



# Lubricants Report



## Product Data Sheet from Shell Lubricants

PDS# 5.12.10

### AEROSHELL\* GREASES PREMIUM GREASES FOR AVIATION APPLICATIONS

#### PRODUCT LINE

**AEROSHELL Grease 5** is a general aviation grease suitable for wheel bearings and high speed applications including magnetos, generators and starters operating in temperatures from  $-23^{\circ}\text{C}$  to  $+177^{\circ}\text{C}$ .

**AEROSHELL Grease 6** is a multi- purpose airframe grease for use in anti-friction bearings, gearboxes and plain bearings operating in temperatures between  $-40^{\circ}\text{C}$  and  $+121^{\circ}\text{C}$ .

**AEROSHELL Grease 7** is a multi- purpose grease that may be used on turbine engined aircraft. It is an advanced grease designed to cover a wide temperature range from  $-73^{\circ}\text{C}$  to  $+149^{\circ}\text{C}$ .

**AEROSHELL Grease 14** is designed for greasing applications on helicopters including main and tail rotor bearings, and splines. It has outstanding anti-fret properties and it may be used over the temperature range from  $-54^{\circ}\text{C}$  to  $+93^{\circ}\text{C}$ .

**AEROSHELL Grease 17** is a fully synthetic grease containing 5% molybdenum disulphide. It is particularly suitable for lubricating heavily loaded sliding surfaces such as bogie pins on aircraft landing gear assemblies over the temperature range of  $-73^{\circ}\text{C}$  to  $+149^{\circ}\text{C}$ .

**AEROSHELL Grease 22** is a fully synthetic grease designed for severe operating conditions including high bearing loads, high speeds and where long grease retention and high water resistance are required.

**AEROSHELL Grease 22** covers the operating temperature from  $-65^{\circ}\text{C}$  to  $+204^{\circ}\text{C}$ .

**AEROSHELL Grease 33** is our newest generation multi-purpose synthetic grease. It is specifically designed to lubricate a wide range of applications and operating conditions on commercial aircraft. It is approved for Boeing's BMS 3-33 specification and it covers the operating temperature range between  $-73^{\circ}\text{C}$  and  $+121^{\circ}\text{C}$ .

**AEROSHELL Grease 33MS** shares the same advanced grease technology AeroShell Grease 33, AeroShell Grease 33MS also possesses the extreme pressure (EP) characteristics provided by molybdenum disulphide. This grease contains a synthetic oil and must not be used with incompatible seal materials.

#### PERFORMANCE BENEFITS

**AEROSHELL** greases have been developed for a wide variety of aircraft lubrication applications. Shell's innovative **Microgel\*** thickener technology is used in several **AEROSHELL** greases to provide greases without the temperature limitations imposed by soap type thickeners. **Microgel** thickened greases also exhibit excellent load carrying ability and maintain consistency with variations in temperature. These factors help to make **Microgel** greases particularly suitable for a range of multi-purpose applications commonly found on aircraft. The multi-purpose features of many of the **AEROSHELL** greases enable users to lubricate their aircraft with fewer greases thus reducing inventory costs and minimizing the risk of misapplication of the wrong grease.

## APPROVALS

AEROSHELL Grease 5	MIL-G-3545 (obsolete)
AEROSHELL Grease 6	MIL-G-24139
AEROSHELL Grease 7	MIL-PRF-23827
AEROSHELL Grease 14	MIL-G-25537
AEROSHELL Grease 17	MIL-G-21164
AEROSHELL Grease 22	MIL-PRF-81322F
AEROSHELL Grease 33	MIL-PRF-23827 ,BMS 3-33
AEROSHELL Grease 33MS	MIL-G-21164D

## TYPICAL PROPERTIES

PROPERTIES	Aeroshell G rease 5	Aeroshell G rease 6	Aeroshell Grease 7	Aeroshell G rease 14	Aeroshell G rease 17	Aeroshell G rease 22	Aeroshell Grease 33	Aeroshell Grease 33MS	
PRODUCT CODE	519-005	519-006	519-010	519-015	519-025	519-035	519-033	519-037	ASTM METHOD
Colour	Amber	Brown	Buff	Tan	Dark Gray	Tan	Green	Dark Gray	Visual
Thickener	Microgel	Microgel	Microgel	Calcium	Microgel	Microgel	Lithium	Lithium Complex	Spec
Dropping Point, °C	+215	+215	+260	+148	+260	+260	+250	+234	D 2265
Penetration @ 25 °C									
Unworked	281	287	283	267	287	271	290	288	D 217
Worked	284	300	296	273	295	275	297	281	D 217
Useful Temp. Range, °C	-23 to +177	-40 to +121	-73 to +149	-54 to +93	-73 to+149	-65 to +204	-73 to +121	-73 to +121	Est.
Water Resistance, loss % m	0.5	2.0	0.8	7.2	1.0	0.5	<6	3.39	D 1264
Bomb Oxidation @ 98.9 °C									
Press. Drop @ 100 hr, kPa	41	62	62	21	55	28	3	10.3	D 942
Press. Drop @ 500 hr, kPa	103	103	96	41	103	69	34	34.5	D 942
Mean Hertz Load, kg	37	33	60	-	-	45	60	57.49	D 2596
Base Oil Type	Mineral	Mineral	Synthetic	Mineral	Synthetic	Synthetic	Synthetic	Synthetic	Spec
Oil Viscosity @ 98.9 °C	31.8	5.5	3.1	3.1	3.1	5.8	3.4	3.4	D 445

[Visit](#) your nearest Shell Associate or Reseller for more details.

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