ROYCO® 602

DIELECTRIC COOLANT FLUID, HYDROLYTICALLY STABLE

Description

ROYCO 602 is a synthetic based dielectric coolant consisting of a stable synthetic hydrocarbon known as polyalphaolefin (PAO) and modern additives. **ROYCO 602** offers exceptional performance over a temperature range of -54 to 200°C. It does not react with water, resulting in cleaner operating systems and longer component life.

Applications

ROYCO 602 is recommended for use as a dielectric cooling fluid for aircraft avionics systems, high-powered transmitter equipment and power supplies, radar, navigation and other electronic systems. **ROYCO 602** may also be considered for use in electronics cooling systems such as circulating computer coolant systems. Benefits include lower initial cost, longer fluid life, lower weight, and lower toxicity when compared to other types of avionic coolants. Since **ROYCO 602** does not react with water, no specialized reclamation equipment is required and there may be less environmental impact potential in the event of a spill.

Elastomer Compatibility

Recommended (< 5% swell)	Marginal (< 15% swell)	Not Recommended (> 15%)
Nitrile (N 674-70)	Nitrile (N 497-70)	Ethylene Propylene
Fluorosilicone		Buna N
Fluorocarbon (PTFE, Viton)		SBR
Polyacrylate		Polychloroprene

Specifications

ROYCO 602 is qualified to **MIL-PRF-87252C(1) ,** NATO Code S-1748

Packaging

ROYCO 602 is available in 5 gallon pails and 55 gallon drums. Other package sizes may be available on special request.

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Typical Properties

PROPERTY	METHOD	ROYCO® 602
Gravity, API	ASTM D287	45.4
Density, pounds per gallon		6.655
Kinematic Viscosity, cSt	ASTM D445	
@ 100°C		1.72
@ 40°C		5.18
@ -40°C		274
@ -54°C		1137
Low Temperature Viscosity Stability, 3 hr, -54°C, % change	ASTM D2532	Pass
Viscosity Index	ASTM D2270	145
Pour Point, °C	ASTM D97	-100
Acid Number, mg KOH/g	ASTM D664	0.03
Flash Point, °C	ASTM D92	158
Fire Point, °C	ASTM D92	173
Water Content, ppm	ASTM D6304	20
Dielectric Constant, 400 Hz		2.10
Power Factor, 400 Hz		< 0.0001
Dielectric Breakdown Voltage, KV	ASTM D877	53
Volume Resistivity, ohm-cm	ASTM D1169	24.3×10^{110}
High Temperature Stability, 200°C, 100 hours	MIL-PRF-87252	Pass
Viscosity Change, %		
Acid Number Change, mg KOH/g		
Particulate Contamination Control	Automated Counter	Pass

Limitations

The synthetic based oils used in this product may soften certain paints and elastomers. Do not use with neoprene or natural rubber elastomers. Components should be evaluated for compatibility if there is any question.

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Royco® aviation lubricants

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