

## Aviation Oil EE Series

### Ashless Dispersant Aviation Piston Engine Oil

#### Product Description

DISCONTINUED - For a product data sheet or replacement product information, please see the contact information at the bottom of this document

Aviation Oil EE is the brand name of a premium quality line of ashless-dispersant piston engine oils. Formulated with select, highly refined base oils together with ashless-dispersant and anti-oxidant additives, Aviation Oil EE is designed to satisfy the requirements of all major engine manufacturers under all climatic conditions.

To meet a wide range of requirements, Aviation Oil EE is available as monogrades in four viscosity grades: 65, 80, 100, and 120.

#### Features and Benefits

Clean engines and low wear are just two of the performance benefits gained through the use of Aviation Oil EE. Through the action of the ashless-dispersant additive, solid contaminants remain suspended in the oil and are not allowed to accumulate as sludge or deposits on engine surfaces. The suspended contaminants are non-abrasive and circulate harmlessly in the oil until they are removed when the oil is drained. Extensive flight tests and thousands of flying hours have demonstrated the high performance level of Aviation Oil EE products.

Key features and potential benefits include the following:

Features	Advantages and Potential Benefits
High oxidation and thermal stability	Minimizes deposits and extends engine life
High dispersancy	Keeps contaminants from settling and reduces the build up of lower ring zone deposits, varnish and sludge, compared to a straight mineral oil
High Viscosity Index	Easy starting and fast lubrication of critical engine parts under low temperature conditions as well as high lubricant film strength and low wear under high temperature operating conditions
Compatible with all commercial aviation piston engine oils of both non-dispersant and ashless-dispersant type	Flexibility in use

#### Applications

Aviation Oil EE oils are designed to meet the requirements of modern aircraft piston engines used in commercial, military and private aircraft. Ashless-dispersant aviation engine oils have attained wide-spread use due to their ability to keep engines cleaner than non-dispersant oils. The four grades of Aviation Oil EE meet the requirements of major engine manufacturers where monograde ashless-dispersant engine oils are recommended.

Aviation Oil EE products are U.S. Military approved under SAE J1899, which replaced MIL-L-22851D and are listed in the U.S. Military Qualified Products List QPL-1899. Specific viscosity grades are approved by Pratt and

Whitney, Teledyne Continental Motors, and Textron Lycoming and included in their respective Qualified Products Lists. Appropriate viscosity grades are recommended for Curtis-Wright, Franklin, and Rolls-Royce engines.

Compatibility: Aviation Oil EE Series is compatible with nondispersant mineral oils as well as with other ashless-dispersant oils that meet the requirements of MIL-L-22851D/SAE J1899. They can 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.

### Specifications and Approvals

Aviation Oil EE Grades are approved against:	65	80	100	120
MIL-L-22851D/SAE J1899	X	X	X	X
Pratt and Whitney Spec No 1183			X	X
Teledyne Continental Motors (MHS 24)	X		X	
Textron Lycoming Spec No 301F	X	X	X	X

### Typical Properties

Exxon Aviation Oil EE Grade (1)	Test Method	65	80	100	120
SAE Grade		30	40	50	60
Military Grade		-	Type III	-	Type II
Kinematic Viscosity, cSt	ASTM D 445				
at 40°C		90.8	130	203	268
at 100°C		12.1 (9.3 to 12.5)	15.2 (12.5 to 16.3)	20.2 (16.3 to 21.9)	24.2 (21.9 to 26.1)
Viscosity Index	ASTM D 2270	126	120	116	114
Pour Point, °C (°F)	ASTM D 97	-33 (-27)	-30 (-22)	-24 (-11)	-23 (-9)
Flash Point, COC, °C (°F)	ASTM D 92	240 (464)	253 (487)	259 (497)	267 (513)
Density at 15.6°C, g/mL	ASTM D 4052	0.880	0.885	0.890	0.893
API Gravity		29.1	28.1	27.2	26.7
Ash Content, mass %	SAE J1787	nil	nil	nil	nil
Acid No., mg KOH/g	ASTM D 664, pH11	0.01 (0.3 max)	0.01 (0.3 max)	0.02 (0.3 max)	0.02 (0.3 max)
Sulfur Content, mass %		0.35	0.41	0.49	0.54

(1) Values not identified as min/max are typical and 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>. PDS AV-16

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