



Product Data

Castrol Aeroplex AI Grease, Aircraft and Instrument Gear and Actuator Screw (formerly Castrollease AI)

Description

Castrol Aeroplex™ AI is a smooth, buttery, light brown grease with exceptionally good low and high temperature properties. It consists of a synthetic ester base stock, inorganic thickener, and additives which impart resistance to oxidation and moisture and which improve load carrying capacity under extreme pressures.

Temperature Range

-100°F to 250°F (-73°C to 121°C); and for short periods to 300°F (149°C).

Application

Castrol Aeroplex AI is intended for general use in ball, roller and needle bearings, gears and on sliding and rolling surfaces of equipment, such as instruments, cameras, electronic gear, and aircraft control systems. It is particularly suitable for equipment, which must operate at both low and high temperatures. Its extremely low volatility helps prevent oil fogging in optical instruments. Castrol Aeroplex AI is also excellent for general use on aircraft gears, actuator screws, and other equipment requiring a lubricant with high load carrying capacity.

Compatibility

The synthetic oils used in this grease may soften paint, natural rubber, neoprene and electrical insulating compounds. Customers should determine the compatibility of existing components with ester based grease and make any changes as required prior to use of this product.

Specifications

Castrol Aeroplex AI meets all the requirements and is qualified under military specification MIL-PRF-23827C, Amendment 1, Type II. This product is identified by Military Symbol: GIA and NATO Code: G-354.

Typical Characteristics

Test	Method	Units	Specification Requirements	Result
Thickener Type				Microgel
Odor	Spec 4.5.1		No odor of rancidity, perfume, or alcohol	Pass, normal odor
Dropping Point	ASTM D2265	°C/°F	165/329 Minimum	254/489
Worked Penetration, 25°C/77°F Unworked Worked, 60 strokes	ASTM D217	0.1mm	200 Minimum 270-310	200+ 285
Base Oil Viscosity @40°C @100°C	ASTM D445	cSt		10.5 3.0
Worked Stability, 100,000 strokes	FTM 313	0.1mm	270-375	354
Dirt Count 25-74 microns 75+ microns	FTM 3005	Microns/ml	1000 Maximum None	31 0
Bomb Oxidation, pressure drop Kpa 100 hours @ 99°C/210°F	ASTM D942	Kpa	70 Maximum	46
Copper Strip Corrosion 24 hrs @100°C/212°F	ASTM D4048	Pass/Fail	1b Maximum	Pass
Water Resistance, 38°C/100F	ASTM D1264	% loss	20 Maximum	2
Evaporation Loss 22hrs @99°C/210°F	ASTM D2595	% loss	2 Maximum	0.8
Oil Separation 30 hrs @99°C/210°F	ASTM D6184	% weight	5 Maximum	3.5
Low-Temperature Torque, @-73°C/-100°F Starting Running, 1 hour	ASTM D1478	Nm	1.00 Maximum 0.10 Maximum	0.45 0.07
High Temperature Bearing Performance @ 10,000 rpm, 250°F/121°C	ASTM D3336	hrs	1000 Minimum	1000+
Four-Ball EP Test, Mean Hertz Load (LWI)	ASTM D2596	kgf	30 Minimum	49
Rust Prevention	ASTM D1743	Pass/Fail	2 Maximum	1,1,1 Pass
Storage Stability, 6 months Unworked Penetration Worked Penetration Change	FTM 3467	0.1mm	200 Minimum 30 Maximum	221 14 (Pass)
Specific Gravity, 75°C/24°C	ASTM D287			0.981

Subject to usual manufacturing tolerances.

Castrol Aeroplex AI
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