Technical Data Sheet

# AeroShell **Grease 7**

***Synthetic Grease for Aircraft***

AeroShell Grease 7 is an advanced multi-purpose grease, composed of a synthetic oil and clay thickener, possessing good load carrying ability over a wide temperature range. It is inhibited against corrosion and has excellent resistance to water.
The useful operating temperature range is –73°C to +121°C.

## DESIGNED TO MEET CHALLENGES

### Main Applications

- AeroShell Grease 7 satisfies nearly all the airframe grease requirements of turbine engined aircraft and also those of piston engined aircraft provided that seal incompatibility does not occur. Most civil aircraft manufacturers approve AeroShell Grease 7 as a general purpose grease either by brand name or by specification. It is recommended for lubricating highly loaded gears, actuator screw mechanisms, etc., also for instrument and general airframe lubrication within the temperature range of –73°C to +121°C.

### Specifications, Approvals & Recommendations

- MIL-PRF-23827C (Type II)
- COMAC QPL-CMS-OL-302

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

### Compatibility & Miscibility

- AeroShell Grease 7 contains a synthetic ester oil and should not be used in contact with incompatible seal materials.
- AeroShell Grease 7 is a clay-based grease approved to MIL-PRF-23827C Type II; it should not be mixed with soap-based greases approved to MIL-PRF-23827C Type I.

### Typical Physical Characteristics

| Properties | | | Method | MIL-PRF-23827C Type II | Typical |
|---|---|---|---|---|---|
| Oil type | | | | Synthetic | Synthetic ester |
| Thickener type | | | | Clay | Clay |
| Colour | | | | - | Beige |
| Base Oil Viscosity | @40°C | $mm^2/s$ | ASTM D445 | - | 11.2 |
| Useful operating temperature range | | °C | | - | -73 to +121 |
| Drop point | | °C | ASTM D2265 | 165 min | Min 300 |
| Worked penetration | @25°C | | ASTM D217 | 270 to 310 | 285 |
| Penetration unworked | @25°C | | ASTM D217 | 200 min | 282 |
| Worked Stability | 100,000 strokes | 0.1mm | FED-STD-791-313 | 270 - 375 | 289 |
| Oxidation Stability | 100h @ 99°C | kPa | ASTM D942 | 70.00 max | 17 |
| Oil separation 30 hrs | @100°C | %m | ASTM D6184 | 5 max | 2.5 |
| Water Washout | @38°C | %m | ASTM D1264 | 20 max | 6 |
| Evaporation Loss | 22h @ 100°C | %m | ASTM D2595 | 2 max | 1.3 |
| Four Ball EP Load Wear Index | | kgf | ASTM D2596 | 30 min | 40 |
| Low Temperature Torque - Start | @-73°C | Nm | ASTM D1478 | 1.00 max | 0.23 |

| Properties | | | Method | MIL-PRF-23827C Type II | Typical |
|---|---|---|---|---|---|
| **Low Temperature Torque - Run** | @-73°C | Nm | ASTM D1478 | 0.10 max | 0.03 |
| **Copper Corrosion** | 24h @ 100°C | | ASTM D4048 | 1b max | Passes |
| **Particle Count** | | part/ml | FED-STD-791 M.3005 | Must pass | Passes |
| **Rust Prevention** | 52°C, 48h | | ASTM D1743 | 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**

  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.