Technical Data Sheet

AeroShell Oil *80*

Mineral lubricating oil for aircraft piston engines

AeroShell straight mineral oils are blended from selected high viscosity index base stocks. These oils do not contain additives except for a small quantity of pourpoint depressant (which is added when improved fluidity at very low temperature is required) and an anti-oxidant.

DESIGNED TO MEET CHALLENGES

Main Applications

- AeroShell Oils are available in four different viscosity grades:

  AeroShell Oil 65 - AeroShell Oil 80 - AeroShell Oil 100 - AeroShell Oil 120.
- The suffix for each grade corresponds to the viscosity of the oil at 210^{0}F in Saybolt Universal Seconds.
- The appropriate grades of these AeroShell Oils are approved for use in four-stroke cycle (four-cycle) certified aircraft reciprocating piston engines (except Porsche) and other aircraft radial engines which use oil to specification SAE J1966 (MIL-L-6082) and which do not require use of an oil containing a dispersant additive. AeroShell Oils are used primarily during break-in of most new or recently overhauled four-stroke cycle aviation piston engines. The duration and lubrication recommendations for break-in vary, so operators should refer to the original engine manufacturer and/or overhaul facility for specific recommendations.

Specifications, Approvals & Recommendations

- SAE J1966 SAE 40
- The U.S. Specification SAE J1966 replaces MIL-L-6082E.
- Although it was planned to replace the British Specification DERD 2472 with a DEF STAN specification this has now been put into suspension and instead the SAE specification has been adopted.
- Russian: MS-14
- Joint Service Designation: OM-170

  For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Typical Physical Characteristics

Properties			Method	SAE J1966 Grade 40	Typical
SAE Viscosity grade					40
Density	@15^{0}C	kg/m^{3}	ASTM D4052	Report	884
API Gravity			ASTM D287	Report	28.3
Kinematic Viscosity	@100^{0}C	mm^{2}/s	ASTM D445	12.5 to 16.3	14
Viscosity Index			ASTM D2270	85 min	> 95
Pour Point		^{0}C	ASTM D5949	-15 max	< -21
Flash Point		^{0}C	ASTM D92	225 min	> 250
Total Acid Number		mgKOH/g	ASTM D664/974	0.10 max	< 0.1
Sulphur		%m	ASTM D4951	0.8 max	0.35
Copper corrosion 3 hrs	@100^{0}C		ASTM D130	1 max	Passes
Ash Content		%m	ASTM D482	0.011 max	< 0.005
Trace Sediment		ml/100ml	ASTM D2273	Must pass	Passes

Properties	Method	SAE J1966 Grade 40	Typical
Foaming Tendency	ASTM D892	Must pass	Passes

These products are made in more than one location and the approval status and typical properties may vary between locations.

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- **Health and Safety**

  This product is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

  Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

  Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from https://www.epc.shell.com

- **Protect the Environment**

  Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

  Advice on applications not covered here may be obtained from your Shell representative.