Technical Data Sheet

AeroShell Fluid *71*

AeroShell Fluid 71 is a preservative mineral hydraulic fluid of improved cleanliness. AeroShell Fluid 71 is composed of a mineral base oil with an additive package which results in a product with excellent corrosion preventative properties as well as excellent oxidation stability, and good anti-wear characteristics.
AeroShell Fluid 71 is dyed red. The useful operating temperature range is –54°C to +121°C.

DESIGNED TO MEET CHALLENGES

Main Applications

AeroShell Fluid 71 is intended for preserving hydraulic equipment in storage and also for use in rig testing of hydraulic components.

AeroShell Fluid 71 should only be used in hydraulic systems employing synthetic rubber seals suitable for MIL-PRF-5606/DEF STAN 91-48 (AeroShell Fluids 4 or 41) type of fluids.

AeroShell Fluid 71 is compatible with AeroShell Fluids 4, 31, 41, 51 and 61.

Chlorinated solvents should not be used for cleaning hydraulic components which use AeroShell Fluid 71. The residual solvent contaminates the hydraulic fluid and may lead to corrosion.

Specifications, Approvals & Recommendations

- Approved MIL-PRF-6083F (US)
- Equivalent DEF STAN 80-142 (British)
- Equivalent to DCSEA 535/A (French)
- NATO Code C-635
- Joint Service Designation Equivalent PX-26

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

Typical Physical Characteristics

Properties			MIL-PRF-6083F	Typical
Oil type			Mineral	Mineral
Kinematic viscosity	@-40°C	mm^2/s	800 max	525
Kinematic viscosity	@-54°C	mm^2/s	3500 max	2400
Kinematic viscosity	@40°C	mm^2/s	13 min	14.3
Flashpoint (Pensky Martin Closed Cup)		°C	82 min	88
Total Acidity		mgKOH/g	0.2 max	0.12
Pour point		°C	-59 max	Below -59
Relative density	@15.6/15.6°C		-	0.879
Water Content		ppm	500	200
Colour			Red	Red
Trace sediment		mg/l	0.005 max	0.002
Corrosiveness & oxidation stability (168 hrs @ 121°C) - metal weight change			Must Pass	Passes
Corrosiveness & oxidation stability (168 hrs @ 121°C) - viscosity change	@40°C	%	-5 to +20	Passes
Corrosiveness & oxidation stability (168 hrs @ 121°C) - acid number change		mgKOH/g	0.2 max	Less than 0.2
Copper corrosion			3a max	Passes
Corrosion inhibition			Must pass	Passes

Properties			MIL-PRF-6083F	Typical
Particle Size per 100ml		5 to 25 µm	10000 max	1170
Particle Size per 100ml		26 to 50 µm	250 max	90
Particle Size per 100ml		51 to 100 µm	50 max	10
Particle Size per 100ml		over 100 µm	10 max	1
Low temperature stability 72 hrs	@-54°C		Must pass	Passes
Shear stability change in viscosity	@40°C	%	2.0 max	0.06
Rubber Swell L rubber		%	19 to 28	23
Evaporation loss 22hrs	@100°C	%m	75 max	62
Foaming tendency			Must Pass	Passes
Steel on steel wear, scar diam		mm	1.0 max	Passes
Gravimetric filtration		mg/100ml	0.5 max	Less than 0.5
Filtration time		mins	15 max	12

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.