



# AeroShell *LGF*

AeroShell Landing Gear Fluid (LGF) is a mineral hydraulic fluid (MIL-PRF-5606) to which additional additives have been added to improve the extreme pressure characteristics and the fluid's natural lubricity. The lubricity agent provides a stable thin film layer to the metal surfaces at mild operating conditions. When severe conditions exist (landing/ touchdown), the extreme pressure additive supplies the load carrying needed at the metal-to-metal surfaces to prevent the occurrence of such phenomena as "ladder cracking" and "slip stiction" of the piston component of the landing gear. AeroShell LGF is AeroShell Fluid 41 plus additives.

## DESIGNED TO MEET CHALLENGES

### Main Applications

The excellent low temperature properties of AeroShell LGF make it particularly suitable in areas of low temperature operations.

- AeroShell LGF is straw yellow in colour.

### Specifications, Approvals & Recommendations

- AeroShell Landing Gear Fluid (LGF) is not covered by any military specification.
- McDonnell Douglas Approved DPM-6177
- Boeing Approved BMS 3-32A (AeroShell LGF is approved to Type II)

**AeroShell LGF is approved for use in the shock struts of the following aircraft:**

- Boeing 707/720, 727, 737, 747 (except those using BMS 3-11 fluids), 757, 767 and 777

- Lockheed L1011 Tristar
- McDonnell Douglas DC-8, DC-9, DC-10, MD-80, MD-11
- Airbus CML Code 02-004A (SSF)
- For use in the landing gear shock struts of other aircraft, operators must check with the respective manufacturer first.
- For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

### Compatibility & Miscibility

AeroShell LGF is compatible with AeroShell Fluids 4, 41 and 71.

### Typical Physical Characteristics

Properties	Method	AeroShell LGF
Base Hydraulic Fluid Specification		MIL-PRF-5606H
Kinematic Viscosity @40°C		14.5
Kinematic Viscosity @-40°C		423
Kinematic Viscosity @-54		1780
Flash Point °C		110
Neutralisation Number mgKOH/g		2.4
Evaporation 6hrs @71°C		18.0
Relative Density @15.6/15.6°C		0.874
Pourpoint °C		Below -68
Foaming Seq I Foam/Collapse time sec		45
Foaming Seq II Foam/Collapse time		N/A
Foaming Seq III Foam/Collapse time		N/A
Corrosion-Oxidation Stability (168hrs) Metal Weight Change - Copper @121°C mg/cm <sup>2</sup>		-0.06

Properties		Method	AeroShell LGF
Corrosion-Oxidation Stability (168hrs) Metal Weight Change - Aluminium	@121°C	mg/cm <sup>2</sup>	-0.005
Corrosion-Oxidation Stability (168hrs) Metal Weight Change - Steel	@121°C	mg/cm <sup>2</sup>	-0.02
Corrosion-Oxidation Stability (168hrs) Metal Weight Change - Magnesium	@121°C	mg/cm <sup>2</sup>	0.01
Corrosion-Oxidation Stability (168hrs) Metal Weight Change - Cadmium	@121°C	mg/cm <sup>2</sup>	0.01
Fluid Properties Change In Viscosity		%	10.5
Fluid Properties Change In Acid Number		mgKOH/g	0.05
Insolubles			Clear
4-ball wear, scar diam.		mm	0.43
Colour			Yellow

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

AeroShell LGF 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 Material Safety Data Sheet, which can be obtained from your Shell representative.

## Additional Information

### ■ Advice

Advice on applications not covered here may be obtained from your Shell representative.

## TYPICAL TEMPERATURE/VISCOSITY CURVE OF AEROSHELL HYDRAULIC FLUIDS

