AEROSHELL® Greases

All AEROSHELL Greases, with the exception of AEROSHELL Grease 14 and AEROSHELL Grease 33, are formulated with MICROGEL® thickener, a high temperature, non-melting inorganic thickener.

Applications of AEROSHELL Greases

AEROSHELL Grease 5: For wheel bearings and engine accessories that operate at high speeds and relatively high temperatures.

AEROSHELL Grease 6: General purpose airframe grease for use in plain and antifriction bearings and gearboxes. Provides good water resistance and has low noise capabilities.

AEROSHELL Grease 7: Wide temperature range, synthetic, multipurpose grease for highly loaded gears and actuator screw mechanisms. Also recommended for instruments and general airframe lubrication of turbine powered aircraft.

AEROSHELL Grease 14: Leading helicopter multipurpose grease. Thickened with calcium soap. Protects against fretting and provides ample water resistance. approved by the USDA for use in meat and poultry processing plants where there is no possible contact between lubricant and edible product.

AEROSHELL Grease 16: Wide temperature range grease recommended for antifriction bearings that operate under heavy load at high speeds and extreme temperatures.

AEROSHELL Grease 17: Extreme pressure version of AEROSHELL Grease 7. Contains 5 percent molybdenum disulfide for use in highly loaded conditions.

AEROSHELL Grease 22: Versatile synthetic hydrocarbon multipurpose grease. Excellent load carrying capacity. Useful temperature range of -85°F to 400°F.

AEROSHELL Grease 33: Developed to meet the stringent requirements of the BMS 3-33 specification for use on Boeing airframe components. It is formulated with a lithium complex thickener system in a synthetic base oil blend.

In aircraft applications, the type certificate and/or lubricants recommendation charts of each aircraft will usually specify the military specification for the grease to be used for the various lubrication points on that aircraft.

Properties of AEROSHELL® Greases

S 6 ASTM MICROGEL Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Mineral Minera		AEROSHE	· · · · ·	
Mineral Mineral Mineral 70026		5	6	ASTM
### Code 70025 70026		MICROGEL®	MICROGEL	Method
Viscosity 210°F, cSt 31.8 5.5 D445	A vpe	Mineral	Mineral	
State Stat		70025	70026	
### 210°F, cSt 31.8 5.5 D445 ### D446 ### D445 ### D445 ### D446				
Columbia	210°F, cSt	31.8	5.5	D445
°C -23 to +177 -40 to +121 sopping Point, °F 500+ 500+ D2265 sectration 281 287 284 300 D217 worked at 77°F 284 300 D217 seporation, 22 hrs., Test Temp. °F(°C) 300(149) 250(121) 250(121) Loss, % wt. 1.0 1.3 D974 enrosion Pass Pass D4048 paring Protection, Z days at 125°F Pass Pass D1743 enrosion Cu Strip, 24 hrs. 212°F Pass Pass D4048 passure Drop 100 hours/210°F, psi 6 9 9 900 hours/210°F, psi 15 15 D942 Nation Resistance Test, wt. loss 0.5 2.0 D1264 Antifiction Bearing Proformance 250(121) 15 15 Temperature, °F(°C) 300(149) 250(121) 17 Image: Proformance Proformance 250(121) 15 15 Load Wear Index, kg 37 35 D2596	Temp. Range, °F		1	
Description	°C	-23 to +177	-40 to +121	
Description	Chopping Point, °F	500+	500+	D2265
Drworked at 77°F 281 287 300 D217	Denetration			
Seporation, 22 hrs., Tast Temp. °F(°C) 300(149) 250(121) 1.3 D974	Unworked at 77°F			
Text Temp. °F(°C) 300(149) 250(121) Loss, % wt. 1.0 1.3 D974 Dearing Protection, 2 days at 125°F Pass Pass D4048 Dearing Protection, 2 days at 125°F Pass Pass D1743 Samb Oxidation, 3 3500 hours/210°F, psi 6 9		284	300	D217
Loss, % wt. 1.0 1.3 D974 Derrosion Cu Strip, 24 hrs. 212°F Pass Pass D4048 Dearing Protection, 2 days at 125°F Pass Pass D1743 Dearing Protection, 2 days at 125°F Pass Pass D1743 Dearing Protection, 2 days at 125°F Pass Pass D1743 Dearing Protection, 2 days at 125°F Pass Pass D1743 Dearing Pass Pass D4048 D40	poration, 22 hrs.,	1		
Pass	Test Temp. °F(°C)	300(149)	, ,	
Cu Strip, 24 hrs. 212°F Pass Pass D4048 Dearing Protection, 2 days at 125°F Pass Pass D1743 Important Drop 100 hours/210°F, psi 6 9 9 500 hours/210°F, psi 15 15 D942 Water Resistance Test, w.t. loss 0.5 2.0 D1264 Antifiction Bearing Performance Performance 250(121) 15 Time, hours 600+ 2000+ D3336 Load Wear Index, kg 37 35 D2596		1.0	1.3	D974
Pass Pass Pass D1743		i .		
### ### ##############################		Pass	Pass	D4048
Serub Oxidation, Sessure Drop 100 hours/210°F, psi 6 9 9 15 15 15 15 15 15		_		
100 hours/210°F, psi 6 9 9 1500 hours/210°F, psi 15 15 15 15 15 15 15 1		Pass	Pass	D1743
100 hours/210°F, psi 6 9 15 D942				
### 15		_		
Water Resistance Test, 0.5 2.0 D1264 S wt. loss 0.5 2.0 D1264 Antifiction Bearing Performance 250(121) 300(149) 250(121) 3336 Time, hours 600+ 2000+ D3336 2596 Load Wear Index, kg 37 35 D2596		_		
Web. loss 0.5 2.0 D1264 Antifiction Bearing Performance 250(121) 300(149) 250(121)		15	15	D942
### Antifiction Bearing Performance				
Performance 300(149) 250(121) Time, hours 600+ 2000+ D3336 Load Wear Index, kg 37 35 D2596		0.5	2.0	D1264
Temperature, °F(°C) 300(149) 250(121) Time, hours 600+ 2000+ D3336 Load Wear Index, kg 37 35 D2596				
Time, hours 600+ 2000+ D3336 Load Wear Index, kg 37 35 D2596		200(140)	250(424)	
Loed Wear Index, kg 37 35 D2596				D3336
vear index, kg 3/ 30 D2596				
Secondian 20 haven	Of Separation, 30 hours	3/	35	DZOSO
at 212°F, % wt 0.5 0.7 F321°	at 212°F. % wt	0.5	0.7	F3211
	Color			
Qualified under Former				710001
Specification(s) MIL-G-3545C MIL-G-24139A	Specification(s)		MIL-G-24139A	

Federal Test Method

Typical Properties of AEROSHELL® Greases

	AEROSHELL Greases		
	7	14	16
Thickener	MICROGEL®	Calcium Soap	Microgel
Product Code	70149	70014	70016
Oil Type	Diester Synthetic	Mineral	Polyol Ester/ Mineral
Oil Viscosity	<u> </u>		
at 99°C, cSt	3.1	3.1	6.0
Useful Temp. Range, °F °C	-100 to +300 -73 to +149	-65 to +200 -54 to 93	-65 to +400 -54 to +204
Dropping Point, °C °F	260+ 500+	148 298	260+ 500+
Penetration at 77°F			
Unworked	283	269	290
Worked	296	273	308
Evaporation in 22 hrs.			
Test Temp. °C	99	99	350
Loss, % wt.	0.5	5.6	3.8
Corrosion:			
Cu Strip, 24 hrs. 100°C	Pass	Pass	Pass
Bearing Protection,			
2 days at 52°C	Pass	Pass	Pass
Bomb Oxidation, Pressure			
Drop			İ
at 99°C, psi:			
100 hours	9	3 6.5	4 10
500 hours	14	6.5	10
Water Resistance Test, %wt.	0.8	7.2	1.8
loss Antifriction Bearing	0.0	1.2	1.0
Performance			
Temperature, °F(°C)	250(121)	200(93)	350(177)
Time, hours	2460	1700+	400+
Load Wear Index, kg	60		
Oil Separation, 30 hrs. at	 		3.5
100°C, % wt	3.0	1.5	(4.3 @ 350°F
Color	Buff	Tan	Light Brown
Qualified under	MIL-G	MIL-G	Former
Specification(s)	23827B	25537C	MIL-G-
-L/-/	1		25760A
	1		BMS 3-24_

Typical Properties of AEROSHELL® Greases

ſ	ASTM		
17	AEROSHELL Great	33	Test
MICROGEL	MICROGEL	Lithium Complex	Method
70017	70022	70024	
Diester Synthetic	Synthetic	Synthetic	
<u></u> _	Hydrocarbon	Blend	
3.1	5.8	3.4	D445
-100 to +300	-85 to +400	-100 to +250	
-73 to +149	-65 to +204	-73 to +121	
260+ 500+	260+	216+	
300+	500+	420+	D2265
287	271	290	
295	275	297	D217
210	350	050	
0.6	4.3	250	
0.0	4.3	<10 (500 hrs.)	D972
Pass	Pass	Pass	D4048
Pass	Pass	Pass	D1743
8 15	4 10	0.5 5	D942
1.0	0.5	<6 (79°C)	D1264
250(121) 2850	350(177) 400+	250(121) 1200+	
60	45	60	D3336
		00	D2596
2.5	4.7 at 350°F	2.0 @ 212°F	F 3211
Dark Gray	Amber	Kelly Green	Visual
MIL-G-21164D	MIL-G-81322E Grade A DOD-G-24508A	BMS 3-33	

Federal Test Method