



SHELL TURBO[®] FLUID DR 46

Fire resistant hydraulic fluid

Product Description

Shell TURBO[®] FLUID DR 46 is a high performance, fire-resistant hydraulic fluid based on tri-aryl phosphate manufactured from carefully selected raw materials. This product is designed for use in electro-hydraulic governor control systems of steam turbines, including systems using fine tolerance servo valves. It does not contain mineral oil, polyolesters, chlorinated hydrocarbons or water.

Applications

- main bearings in steam & gas turbines
- generators
- cooling pumps

Features/Benefits

- excellent fire resistance
- good oxidation stability
- good hydrolytic stability
- quick water separation
- good air release
- low foaming

Approvals and Recommendations

- classified as Specification Tested by Factory Mutual.
- ISO 12922 Standard (HF DR type Fluids)
- Relevant OEM's (e.g. ABB, GEC, Siemens, Westinghouse)

Typical Properties of Shell TURBO[®] DR 46

	Test Method	
Product Code		65612
Specific Gravity, 60/60°F	D 1298	1.13
Autoignition Temp. , °F(°C)	D 2155	1067(575)
Flash Point, COC, °F (°C)	D 92	518 (270)
Viscosity: @ 40°C, cSt @ 100°C, cSt	D 445	43.4 5.0
Pour Point, °F(°C)	D 97	-4(-20)
Acid Number, mg KOH/g	D 664	0.06

Compatibility

Packing, Seals and Hoses

Butyl rubbers, Nylon, PTFE, and Viton rubber (depending on operating temperature range) are suitable for use with this product.

Painted Surfaces

Attention must be paid to painted surfaces. Epoxy paints are seen as resistant to **Shell TURBO® FLUID DR 46**

Metallurgy

Compatible with most construction metals. Aluminum should be hard anodized. Use of copper and its alloys is acceptable as long as the fluids acidity remains within the manufacturer's specified limits. Stainless steel and titanium can also be used for the construction of the oil cooler.

Fluid Conditioning

To maximize fluid life, it is essential to keep the fluid clean and dry and to maintain a low level of acidity. Special advice for the treatment of the product in service can be requested from your supplier.

Handling & Safety Information

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call 1+800-468-6457 for all of your service needs. All other customers, please call 1+800-840-5737 for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>