



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°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°C kg/m ³ | ASTM D4052 | Report | 884 |
| API Gravity | ASTM D287 | Report | 28.3 |
| Kinematic Viscosity @100°C mm ² /s | ASTM D445 | 12.5 to 16.3 | 14 |
| Viscosity Index | ASTM D2270 | 85 min | > 95 |
| Pour Point °C | ASTM D5949 | -15 max | < -21 |
| Flash Point °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°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.