

Cargill Priolube™ EF 3221

Next-generation synthetic ester base oil for electric vehicles



Low
viscosity



For EV
transmission
fluids



For immersion
cooling fluids



Oxidatively
stable



Readily
biodegradable*

Priolube™ EF 3221 is a low viscosity, fully synthetic dielectric ester base oil suitable for immersion cooling and EV transmission fluids.



cargill.com/priolube-ef

Features and benefits

- Oxidatively stable – improves fluid lifetime
- Very low viscosity – reduces pumping losses
- High thermal conductivity – create fluids with good heat removal properties
- No halogenated materials intentionally added

*OECD 301F

©2024 Cargill, Incorporated. All rights reserved.

Cargill™

Typical Properties

Property ¹	Units	Value
Kinematic viscosity at 40°C	cSt	7.7
Kinematic viscosity at 100°C	cSt	2.4
Kinematic viscosity at -20°C	cSt	130
Kinematic viscosity at -40°C	cSt	808
Hydrolytic stability	–	Stable
Oxidative stability (ASTM D8206)	minutes	178
Breakdown voltage (EN 60156 / IEC 60156)	kV	80
Dielectric dissipation factor (tan delta)	–	0.274
Electrical conductivity at 20°C (DIN 51 111)	pS m ⁻¹	80
Flash point COC	°C	203
Pour point	°C	-81
Density at 20°C	g cm ⁻³	0.91
Water content	ppm	<300
Biodegradability (OECD 301F)	–	Readily biodegradable
Halogen content	–	None*
Autoignition temperature	°C	350
Heat capacity (specific) at 20°C (ASTM D7896-19)	kJ/kg K	1.97
NOACK volatility at 200°C	%	6
Viscosity index	–	141
Thermal conductivity at 20°C (ASTM D7896-19)	W m ⁻¹ K ⁻¹	0.148
Thermal conductivity at 40°C (ASTM D7896-19)	W m ⁻¹ K ⁻¹	0.144

¹ Typical values. Please refer to CoA for actual results

* No halogenated materials intentionally added

Applications and recommended uses

Priolube™ EF 3221 is compatible with Group III, IV and V (ester) base oils and we recommend a maximum treat rate of 35% w/w. Contact us for specific guidance

Environment and safety

Please request our safety data sheet.

Further information

If you have further questions do not hesitate to reach out to your local representative.

energy_technologies@cargill.com

Non-warranty

This document is provided for your information and convenience only. All information, statements, recommendations and suggestions are believed to be true and accurate but are made without guarantee, express or implied. WE DISCLAIM, TO THE FULLEST EXTENT PERMITTED BY LAW, ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE and FREEDOM FROM INFRINGEMENT and disclaim all liability in connection with the storage, handling or use of our products or information, statements, recommendations and suggestions made by Cargill. All such risks are assumed by you/user. The labelling, substantiation and decision making relating to the regulatory approval status of, the labelling on and claims for your products is your responsibility. We recommend you consult regulatory and legal advisors familiar with applicable laws, rules and regulations prior to making regulatory, labelling or claims decisions for your products. The information, statements, recommendations and suggestions contained herein are subject to change without notice. Tests conducted by Cargill labs unless otherwise noted. ©2024, Cargill, Incorporated. All rights reserved. 5142DS/ET/0624/4/EN

