



# AeroShell Turbine Oil 3

## Mineral lubricating oil for aircraft turbine engines

AeroShell Turbine Oil 3 is a 3 mm<sup>2</sup>/s mineral turbine oil blended from mineral base stocks to which an anti-corrosion additive has been added.

### DESIGNED TO MEET CHALLENGES

#### Main Applications

- AeroShell Turbine Oil 3 was developed for early pure jet engines and is still approved for some versions of these engines plus the Turbomeca Astazou, Artouste, Turmo, Bastan and Marbore engines.
- AeroShell Turbine Oil 3 is widely used for inhibiting fuel systems and fuel system components during storage.
- AeroShell Turbine Oil 3 is an analogue to the Russian Grade MK-8 and can therefore be used in engines which require the use of MK-8. It is also used as the mineral turbine oil component in the mixture of mineral turbine oil and piston engine oil used in Russian turbo-prop engines.

#### Specifications, Approvals & Recommendations

- DEF STAN 91-99
- French: AIR 3515/B
- Russia: MK-8
- NATO Code O-135 and O-134
- Joint Service Designation OM-11 and OM-13
- DEF STAN 91-44

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

#### Typical Physical Characteristics

| Properties                                     | Method                   | DEF STAN 91-99 | Typical |
|------------------------------------------------|--------------------------|----------------|---------|
| Oil type                                       |                          | Mineral        | Mineral |
| Density @15°C kg/m <sup>3</sup>                | ISO 12185                | -              | 875     |
| Kinematic Viscosity @40°C mm <sup>2</sup> /s   | ASTM D445                | 12.0 min       | 12.66   |
| Kinematic Viscosity @-25°C mm <sup>2</sup> /s  | ASTM D445                | 1 250 max      | 1 149   |
| Pour Point °C                                  | ASTM D97                 | -45 max        | <-50    |
| Flash Point °C                                 | ASTM D93                 | 144 min        | 148     |
| Total Acid Number mg KOH/g                     | ASTM D664                | 0.30 max       | 0.18    |
| Strong acid number mgKOH/g                     | IP 177                   | Nil            | Nil     |
| Copper corrosion 3 hrs @100°C                  | ASTM D130                | Must Pass      | Passes  |
| Saponification number mgKOH/g                  | ASTM D94                 | 1 max          | 0.35    |
| Ash %m                                         | IP 4                     | 0.01 max       | 0.001   |
| Aromatic content %                             | Def Stan 05-50 Part 65   | 10 max         | 6.9     |
| Oxidation - total acid number increase mgKOH/g | DEF STAN 91-99/2 Annex A | 0.7 max        | 0.24    |
| Oxidation - asphaltenes %m                     | DEF STAN 91-99/2 Annex A | 0.35 max       | 0.02    |

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.