Technical Data Sheet

AeroShell Fluid *12*

AeroShell Fluid 12 is a low volatility synthetic ester oil used in aircraft instruments and also for the general lubrication of aircraft. It is oxidation and corrosion inhibited, and possesses good high and low temperature characteristics.

DESIGNED TO MEET CHALLENGES

Main Applications

- AeroShell Fluid 12 is used for general aircraft lubrication as well as for aircraft gyro instrument gimbal bearings, separately lubricated high speed turbines and compressors, aircraft air cycle equipment and electronic equipment. AeroShell Fluid 12 is particularly suitable for use when an oil with a low evaporation rate is required at high and low temperatures.
- AeroShell Fluid 12 is a synthetic oil and it should not be used in contact with incompatible seal materials such as neoprene or natural rubber. Suitable seal materials include Fluorocarbon (Viton). AeroShell Fluid 12 may also affect certain paints and plastics. It is recommended that components are evaluated for compatibility if there is any question.

Specifications, Approvals & Recommendations

- COMAC Approved to QPL-CMS-OL-204
- Approved MIL-PRF-6085D (US)
- Equivalent DEF STAN 91-49 (British)
- Approved AIR 3511/A (French)
- NATO Code O-147
- Joint Service Designation OX-14

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

Typical Physical Characteristics

Properties			MIL-PRF-6085D	Typical
Oil type			–	Synthetic ester
Kinematic viscosity	@54.4°C	mm^2/s	8 min	8.2
Kinematic viscosity	@-53.9°C	mm^2/s	12000 max	11000
Flashpoint (Cleveland Open Cup)		°C	185 min	220
Pour point		°C	-57 max	Below -60
Total Acid Number		mgKOH/g	–	0.20
Relative Density	@15.6/15.6°C		–	0.925
Evaporation loss in 22 hrs	@-120°C	% m	1.80 max	1.50
Colour ASTM			–	< 0.5
Corrosion & oxidation stability (168 hrs at 135°C) - metal weight change			Must pass	Passes
Corrosion & oxidation stability (168 hrs at 135°C) - viscosity change	@54.5°C		± 5	0.5
Corrosion & oxidation stability (168 hrs at 135°C) - total acid number change		mgKOH/g	0.5 max	0.1
Oxidation and corrosion stability 168 hrs at 135°C - insolubles		mg/100ml	–	1.0
Low temperature stability			Must pass	Passes
Corrosivity			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.