Technical Data Sheet

AeroShell **Fluid *3***

Mineral lubricating oil for general purpose aircraft use

AeroShell Fluid 3 is a general purpose mineral lubricating oil recommended for general lubrication of aircraft parts that require a light oil with good low temperature characteristics and a low freezing point. It is inhibited against oxidation and corrosion. AeroShell Fluid 3 is a relatively low viscosity product with good resistance to evaporation.

DESIGNED TO MEET CHALLENGES

Main Applications

- AeroShell Fluid 3 is recommended for general lubrication of aircraft parts that require a light oil, e.g. hinges, pivot joints, shaft joints, linkage pins and bearings, pulleys, cables, camera mechanisms, radio and radar gear and instruments. AeroShell Fluid 3 is normally applied by means of an oil can or brush. For this reason it is also described as 'an oilcan lubricant'.
- Operating temperature range of AeroShell Fluid 3 is -54°C to +121°C.
- For high temperature applications where no provision is made for frequent re-lubrication the synthetic oil, AeroShell Fluid 12, should be used in place of the mineral oil, AeroShell Fluid 3; however in this case care should be taken to ensure that there is no incompatibility between AeroShell Fluid 12 and seals, paints etc.

Specifications, Approvals & Recommendations

- MIL-PRF-7870E
- DEF STAN 91-47 (Obsolete)
- NATO Code O-142
- Joint Service Designation OM-12 (Obsolete)

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

Typical Physical Characteristics

Properties			Method	MIL-PRF-7870E	Typical
Oil type					Mineral
Colour			ASTM D1500		<0.5
Density	@15°C	kg/m³	ASTM D4052		890
Kinematic Viscosity	@38°C	mm²/s	ASTM D445	10 min	10
Kinematic Viscosity	@-40°C	mm²/s	ASTM D445	4 000 max	<4 000
Flash Point (Cleveland Open Cup)		°C	ASTM D92	130 min	155
Pour Point		°C	ASTM D97	-57 max	<-57
Evaporation Loss	22h @ 99°C	%m	ASTM D972	25 max	19
Total Acid Number		mg KOH/g	ASTM D664	Report	0.68
Low temperature stability 72 hrs	@-54°C		FED-STD-791-3458	Must pass	Passes
Corrosion and oxidation stability 168 hrs - metal weight change	@121°C		ASTM D4636	Must pass	Passes

Properties			Method	MIL-PRF-7870E	Typical
Corrosion and oxidation stability 168 hrs - viscosity change at 37.8°C	@121°C	%	ASTM D4636	-5 to +20 max	10
Corrosion and oxidation stability 168 hrs - acid number change	@121°C	mgKOH/g	ASTM D4636	0.2 max	0.06
Precipitation number		ml	ASTM D91	0 max	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**

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.