



Rodutherm PAO

PAO Synthetic Compressor Lubricant · 165 Series | Technical Data Sheet

Introduction

Rodutherm PAO is a full synthetic polyalphaolefin compressor lubricant formulated with neutral, non-reactive base oils and additives for industrial refrigeration, heat pump, and process gas compression service. Its chemically inert formulation ensures reliable operation across hydrocarbon refrigerants, CO₂, inert gases, and reactive gas environments, with pour points as low as –68 °C and extremely low lubricant carryover for cryogenic and low-temperature applications.

Applications, Gases & Benefits

Applications	Gases	Benefits
▶ CO₂ process gas and carbon capture compression ▶ Cryogenic and LNG liquefaction compression ▶ Ammonia and urea production compression ▶ Industrial and specialty gas compression ▶ Hydrocarbon refrigeration (R-170, R-290, R-600a)	▶ Hydrocarbon refrigerants: R-170, R-290, R-1270, R-600a ▶ CO₂ (R-744), nitrogen, argon, helium, hydrogen ▶ HFC gases (e.g. R-22) ▶ Reactive gases (consult NEXT Lubricants prior to use)	▶ Superior low-temperature fluidity and oil return (pour point to –68 °C) ▶ Extremely low lubricant carryover ▶ Excellent seal compatibility ▶ Chemically stable in both inert and reactive gas environments ▶ Strong corrosion protection ▶ Extended service life under continuous duty

Technical Specifications

Property		VG 15	VG 32	VG 46	VG 68	VG 100	VG 150	VG 220	VG 320
Viscosity @ 40 °C	cSt	15	32	46	64	100	150	220	320
Viscosity @ 100 °C	cSt	3.6	6.1	7.8	10.2	14.3	20.2	29.3	41.9
Viscosity Index		118	137	139	145	149	156	172	186
Density @ 15 °C	g/cm ³	0.82	0.83	0.83	0.83	0.82	0.82	0.82	0.84
Pour Point	°C	-68	-66	-60	-57	-57	-51	-45	-45
Flash Point	°C	214	247	262	264	264	265	266	268
Copper Strip (D130)		1a	1a	1a	1a	1a	1a	1a	1a
Rust Test (D665)		Pass	Pass	Pass	Pass	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 PAO — 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.