



# AEROSHELL GREASE 33MS

AeroShell Grease 33MS comprises AeroShell Grease 33 fortified with 5% molybdenum disulphide. It possesses the enhanced anti-wear and anti-corrosion properties of AeroShell Grease 33 with the added EP (Extreme Pressure) properties provided by the addition of a solid lubricant. The useful operating temperature range is -73°C to +121°C.

### APPLICATIONS

AeroShell Grease 33 has established itself as the answer to most of the airframe's General Purpose, airframe greasing requirements, being approved for use in Boeing, Airbus and many other aircraft types. It sets the standard with exceptional anti-corrosion and anti-wear performance while allowing aircraft operators to shrink their grease inventory and reduce the risk of misapplication. However, there remains a small number of highly loaded, sliding applications on the airframe where the additional boost of molybdenum disulphide will always be required. To address this need, Shell Aviation has developed AeroShell Grease 33MS. Sharing the same advanced grease technology as its parent, AeroShell Grease 33MS also possesses the extreme pressure (EP) characteristics provided by molybdenum disulphide.

AeroShell Grease 33MS contains a synthetic oil and must not be used with incompatible seal materials.

### SPECIFICATIONS

<b>U.S.</b>	Approved MIL-G-21164D
<b>British</b>	Approved DEF STAN 91-57
<b>French</b>	Equivalent DCSEA 353/A
<b>Russian</b>	-
<b>NATO Code</b>	G-353
<b>Joint Service Designation</b>	XG-276

PROPERTIES		MIL-G-21164D	TYPICAL
Oil type		-	Synthetic hydrocarbon/Ester
Thickener type		-	Lithium Complex
Base oil viscosity mm <sup>2</sup> /s			
@ -40°C		-	1840
@ 40°C		-	14.2
@ 100°C		-	3.4
Useful operating temperature range	°C	-	-73 to +121
Drop point	°C	165 min	234
Worked penetration @ 25°C		260 to 310	281
Unworked penetration @ 25°C		200 min	288
Worked stability (100,000strokes)		260 - 375	309
Bomb oxidation pressure drop			
100 hrs	kPa (psi)	68.9 (10) max	10.3
500 hrs	kPa (psi)	103.4 (15) max	34.5
Oil separation @ 100°C in 30 hrs	%m	5 max	2.29
Water resistance test loss @ 40°C	%m	20 max	3.39

<b>PROPERTIES</b>	<b>MIL-G-21164D</b>	<b>TYPICAL</b>
Evaporation loss in 22 hrs @ 100°C % m	2.0 max	0.65
Low Temperature Torque @ -73°C		
Starting torque Nm	0.98 max	0.50
1 hr running torque Nm	0.098 max	0.060
Anti-friction bearing performance @ 121°C hrs	1000 min	Greater than 1000 (on all four runs)
Extreme pressure properties – load wear index	50 min	57.49
Copper corrosion 24 hr @ 100°C	1b max	1b
Rust Prevention/Bearing protection 2 days @ 52°C	Must pass	Passes, no corrosion
Storage Stability 6 months @ 40°C		
Unworked penetration	200 min	226
Worked penetration		289
Change in penetration from original	30 max	8
Colour	-	Dark grey

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