



AeroShell Turbine Oil 308

AeroShell Turbine Oil 308 is a 3 mm²/s synthetic ester oil incorporating additives to improve resistance to oxidation and corrosion and to minimise wear.

DESIGNED TO MEET CHALLENGES

Main Applications

- AeroShell Turbine Oil 308 was developed specifically for use in particular models of aircraft turbo-prop and turbo-jet engines for which a MIL-PRF-7808 (formerly MIL-L-7808) oil is required.
- AeroShell Turbine Oil 308 contains a synthetic ester oil and should not be used in contact with incompatible seal materials and it also affects some paints and plastics.

Specifications, Approvals & Recommendations

- Approved MIL - PRF - 7808L Grade 3 (US)
- NATO Code O -148
- Joint Service Designation OX - 9

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

Typical Physical Characteristics

Properties			MIL-PRF-7808L Grade 3	Typical
Oil type			Synthetic ester	Synthetic ester
Density	@15°C	kg/l	-	0.956
Kinematic viscosity	@100°C	mm ² /s	3.0 min	3.1
Kinematic viscosity	@40°C	mm ² /s	11.5 min	12.0
Kinematic viscosity	@-40°C	mm ² /s	-	2400
Kinematic viscosity	@-51°C	mm ² /s	17000 max	12000
Viscosity Stability			Must pass	Passes
Pourpoint	°C		-	Below -62
Flashpoint Cleveland Open Cup	°C		210 min	235
Total Acidity	mgKOH/g		0.3 max	0.15
Trace metal content			Must pass	Passes
Evaporation 6.5 hrs	@205°C	% m	30 max	20
Silver - bronze corrosion - Silver	@232°C	gm/m ²	+4.5 max	0.01
Silver - bronze corrosion - Bronze	@232°C	gm/m ²	+4.5 max	0.05
Deposit Test - deposit rating			1.5 max	0.8
Deposit Test - neutralisation number change	%		20 max	2.0
Deposit Test - viscosity change	@40°C	%	100 max	12.0
Storage Stability			Must pass	Passes
Compatibility			Must pass	Passes
Elastomer compatibility SAE-AMS 3217/1, 168 hrs	@70°C	- % swell	12 to 35	27
Elastomer compatibility SAE-AMS 3217/4, 72 hrs	@175°C	- % swell	2 to 25	16
Elastomer compatibility SAE-AMS 3217/4, 72 hrs, tensile strength change	@175°C	%	50 max	30

Properties		MIL-PRF-7808L Grade 3	Typical
Elastomer compatibility SAE-AMS 3217/4, 72 hrs, elongation change	@175°C %	50 max	3.5
Elastomer compatibility SAE-AMS 3217/4, 72 hrs, hardness change	@175°C %	20 max	9.0
Elastomer compatibility SAE-AMS 3217/5, 72 hrs	@150°C - % swell	2 to 25	Passes
Elastomer compatibility SAE-AMS 3217/5, 72 hrs, tensile strength change	@150°C %	50 max	Less than 50
Elastomer compatibility SAE-AMS 3217/5, 72 hrs, elongation change	@150°C %	50 max	Less than 50
Elastomer compatibility SAE-AMS 3217/5, 72 hrs, hardness change	@150°C %	20 max	Less than 50
Static foam test - foam volume	ml	100 max	30
Static foam test - foam collapse time	secs	60 max	15
Dynamic foam test		Must pass	Passes
Corrosion and oxidation stability		Must pass	Passes
Bearing deposition stability - deposit rating		60 max	<60
Bearing deposition stability - filter deposit weight	g	2.0 max	<2
Bearing deposition stability - viscosity change	@40°C	-5 to +25	Passes
Bearing deposition stability - acid number change	mgKOH/g	1.0 max	<1
Bearing deposition stability - metal weight change	mg/cm ²	+0.2 max	Passes
Gear load carrying capacity		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**

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.