

ROYCO[®] 500

SYNTHETIC TURBINE ENGINE OIL

Description

ROYCO 500 is a 5 centistoke synthetic lubricating oil for gas turbine engines. The product is a careful blend of "hindered" esters and modern additive technology. These carefully selected components result in a product that has demonstrated excellent performance in today's modern gas turbines. **ROYCO 500** provides superior high temperature corrosion protection and exhibits excellent anti-wear capabilities. The product is blended to provide superior thermal and oxidative performance in critical turbine applications.

Applications

ROYCO 500 was specifically developed for use in high performance turboprop and turbojet engines, as well as industrial gas turbine engines, where longer engine life is required, along with increased lubricant life. **ROYCO 500** is well suited for use in engines that require minimum sludge and coke deposition. **ROYCO 500** is also recommended for helicopter transmissions. This oil should only be used in applications where synthetic oils have been specified or in systems expressly designed for synthetic lubricants.

Features and Benefits

Features	Benefits
Excellent Thermal and Oxidative Stability	Maintains engine efficiency; Extends engine life; Reduces carbon deposits and sludge formation.
Low pour point	Eases start-up in low ambient temperatures
Excellent corrosion and wear protection	Extends component life Reduces engine maintenance costs
Chemically stable	Lowers oil consumption and losses due to evaporation

Approvals and Specifications

ROYCO 500 meets all the requirements and is qualified under U.S. Military specification MIL-PRF-23699F Class STD. It is also qualified under the Performance Review Institute specification AS-5780, Class Standard Performance Capacity (SPC).

ROYCO 500 is approved commercially for use in aircraft engines manufactured by Pratt & Whitney, General Electric, Honeywell, Lycoming, Rolls Royce, Snecma, and Turbomeca gas turbine engines, as well as AiResearch, Garrett, and Sundstrand accessories. A detailed application list is available upon request.

ROYCO 500 is also approved for use in the industrial and marine versions of the Rolls-Royce Avon, Allison 501, Lycoming TF35, Pratt & Whitney GG3/FT3, GG4, GG12/FT12 and General Electric LM100, 1600, 2500 5000 and 6000 engines as well as Turbomeca Industrial engines.

PROPERTY	TEST METHOD	ROYCO® 500
Kinematic Viscosity, cSt		
@ 100°C	ASTM D445	5.12
@ 40°C		25.4
@ -40°C		8,875
Flash Point, °C (°F)	ASTM D92	264 (507)
Fire Point, °C (°F)	ASTM D92	301 (575)
Pour Point, °C (°F)	ASTM D97	-59 (-74)
Neutralization No.	SAE-APR-5088	0.06
Evaporation, 400°F, 6.5 hours, % wt loss	ASTM D972B	3
Synthetic Rubber Swell "H" (72 hrs, 158°F), %	FTM 3604	16.9
Synthetic Rubber Swell "F" (72 hrs, 400°F), %		13.8
Thermal Stability and Corrosivity (96 hrs, 525 °F)	FTM 3411	
Viscosity; @ 40°C, % Change		1.90
Acid Number Change, mg KOH/g		0.77
Metal Weight Change, mg/cm ²		0.22
Oxidation and Corrosion Stability (72 hrs, 400 °F)	FTM 5308	
Iron, wt. change, mg/cm ²		0.03
Silver, wt. change, mg/cm ²		0.03
Aluminium, wt. change, mg/cm ²		0.02
Magnesium, wt. change, mg/cm ²		0.01
Copper, wt. change, mg/cm ²		0.00
Viscosity Change @ 40°C, %		14.0
Acid Number Change		0.8
Contamination, mg/100 ml		0.9
Sediment, 1.2 micron filter, mg/L	0.8	
Foaming, ml initial/ml final	ASTM D892	
Sequence I, Sequence II, Sequence III		2/0, 3/0, 2/0
Density, pounds per gallon		8.35

Packaging

ROYCO 500 is available in 55 gallon drums, 5 gallon pails, and twenty-four by 1-quart cans per carton.

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