POE 68

Refrigeration Lubricant

Description

ERRECOM's POE 68 is formulated with high-performance additives that provide the polyester base with high thermal, chemical, and hydrolytic stability. Due to its high viscosity index, POE 68 has excellent cold flow properties and a highly stable lubricating film under high temperature conditions.

Like all Errecom's POEs, POE 68 is ultra-dry and, as a result, its hygroscopicity is drastically reduced. POEs, in fact, tend to easily absorb atmospheric moisture, much faster than non-polar hydrocarbon-based refrigeration lubricants such as mineral oil, alkylbenzene and PAO. In extreme cases, i.e. when they absorb a certain amount of water (over 50-100 ppm) and are working under particularly extreme operating conditions, hydrolytic decomposition reactions may occur [Figure 1]. For this reason, it is necessary to avoid contact with water or moisture during storage, handling, or operation. Precisely for this reason, all Errecom's POEs are packaged in plastic bottles and metal tanks that have been specially designed to protect oils against moisture.

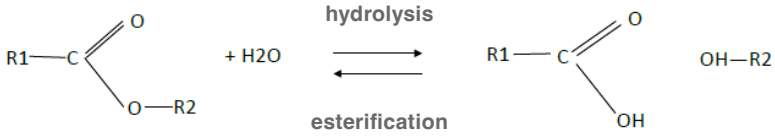

Figure 1: Hydrolysis of POE

Field of Application

HVAC/R (refrigeration lubricant for hermetic, semi-hermetic, open, and screw compressors, and turbochargers).

Features – Pluses

Features	Pluses
High viscosity index	Ensures excellent low temperature fluidity, no oily deposits and improved evaporator efficiency
Anti-wear additive	Ensures reduced compressor wear and maintenance costs
Excellent high temperature stability	Ensures cleaner evaporators, and reduced downtime and maintenance costs
Optimised miscibility with HFC - HFO - Hydrocarbon	Ensures high system efficiency and correct oil return in refrigeration systems

Instructions

Recommended operating temperature: 20°C-25°C.
Viscosity increases as temperature decreases.

Physical and Chemical Properties

Physical Quantity (Unit of Measurement)	Analytical Method	POE 68
ISO VG	/	68
Kinematic Viscosity at 40°C (cSt)	ASTM-D445	68
Kinematic Viscosity at 100°C (cSt)	ASTM-D445	9,5
Viscosity Index	ASTM-D2270	140
Pour Point (°C)	ASTM-D97	-42
Flash Point (°C)	ASTM-D93	234
Density at 15°C (g/cm3)	ASTM-D1298	0,975
Moisture Level (ppm)	ASTM-D6304	50
Total Acid (mg KOH/g)	ASTM-D974	< 0,03

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Refrigerant Gas Compatibility

Errecom's POE 68 is compatible with the following refrigerant gases:
- HFC: R134a, R404A, R507, R410A, R407C
- HFO: R1234yf, R1234ze
- Hydrocarbons: R290, R1270
- new refrigerants developed to replace R22: R422A/D, R417A

Product Compliance

POE 68 complies with the following European standards:
- Regulation (EC) No. 1907/2006 – REACH and next updates and reviews
- Regulation (EC) No. 1272/2008 – CLP and next updates and reviews
- Directive 2011/65/EC (formerly 2002/95/EC) - RoHS, and next updates - including Delegated Directive (EU) No. 2015/863

In addition, POE 68 complies with the following FDA 21 CFR sections and, therefore, can be used in different applications where there may be a risk of accidental contact with food:

FDA

Indirect Food Additives: Adjuvants, production aids and sanitizers
Subpart D Certain adjuvants and production aids
178.3570 – Lubricants with incidental food contact

Categorisation and Labelling

This technical specification is only applicable when it comes with the current Safety Data Sheet. In accordance with legal requirements, only the Safety Data Sheet contains current safety information.

Safety Instructions

Keep the container tightly closed. Keep away from heat, hot surfaces, sparks, open flames, or other ignition sources. Read the label and the MSDS before use. The MSDS is available on request.

Chemical substance inventory

POE 68 is recorded in the following chemical inventories:

REACH	KECL	IECSC	NCI	TCSI	NZIOC
EU	Korea	China	Vietnam	Taiwan	New Zealand

Storage Instructions

Store below 20°C. Keep away from open flame, heat, or direct sunlight. Store in a dry and cool place. Never expose to temperatures above 50°C.

Transport Conditions

This product is not regulated for transport according to ADR/RID, IMDG, ICAO/IATA.

Packaging

Art.-Nr.	Qty		**	Packaging
OL6016.Q.P2	250 mL	24	2880	Plastic Tank
OL6016.M.P2	500 mL	12	1080	
OL6016.K.P2	1 L	12	756	
OL6016.UP.P2	1 Gal	02	196	
OL6016.I.P2	4 L	02	196	
OL6016.P.P2	5 L	02	140	
OL6016.K.01	1 L	12	768	Metal Tank
OL6016.P.01	5 L	02	190	
OL6016.UV	5 Gal	01	24	
OL6016.V	20 L	01	24	
OL6016.T	25 L	01	24	
OL6016.B	200 L	01	02	
OL6016.IBC	1000 L	01	01	IBC

Shelf life

5 years from the production date.
After this period, the product may still be used subject to successful checks on the performance requirements.

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