Solest® 120

Refrigeration Compressor Lubricant

Description

Solest® 120 is a formulated VG120 synthetic polyol ester (POE) lubricant designed for commercial and industrial refrigeration and air conditioning compressors with over 25 years service in the field.

Designed to maximize lubrication in HFC systems, Solest® 120 provides superior bearing protection with greater film strength than standard HFC lubricants. This product provides effective wear protection for steel and aluminium surfaces for increased system life and improved efficiency.

Solest® lubricants are designed for standard factory fill of air conditioning and industrial refrigeration equipment, as well as for OEM retrofitting operations. CPI's laboratory studies and OEM compressor bench tests have afforded a product line specifically designed to meet key system needs. Solest® lubricants are not hazardous under 29 CFR 1910.1200. They provide improved properties over conventional mineral oils in all aspects, including viscosity index, flash and fire points and pour point.

Applications and Compressor Type

- HFC, HCFC, HFO Refrigeration
- Reciprocating, Screw, Centrifugal Compressors

Features and Benefits

Thermally stable	Longer system life
Improved oil management	Efficiency gains
Corrosion protection	Enhanced system reliability and reduced down-time
Excellent bearing lubrication	Longer compressor Life
Optimized System performance	Reduced operating costs
Environmentally friendly	Biodegradable
Excellent lubricity	Increased efficiency, reduced cost of operation

Outstanding Miscibility

The performance of an HFC system is optimized when the lubricant and refrigerant mix to form a single, clear phase.

Miscibility lowers the viscosity of the lubricant carried through the system, so the lubricant can more efficiently return to the compressor. Mineral oils are not miscible with HFCs whereas Solest® 120, as a polyol ester has a controlled level of miscibility with HFC gases.

Excellent Thermal Stability

Sealed tube results (ASHRAE 97) indicate that Solest® 120 provides excellent stability in the presence of HFC refrigerants. In addition to outstanding stability, this lubricant shows no adverse effects to metals and other materials of construction.

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Physical Properties

Test Procedure	ASTM Method	Typical
ISO VG		120
Viscosity at 40°C (cSt.)	ASTM D445	127.7
Viscosity at 100°C (cSt.)	ASTM D445	12.7
Viscosity Index	ASTM D2270	90
Density at 15°C (g/ml)	ASTM D4052	0.9492
Pour Point (°C)	ASTM D97	-27
Flash Point (°C)	ASTM D92	251
Fire point (°C)	ASTM D92	251
Specific Gravity (g/ml)	ASTM D4052	0.951
Dielectric Strength (kV)	ASTM D877	47.0
Water Content (ppm)	ASTM D1533	<50

The Solest® range is available in other viscosities and in a variety of packages.
These values are not intended for use in preparing specifications.
Additional information is available upon request.

Solest® Series Application Guide

	Residential Air Conditioning		Industrial & Commercial Refrigeration & Air Conditioning			
	Recip.	Rotary	Centr.	Recip.	Screw	Scroll
Solest® 22	Y	Y	Y	Y		Y
Solest® 31-HE	Y	Y	Y	Y		Y
Solest® LT-32	Y	Y	Y	Y		Y
Solest® 46	Y	Y	Y	Y	Y	Y
Solest® 68	Y	Y	Y	Y	Y	Y
Solest® 120			Y	Y	Y	Y
Solest® 170			Y	Y	Y	
Solest® 180			Y	Y	Y	
Solest® 220			Y	Y	Y	
Solest® 370			Y	Y	Y	

This application guide covers only a few of the many possible lubricants for various applications. Please consult your OEM and CPI for specific information on our complete product line as well as viscosity recommendations.

CPI is a world leader in the synthetic lubricants industry with operations in North America, Europe, Africa and Asia Pacific regions. In addition to our Solest® lubricants, CPI offers lubricants for any refrigeration application including domestic and automotive air conditioning, commercial and industrial refrigeration and low Global Warming Potential (GWP) refrigerants such as Carbon Dioxide, Hydrocarbons and Ammonia. CPI also offers a comprehensive range of Industrial Lubricants for Process gas, Hydrocarbon gas, Air Compressors, Vacuum Pumps, Hydraulics, Gears, Chains, Turbine, Landfill Gas, Field Gas, Chemical Process and many NSF H1 & H2 Food Grade applications. CPI is ISO 9001 and ISO 14001 accredited and earned the 1993 Stratospheric Ozone Protection Award from the Environmental Protection Agency. Also registered for the manufacture of Halal, Kosher and Pareve products.

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