



AeroShell Turbine Oil 308

AeroShell Turbine Oil 308 is a 3 mm²/s synthetic ester oil incorporating additives to improve resistance to oxidation and corrosion and to minimise wear.

DESIGNED TO MEET CHALLENGES

Main Applications

- AeroShell Turbine Oil 308 was developed specifically for use in particular models of aircraft turbo-prop and turbo-jet engines for which a MIL-PRF-7808 (formerly MIL-L-7808) oil is required.
- AeroShell Turbine Oil 308 contains a synthetic ester oil and should not be used in contact with incompatible seal materials and it also affects some paints and plastics.

Specifications, Approvals & Recommendations

- Approved MIL - PRF - 7808L Grade 3 (US)
- NATO Code O -148
- Joint Service Designation OX - 9

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

Typical Physical Characteristics

| Properties | | | MIL-PRF-7808L Grade 3 | Typical |
|---|--------|--------------------|-----------------------|-----------------|
| Oil type | | | Synthetic ester | Synthetic ester |
| Density | @15°C | kg/l | - | 0.956 |
| Kinematic viscosity | @100°C | mm ² /s | 3.0 min | 3.1 |
| Kinematic viscosity | @40°C | mm ² /s | 11.5 min | 12.0 |
| Kinematic viscosity | @-40°C | mm ² /s | - | 2400 |
| Kinematic viscosity | @-51°C | mm ² /s | 17000 max | 12000 |
| Viscosity Stability | | | Must pass | Passes |
| Pourpoint | | °C | - | Below -62 |
| Flashpoint Cleveland Open Cup | | °C | 210 min | 235 |
| Total Acidity | | mgKOH/g | 0.3 max | 0.15 |
| Trace metal content | | | Must pass | Passes |
| Evaporation 6.5 hrs | @205°C | % m | 30 max | 20 |
| Silver - bronze corrosion - Silver | @232°C | gm/m ² | +4.5 max | 0.01 |
| Silver - bronze corrosion - Bronze | @232°C | gm/m ² | +4.5 max | 0.05 |
| Deposit Test - deposit rating | | | 1.5 max | 0.8 |
| Deposit Test - neutralisation number change | | % | 20 max | 2.0 |
| Deposit Test - viscosity change | @40°C | % | 100 max | 12.0 |
| Storage Stability | | | Must pass | Passes |
| Compatibility | | | Must pass | Passes |
| Elastomer compatibility SAE-AMS 3217/1, 168 hrs | @70°C | - % swell | 12 to 35 | 27 |
| Elastomer compatibility SAE-AMS 3217/4, 72 hrs | @175°C | - % swell | 2 to 25 | 16 |
| Elastomer compatibility SAE-AMS 3217/4, 72 hrs, tensile strength change | @175°C | % | 50 max | 30 |

| Properties | | MIL-PRF-7808L Grade 3 | Typical |
|---|--------------------|-----------------------|--------------|
| Elastomer compatibility SAE-AMS 3217/4, 72 hrs, elongation change | @175°C % | 50 max | 3.5 |
| Elastomer compatibility SAE-AMS 3217/4, 72 hrs, hardness change | @175°C % | 20 max | 9.0 |
| Elastomer compatibility SAE-AMS 3217/5, 72 hrs | @150°C - % swell | 2 to 25 | Passes |
| Elastomer compatibility SAE-AMS 3217/5, 72 hrs, tensile strength change | @150°C % | 50 max | Less than 50 |
| Elastomer compatibility SAE-AMS 3217/5, 72 hrs, elongation change | @150°C % | 50 max | Less than 50 |
| Elastomer compatibility SAE-AMS 3217/5, 72 hrs, hardness change | @150°C % | 20 max | Less than 50 |
| Static foam test - foam volume | ml | 100 max | 30 |
| Static foam test - foam collapse time | secs | 60 max | 15 |
| Dynamic foam test | | Must pass | Passes |
| Corrosion and oxidation stability | | Must pass | Passes |
| Bearing deposition stability - deposit rating | | 60 max | <60 |
| Bearing deposition stability - filter deposit weight | g | 2.0 max | <2 |
| Bearing deposition stability - viscosity change | @40°C | -5 to +25 | Passes |
| Bearing deposition stability - acid number change | mgKOH/g | 1.0 max | <1 |
| Bearing deposition stability - metal weight change | mg/cm ² | +0.2 max | Passes |
| Gear load carrying capacity | | Must pass | Passes |

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

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://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.