUBE CPE-1000	Polyol	1000	96	185	300	-20
LEXOLUBE CQ-3000	Polyol	3000	205	180	300	-15
LEXOLUBE CG-3000	Polyol	3000	290	235	310	-20

Features

- High viscosity
- Thermal stability
- Biodegradability
- Lubricity/boundary lubrication
- Low volatility
- High flash point
- High viscosity index

Applications

- Grease
- Gear oils
- Metalworking
- Compressor oils
- Thickening
- Metal protection
- Textile

Please inquire about additional tailor-made products that can be made to fit your exact performance requirements.

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