



# AeroShell Grease 22

AeroShell Grease 22 is a versatile advanced general purpose grease composed of a synthetic hydrocarbon oil thickened with Microgel®, with outstanding performance characteristics. Appropriate additives are included to achieve the necessary oxidation and corrosion resistance, anti-wear properties and load carrying properties. The useful operating temperature range is  $-65^{\circ}\text{C}$  to  $+204^{\circ}\text{C}$ .

## DESIGNED TO MEET CHALLENGES

### Main Applications

- AeroShell Grease 22 is especially recommended for use wherever severe operating conditions are encountered as in high bearing loads, high speeds, wide operating temperature range, and particularly where long grease retention and high resistance to water washout are required.
- The wide range of applications include aircraft wheel bearings, engine accessories, control systems, actuators, screw-jacks, servo mechanisms and electric motors, helicopter rotor bearings, instruments, airframe lubrication, hinge pins, static joints, landing gears.
- AeroShell Grease 22 contains a synthetic hydrocarbon oil and should not be used in contact with incompatible seal materials.

### Specifications, Approvals & Recommendations

- U.S. : Approved MIL-PRF-81322F NLGI Grade 2, Approved DOD-G-24508A
  - British : Approved DEF STAN 91-52
  - French : Approved DCSEA 395/A
  - Russian : Analogue of CIATIM 201 and 203, VNII NP 207, ERA (VNII NP 286M) and ST (NK-50)
  - NATO Code : G-395
  - Joint Service Designation : XG-293
  - COMAC Approved to QPL-CMS-OL-301
- For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

### Typical Physical Characteristics

Properties	MIL-PRF-81322F NLGI Grade 2	Typical
Oil type	-	Synthetic Hydrocarbon
Thickener type	-	Microgel
Base Oil viscosity @ $-40^{\circ}\text{C}$ $\text{mm}^2/\text{s}$	-	7500
Base Oil viscosity @ $40^{\circ}\text{C}$ $\text{mm}^2/\text{s}$	-	30.5
Base Oil viscosity @ $100^{\circ}\text{C}$ $\text{mm}^2/\text{s}$	-	5.7
Useful operating temperature range $^{\circ}\text{C}$	-	$-65$ to $+204$
Drop point $^{\circ}\text{C}$	232 min	260+
Worked penetration @ $25^{\circ}\text{C}$	256 to 320	275
Bomb Oxidation pressure drop 100 hrs @ $99^{\circ}\text{C}$ kPa (psi)	83 (12) max	27 (4)
Bomb Oxidation pressure drop 500 hrs @ $99^{\circ}\text{C}$ kPa (psi)	172 (25) max	69 (10)
Oil separation 30 hrs @ $177^{\circ}\text{C}$ % m	2.0 to 8.0	4.7
Water resistance test loss @ $41^{\circ}\text{C}$ % m	20 max	0.5
Evaporation loss 22 hrs @ $177^{\circ}\text{C}$ % m	10 max	4.3
Anti-friction bearing performance @ $177^{\circ}\text{C}$ hrs	400 min	400+
Load carrying capacity . kg	30 min	45
Copper corrosion 24 hrs @ $100^{\circ}\text{C}$	Must pass	Passes
Bearing protection 2 days @ $52^{\circ}\text{C}$	Must pass	Passes

Properties	MIL-PRF-81322F NLGI Grade 2	Typical
Colour	-	Amber

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.