

Dielectric Coolants Technical Data Sheet

Synthetic esters provide excellent thermal conductivity, oxidative stability, and fire resistance, making them the preferred base fluid for dielectric coolant applications.

Single phase dielectric coolants must have low viscosity and low volatility combined with high dielectric strength and high electrical resistivity. Synthetic esters are environmentally friendly alternatives to mineral oils and fluorocarbons that can be used as immersion coolants to significantly improve heat removal and reduce energy consumption compared to air cooling.

When used as fire resistant transformer fluids or EV battery thermal control fluids, esters deliver long life, low deposit formation and good materials compatibility. Synthetic ester base stocks are the high-performance choice for modern transformers and increasingly sophisticated EV batteries that can meet the demands of IEC, UL and Factory Mutual approval standards.

Synthetic Ester	Chemistry	Viscosity @ 40°C (cSt)	Viscosity @ 100°C (cSt)	Viscosity Index	Flash Pt. (°C)	Pour Pt. (°C)
LEXOLUBE 3I-310	Polyol	14	3.4	120	230	-65
LEXOLUBE 3Q-310	Polyol	18	4.0	120	250	-65
LEXOLUBE 3N-310	Polyol	20	4.4	140	260	-40
LUBRICIT TMP C9	Polyol	21	4.6	140	275	-50
LEXOLUBE POE-22	Polyol	22	4.7	140	270	-40
LUBRICIT PE 510/1	Polyol	22	4.7	135	285	-45
LUBRICIT DTDA	Diester	23	4.9	145	245	-55
LEXOLUBE PQ-25	Polyol	25	5.0	134	265	-55
LEXOLUBE 2X-109	Diester	27	5.4	135	250	-60
LEXOLUBE PQ-32	Polyol	32	6.0	130	260	-45
LEXOLUBE POE-32	Polyol	32	6.0	130	265	-50

Features

- Thermal/oxidative stability
- Low volatility
- No deposit formation
- High thermal conductivity
- Low temperature fluidity
- High flash point/fire resistance
- Long service life
- Readily Biodegradable
- High dielectric strength
- Low dissipation factor
- High DC resistivity

Applications

- IEC 61099 synthetic ester transformer fluids
- Low GWP immersion computing coolants
- Multifunctional electric vehicle battery coolants and lubricants
- IEC 61100 K3-class fire resistant transformer fluids
- UL EOUV/EOVK and FM 6399 approved transformer fluids
- Capacitors
- High voltage cables
- Switchgear
- Tap changers

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

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