

Introduction

Rodutherm 744-PAG is a polyalkylene glycol (PAG) refrigeration lubricant formulated specifically for CO₂ (R-744) systems. Its controlled miscibility with CO₂ ensures reliable oil return from evaporators, preventing oil accumulation that degrades heat transfer and system efficiency. A high viscosity index (172–204) maintains stable film protection from low-temperature evaporators through to high-pressure transcritical discharge.

Applications, Gases & Benefits

Applications	Gases	Benefits
▶ Transcritical CO₂ refrigeration ▶ Subcritical CO₂ refrigeration ▶ Cascade CO₂ refrigeration systems ▶ Commercial and industrial cold chain	▶ CO₂ (R-744)	▶ Optimised CO₂-lubricant miscibility for reliable oil return ▶ Excellent film strength under extreme CO₂ pressures ▶ Superior carbon and varnish control ▶ Very high viscosity index (172–204) ▶ Good low-temperature performance ▶ Extended service life and excellent lubricity

Technical Specifications

Property		VG 46	VG 68	VG 100	VG 150
Viscosity @ 40 °C	cSt	44	64	98	135
Viscosity @ 100 °C	cSt	8.5	11.6	17.8	23.4
Viscosity Index		172	178	200	204
Density @ 15 °C	g/cm ³	0.98	0.98	0.99	1.02
Pour Point	°C	-51	-45	-45	-39
Flash Point	°C	204	208	222	231
Copper Strip (D130)		1b	1b	1b	1b
Rust Test (D665)		Pass	Pass	Pass	Pass

NOTE Values in this Technical Data Sheet are typical and do not constitute a specification. Manufacturing specifications are available on request. Routine oil analysis is recommended. Specifications are subject to change due to formulation or raw-material updates; always verify that this TDS is the most current version.

Rodutherm 744-PAG — Technical Data Sheet The data presented is typical and subject to normal manufacturing variation. For product safety information, please refer to the Safety Data Sheet.