ExxonMobil

Mobil Aviation Grease SHC 100

ExxonMobil Aviation, United States

Synthetic Aviation Grease

Product Description

Mobil Aviation Grease SHC 100 is a supreme performance synthetic grease which combines the unique features of a polyalphaolefin (PAO) synthetic base fluid with those of a high quality lithium complex soap thickener. The thickener system provides a high dropping point, excellent resistance to water wash, and a tenacious structural stability. The unique physical properties of the synthetic base oil, combined with selected additives, provide outstanding protection against wear, rust, corrosion, and high temperature degradation. The wax-free feature of the synthetic base oil allows for low-temperature mobility/pumpability and low starting and running torque values. Mobil Aviation Grease SHC 100 is the product of choice for aircraft wheel bearing applications.

Features and Benefits

A key factor in the development of Mobil Aviation Grease SHC 100 was the close contact between ExxonMobil product engineers and key OEMs to ensure that the lubricant would provide exceptional performance in aircraft wheel bearings. This work has helped to confirm the results from ExxonMobil laboratory tests showing the exceptional performance of Mobil Aviation Grease SHC 100 including long grease life, enhanced bearing protection and bearing life in aircraft wheels, and wide temperature range of application.

To combat high thermal exposure of the oil, ExxonMobil product formulators chose synthetic hydrocarbon base oils for Mobil Aviation Grease SHC 100 because of their exceptional thermal/oxidative resistance potential. A state-of-the-art lithium complex thickener technology was developed and used specific additives to enhance performance.

Mobil Aviation Grease SHC 100 offers the following features and benefits:

Features	Advantages and Potential Benefits
High viscosity index (VI) base stock with no wax content	Wide application temperature ranges, with excellent protection at high temperatures and low torque, easy start-up at low temperatures.
Outstanding high temperature and low temperature performance	Thicker fluid films protecting against wear of equipment parts operating at high temperature

Features	Advantages and Potential Benefits
Excellent protection against wear, rust, and corrosion	Reduced downtime and maintenance costs because of reduced replacement of equipment parts
Excellent structural stability and oxidation resistance	Long intervals between re-lubrication and improved bearing life
Outstanding structural stability in the presence of water	Excellent grease retention on parts in hostile wet environments
Low volatility	Little loss of lubricating oil

Applications

Mobil Aviation Grease SHC 100 is recommended for aviation applications which need a lubricant that can perform normal functions, yet go far beyond in terms of high and low temperatures and long-life performance. It is a NLGI Grade 2/ISO VG 100 grease having the cold-temperature pumping resistance of most mineral-oil NLGI Grade 0 greases. It provides outstanding protection at operating temperatures from –54 ºC (-65 ºF) to 177 ºC (350 ºF).

Mobil Aviation grease SHC 100 is recommended for high speed, heavy load applications such as wheel bearings, as well as for slower speed, high load applications such as landing gear bearings, slides, and joints.

Mobil Aviation Grease SHC 100 is approved as a wheel bearing grease by all major aircraft wheel manufacturers.

Specifications and Approvals

Mobil Aviation Grease SHC 100	Approved as a wheel bearing grease
ABSC (Meggitt)	X
Dunlop (Meggitt)	X
Goodrich	X
Honeywell (formerly AlliedSignal)	X
Messier-Bugatti	X
Parker-Cleveland	X

Typical Properties

	Test Method	Mobil Aviation Grease SHC 100 (1)	Spec Limit
NLGI Grade		2	
Soap Type		Lithium Complex	
Structure	Visual	Smooth; Slight Tack	
Color	Visual	Red	
Base Oil Viscosity, cSt	ASTM D 445		
at 40 ºC		100	
at 100 ºC		14.5	
Penetration at 25ºC (77ºF), 60 Stroke Worked, mm/10	ASTM D 217	280	255 - 300
Extended Worked Stability, 100,000 strokes	FTM 313	313	350 max
Dropping Point, ºC (ºF)	ASTM D 2265	278 (532)	246 (475) min
Copper Strip Corrosion, 24 Hrs at 100ºC	ASTM D 4048	Pass	1b max
Four-Ball Wear, Scar dia, mm	ASTM D 2266	0.5	0.8 max
Four-Ball EP, Weld Load, kgf	ASTM D 2596	250	
Four-ball EP, Load Wear Index, kgf	ASTM D 2596	40	
Water Washout, wt %	ASTM D 1264		
1 Hr at 79ºC (175ºF)		7	
1 Hr at 41ºC (105ºF)		3	20 max
Rust Protection, 48 Hrs at 125ºF, ›1mm dia Corrosion Spots	ASTM D 1743	Pass	0 in 2 out of 3 bearings
Bomb Oxidation, pressure drop in psi	ASTM D 942		
100 hr at 99ºC (210ºF)		3	
500 hr at 99ºC (210ºF)		5	
Oil Separation, 30 Hrs at 177ºC, wt %	ASTM D 6184	7	12 max
Evaporation, 30 Hrs at 177ºC, wt %	ASTM D 972	5	
Dirt Count, Particles/mL	FTM 3005		
25-125 Micron		Pass	1000 Max
Larger than 125 Micron		Pass	0

	Test Method	Mobil Aviation Grease SHC 100 (1)	Spec Limit
Low Temp. Torque @ -54ºC (-65ºF), Nm (g-cm)	ASTM D 1478		
Starting		0.3 (3100)	2.0 (20400)
Running		0.1 (1020)	0.5 (5100)
(1) Values may vary within modest ranges			

Health and Safety

Based on available toxicological information, this product is not expected to produce adverse effects on health when used and handled properly. Information on use and handling, as well as health and safety information, can be found in the Material Safety Data Sheet (MSDS) which can be obtained from your local distributor or via the Internet on http://www.exxonmobil.com/lubes

09-2017

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For additional technical information or to identify the nearest U.S. ExxonMobil supply source, call 1800 662-4525.
http://www.exxonmobil.com

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.