

Synthetic Refrigeration Compressor Lubricant (SRNC5)



Product Description

Podlee Polyol Ester (POE) synthetic refrigeration oil is a high-performance lubricant specifically engineered for modern refrigeration and air-conditioning systems, particularly those using hydrofluorocarbon (HFC) refrigerants (e.g., R-134a, R-410A, R-404A). As a key member of synthetic refrigeration oils, POE oils are renowned for their exceptional compatibility with environmentally friendly refrigerants and their ability to meet stringent operational demands.

Application

Commercial/Residential HVAC-R Systems: Compatible with HFC-based chillers, heat pumps, and air conditioners.

Automotive Air Conditioning: Used in electric vehicle (EV) thermal management systems and traditional automotive AC units.

Industrial Refrigeration: Cold storage, food processing, and pharmaceutical chillers.

CO₂ (R-744) Transcritical Systems: Some POE blends are tailored for CO₂ applications.

Advantages

Environmental Compliance: Replaces CFC/HCFC-compatible mineral oils in HFC systems, supporting global phase-out of ozone-depleting refrigerants.

Extended Service Life: Reduces oil change frequency due to superior stability.

Energy Efficiency: Low friction improves compressor efficiency, lowering energy consumption.

Typical Characteristics

| Item | Value | | | Method |
|--|---------|---------|---------|------------|
| Viscosity (mm ² /s@ 104 F /40 °C) | 32 | 46 | 68 | ASTM D445 |
| Viscosity Index | 120 | 120 | 120 | ASTM D2270 |
| Flash Point – Open Cup Method, (°F/°C) | 482/250 | 482/250 | 500/260 | ASTM D92 |
| Pour Point (°F/°C) | -49/-45 | -49/45 | -40-40 | ASTM D97 |
| Copper Corrosion | 1a | 1a | 1a | ASTM D130 |
| Rust Preventing Characteristics (A) | Pass | Pass | Pass | ASTM D665 |

Package

18 L/Barrel

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