

# AEROSHELL FLUID 4

AeroShell Fluid 4 is a mineral hydraulic oil with very good low temperature characteristics and capable of operating over a wide temperature range. AeroShell Fluid 4 is composed of a mineral oil base stock and a complex additive package which results in a product with excellent low temperature flow and anti-wear properties, exceptional antifoam characteristics, and excellent oxidation stability.

AeroShell Fluid 4 is dyed red.

## APPLICATIONS

AeroShell Fluid 4 is intended for use as a hydraulic fluid in undercarriage retraction mechanisms, flap jacks and control mechanisms, brakes, shock absorbers, automatic pilots, oleo legs, tail wheels, servo units, etc. AeroShell Fluid 4 is also suitable for lubricating de-icing pumps and gearboxes.

AeroShell Fluid 4 should be used in systems with synthetic rubber components and must not be used in systems incorporating natural rubber. The latter systems require castor base fluids with which AeroShell Fluid 4 is not interchangeable. Refer to the General Notes at the front of this section for more information on compatibility.

AeroShell Fluid 4 is compatible with AeroShell Fluids 31, 41, 51, 61 and 71, although it is not recommended that AeroShell Fluid 4 is used in systems which require the use of a superclean fluid nor should it be mixed with superclean fluids for operational reasons.

Chlorinated solvents should not be used for cleaning hydraulic components which use AeroShell Fluid 4. The residual solvent contaminates the hydraulic fluid and may lead to corrosion.

## SPECIFICATIONS

<b>U.S.</b>	Meets MIL-H-5606A (Obsolete – see AeroShell Fluid 41)
<b>British</b>	Meets DTD.585 (Obsolete – see AeroShell Fluid 41) Approved DEF STAN 91-48 Grade Normal (European production only)
<b>French</b>	Approved DCSEA 415/A
<b>Russian</b>	Analogue to AMG-10
<b>NATO Code</b>	H-520 (European production only)
<b>Joint Service Designation</b>	OM-18 (European production only)

PROPERTIES	DEF STAN 91-48 Grade Normal	TYPICAL (European Production)
Oil type	Mineral	Mineral
Kinematic viscosity mm <sup>2</sup> /s @ 100°C @ 40°C @ -40°C @ -54°C	4.0 min 13 min 500 max 3000 max	5.30 14.1 491 2300
Flashpoint Pensky Martin Closed Cup °C	81 min	105
Pourpoint °C	-60 max	< -60
Total acid number mgKOH/g	0.2 max	0.01
Relative Density @ 15.6/15.6°C	–	0.87
Evaporation @ 100°C %m	20 max	10
Colour	Red	Red
Copper corrosion	2 max	Passes
Low temperature stability	Must pass	Passes
Shear stability	Must pass	Passes
Foaming characteristics	Must pass	Passes
Phosphorus content % m/m	0.035 to 0.050	Passes
Oxidation & corrosion stability 168 hrs @ 135°C – metal weight change – change in viscosity @ 40°C % – change in acid number mgKOH/g	Must pass –5 to +20 0.2 max	Passes +2.0 +0.1
Anti-wear properties, scar diam mm	1.5 max	0.95
Rubber swell 168 hrs @ 70°C vol change %	19 to 30	25

A viscosity/temperature curve is shown at the end of this section.