



Product Data Sheet

AVIATION OIL ELITE 20W50

SEMI-SYNTHETIC OIL FOR PISTON ENGINES OF AIRCRAFT

February 2001

AVIATION OIL ELITE 20W50, an ashless dispersant piston engine oil, offers the following features and advantages:

- ◆ Semi-synthetic SAE 20W50 multi-grade engine lubricant
- ◆ Meets SAE J1899
- ◆ Meets MIL-L-22851D (Obsolete)
- ◆ US Military approved
- ◆ Contains the Lycoming anti-wear/anti-scuffing additive
- ◆ FAA approved fluid for alternate method of compliance to AD 80-04-03-R2 par. b.1 (For additional information see FAA Special Airworthiness Information Bulletin, No. NE-00-22)
- ◆ Compatible with all commercial aviation piston engine oils - both non-dispersant and ashless dispersant type

Primary Applications

AVIATION OIL ELITE 20W50 is a super premium quality ashless-dispersant aviation piston engine oil. It is formulated from select, highly refined mineral base oils, a polyalphaolefin synthetic base oil, and ashless performance additives providing outstanding engine cleanliness, wear protection, and corrosion protection. AVIATION OIL ELITE 20W50 is designed to satisfy the requirements of all opposed piston engine manufacturer's requirements under a wide range of climactic conditions. It is recommended for all Teledyne Continental and Textron Lycoming engines. It contains the anti-wear/anti-scuffing additives required for some Lycoming engines and it is recommended for all Lycoming engines.

Performance Features

AVIATION OIL ELITE 20W50 has been designed to provide a high level of rust and corrosion protection. The powerful dispersant utilized keeps the engine parts, the turbocharger bearings, the propeller hub and dome, etc...clean of harmful sludge and varnish deposits. As a multi-viscosity grade, the oil will provide easy starting and fast lubrication of critical engine parts under low temperature conditions, while offering high lubricant film strength and low wear under high temperature conditions. Extensive laboratory, engine rig, and flight evaluation tests have demonstrated the excellent performance of AVIATION OIL ELITE 20W50.

Compatibility

AVIATION OIL ELITE 20W50 is compatible with non-dispersant mineral oils as well as with other ashless-dispersant oils that meet the requirements of MIL-L-22851D/SAE J1899. It can also be used in high-time engines that have previously used a straight mineral oil. If this is done, however, it is advisable to carry out the oil-screen inspection recommended by the engine manufacturer.

Run-in Procedure

New or newly overhauled aircraft engines should be broken in according to the engine builder's recommended procedure. Many engine manufacturers advise running in on straight mineral oil for the first 25 to 50 hours of operation. In all case, however, the engine manufacturer's recommendations should be followed, since the modification standard can vary from engine to engine.

Precautions

Health studies have shown that many petroleum hydrocarbons pose potential human health risks that may vary from person to person. As a precaution, exposure to liquids and vapors of such products should be minimized.

Oils and greases in contact with the skin can result in plugging of sweat glands and hair follicles. This can lead to skin irritation or dermatitis. Therefore, good personal hygiene should always be practiced. AVIATION OIL should be promptly removed from the skin. Soiled clothing should not remain in contact with the skin.

Oils and greases are readily removed from the skin by waterless hand cleaners, followed by washing with soap, water, and a soft skin brush.

They can be removed from clothing by dry-cleaning or by washing with laundry detergents. Where repeated skin contact occurs use chemical resistant gloves.

If petroleum products contact the eyes, flush the eyes with fresh water until the irritation subsides.

WARNING: "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; they may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove, and even a trace of remaining material constitutes an explosive hazard. "Empty" drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Please refer to the Esso Material Safety Data Sheet for further information.

Note: This product is NOT controlled under the Canadian WHMIS legislation.

Typical Properties

AVIATION OIL ELITE 20W50	
Gravity, °API	30.0
Density, gm/cm ³ @ 15.6°C (60°F)	0.875
Viscosity	
cSt at 40°C	183.1
cSt at 100°C	20.5
SUS at 100°F	941.7
SUS at 210°F	103.4
Viscosity Index	131
Flash Point, °C	250.0
°F	482.0
Pour point, °C	-27.0
°F	-16.6

The values shown above are representative of current production. Some are controlled by manufacturing and performance specifications while others are not. All may vary within modest ranges.