Technical Data Sheet

AeroShell **Turbine** *Oil 308*

Synthetic lubricating oil for aircraft turbine engines

AeroShell Turbine Oil 308 is a 3 mm^2/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

- MIL-PRF-7808M Grade 3
- 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			Method	MIL-PRF-7808M Grade 3	Typical
Oil type				Synthetic ester	Synthetic ester
Kinematic Viscosity	@100°C	mm^2/s	ASTM D445	3.0 min	3.1
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	11.5 min	12
Kinematic Viscosity	@-51°C	mm^2/s	ASTM D2532	13 000 max	7 600
Flash Point		°C	ASTM D92	210 min	225
Total Acidity		mgKOH/g	ASTM D664	0.40 max	0.27
Trace metal content			-	Must pass	Passes
Foaming tendency			ASTM D892	Must pass	Passes
Evaporation loss (6.5 hrs)	@205°C	%m	ASTM D972	30 max	28
Corrosion test – Silver	@232°C	g/m^2	FED-STD-791 M.5305	+/- 4.5 max	0.01
Corrosion test – Bronze	@232°C	g/m^2	FED-STD-791 M.5305	+/- 4.5 max	0.09
Deposition Test WADC – deposit rating			FED-STD-791 M.5003	1.5 max	0.8
Deposition Test WADC – acid number change		%	FED-STD-791 M.5003	20 max	2.0
Deposition Test WADC – viscosity change	@40°C	%	FED-STD-791 M.5003	100 max	12.0
Elastomer compatibility SAE-AMS 3217/1, 168 hrs	@70°C	- % swell	FED-STD-791 M.3604	12 to 35	32
Elastomer compatibility SAE-AMS 3217/4, 72 hrs	@175°C	- % swell	FED-STD-791 M.3432	2 to 25	16
Elastomer compatibility SAE-AMS 3217/4, 72 hrs, tensile strength change	@175°C	%	FED-STD-791 M.3432	50 max	-18
Elastomer compatibility SAE-AMS 3217/4, 72 hrs, elongation change	@175°C	%	FED-STD-791 M.3432	50 max	-16

Properties			Method	MIL-PRF-7808M Grade 3	Typical
Elastomer compatibility SAE-AMS 3217/4, 72 hrs, hardness change	@175°C	%	FED-STD-791 M.3432	20 max	-8
Elastomer compatibility SAE-AMS 3217/5, 72 hrs	@150°C	- % swell	FED-STD-791 M.3432	2 to 25	9
Elastomer compatibility SAE-AMS 3217/5, 72 hrs, tensile strength change	@150°C	%	FED-STD-791 M.3432	50 max	-9
Elastomer compatibility SAE-AMS 3217/5, 72 hrs, elongation change	@150°C	%	FED-STD-791 M.3432	50 max	-27
Elastomer compatibility SAE-AMS 3217/5, 72 hrs, hardness change	@150°C	%	FED-STD-791 M.3432	20 max	-5
Lead Corrosion			FED-STD-791 M.5321	9.3 max	0.2
Corrosion and Oxidation Stability	96h @ 200°C		ASTM D4636	Must pass	Passes
Gravimetric particulate contamination			FED-STD-791 M.3013	Must pass	Passes
Gear load carrying capacity			FED-STD-791 FTM 6508	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**

  This product is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

  Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

  Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from https://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.