

Mobilgrease 28

Synthetic Aviation Grease

Product Description

Mobilgrease 28 is a supreme performance, wide-temperature, antiwear grease designed to combine the unique features of a polyalphaolefin (PAO) synthetic base fluid with an organo-clay (non-soap) thickener. Its consistency is between an NLGI No. 1 and No. 2 grease. It offers outstanding performance over wide temperature ranges. The wax-free nature of the synthetic base fluid, together with its low coefficient of traction compared with mineral oils, provide excellent low temperature pumpability, very low starting and running torque, and can reduce operating temperatures in the load zone of rolling element bearings. The clay thickener gives Mobilgrease 28 a high dropping point value of around 300°C, which provides excellent stability at high temperatures. Mobilgrease 28 resists water washing, provides superior load-carrying ability, reduces frictional drag, and prevents excessive wear. Tests show that Mobilgrease 28 lubricates effectively rolling element bearings under conditions of high speeds and temperatures. Mobilgrease 28 has also shown superior ability to lubricate heavily loaded sliding mechanisms, such as wing flap screw jacks.

Mobilgrease 28 is of quality level U.S. Military Specification MIL-G-81322E, Grease (Grade A), General-Purpose, Aircraft and U.S. Military Specification DOD-G-24508A (Navy) for shipboard auxiliary machinery. It is designated U.S. Military Symbol WTR and NATO Code G-395 grease.

For more than 30 years, Mobilgrease 28 has been the multi-purpose grease of choice for military and related aviation applications, worldwide.

Applications

Mobilgrease 28 is designed for the lubrication of plain and rolling bearings at low to high speeds, and splines, screws, worm gears, and other mechanisms where high friction reduction, low wear, and low lubricant friction losses are required. The recommended operating temperature range is -54°C to 177°C (-65°F to 350°F) with appropriate relubrication intervals.

Mobilgrease 28 is recommended for use in landing wheel assemblies, control systems and actuators, screw jacks, servo devices, sealed-bearing motors, oscillating bearings, and helicopter rotor bearings on military and civil aircraft. Subject to equipment manufacturer approvals, it can also be used on naval shipboard auxiliary machinery and where superseded specifications MIL-G-7711A, MIL-G-3545B, and

MIL-G-25760A are recommended.

Mobilgrease 28 also is recommended for industrial lubrication, including sealed or repackable ball and roller bearings wherever extreme temperature conditions, high speeds, or water washing resistance are factors. Typical industrial applications include conveyor bearings, small alternator bearings operating at temperatures near 177°C (350°F), high-speed miniature ball bearings, and bearing applications where oscillatory motion, and vibration create problems. It is USDA H-2.

Advantages

- Low volatility
- Wide temperature range operability
- Excellent protection against rust and corrosion
- Low friction and wear
- Excellent stability and oxidation resistance
- Outstanding resistance to water washing

Health & 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>; or by calling 1-800-662-4525 and selecting prompt 2.

For additional technical information or to identify the nearest U.S. ExxonMobil supply source, call 1-800-662-4525.

Characteristics	Test Method	Mobilgrease 28*	MIL-G-81322E Limits
NLGI Grade		1 1/2	
Thickener Type		Clay (non-soap)	
Color	Visual	Dark Red	
Structure	Visual	Smooth, buttery	
Dropping Point, °C (°F)	ASTM D 2265	305 (581)	232 (450) min
Viscosity of Base Oil, cSt, @ 40°C	ASTM D 445	29.3	
Low Temp. Torque, @ -54°C (-65°F)	ASTM D 1478		
Starting, Nm (g-cm)		0.8 (7600)	0.98 (10,000) max
Running, after 1 Hr, Nm (g-cm)		0.08 (770)	0.098 (1,000) max
Penetration @ 25°C (77°F), mm/10 60 Stoke Worked	ASTM D 217	295	265-320
Extended Worked Penetration Stability, mm/10 100,000 strokes	FTM 791.313	302	350 max
Oil Separation, wt %, 30 Hrs @ 177°C	ASTM D 6184	3	10 max
Evaporation Loss, wt %, 22 Hrs @ 177°C	ASTM D 2595	6	12 max
Copper Strip Corrosion, 24 Hrs @ 100°C	ASTM D 4048	Pass	1b max
Four-Ball Wear, Scar dia, mm	ASTM D 2266	0.55	1.3 min
Load Wear Index, kgf	ASTM D 2596	41	30 min
Rust Protection, > 1mm dia Corrosion Spots 48 Hrs @ 125°F	ASTM D 1743	Pass	0 in 2 out of 3 bearings
Water Washout, wt %, 1 Hr @ 41°C	ASTM D 1264	1	20 max
High Temperature Performance, Hrs @ 177°C	ASTM D 3336	Pass	400 min
Oxidation Stability, pressure drop in kPa	ASTM D 942		
100 Hrs @ 99°C		Pass	83 max
500 Hrs @ 99°C		Pass	172 max
Storage Stability, 6 months @ 38°C	FTM 791.3467	Pass	
Dirt Count, Particles/mL	FTM 791.3005		
25-74 Micron		Pass	1000 max
75 Micron or Larger		0	0
Oscillation Friction and Wear, Scar Dia, mm 35,000 cycles, 900 Angle	Modified ASTM D 3704	Pass	6.35 max
Rubber Swell, L Type Synthetic, vol % 1 week @ 70°C (158°F)	FTM 791.3603	6	10 max

*Values shown are typical and may vary within modest ranges.