ROKOLUB FR T-46 ULTRA

ROKOLUB FR SERIES

FIRE RESISTANT HYDRAULIC FLUIDS

GENERAL INFO & APPLICATION

ROKOLUB FR T-46 ULTRA is a triaryl phosphate ester, it is a fire resistant and self-extinguishing base stock fluid intended to be used in applications where certain circumstances may present a fire risk. This unique phosphorus based product is widely known as the best available option when applied to turbine governors in the power generation industry. Rokolub FR T-46 ultra is targeted at the electro-hydraulic control system of steam turbines that require high performance oils to operate steam valve control accurately. Due to its tailored properties to EHC systems, Rokolub FR T-46 ultra meets OEMs demands.

MAIN FEATURES

- Unique self-extinguishing and fire resistant performance
- Perfect particle distribution and great cleanliness
- Good air release and foaming tendency
- Excellent lubrication
- Appropriate resistivity
- Superior oxidation and thermal stability

COMPATIBILITY

All components, such as seals, adhesives, coatings including wire and cable insulations need to be constructed from phosphate ester resistant materials. These specialty materials are well-known and widely available to component manufacturers and suppliers.

Silicone, butyl, or fluorocarbon based seals are considered to be fully compatible materials. In case of using non-resistant materials swelling may arise and as a consequence leakage of fluid may occur.
Most paints and coatings, especially polyurethane and two-component epoxy based types are not compatible with phosphate ester fluids. Hence, only uncoated surfaces are recommended for direct contact with this product.
Materials specified as wire and cable insulations are polytetrafluoroethylene, silicone rubber, polyethylene, polypropylene and nylon. Polyvinyl chloride is not advised as the outer insulation coating in this application.

PRODUCT MIXING

Please note that the use of Rokolub FR series products along with other fluid types is not advised, with the exception of aryl phosphate ester fluids. In particular, fluids that contain water are incompatible and cannot be mixed. Please also note that Rokolub FR T-46 ultra is fully compatible with other phosphate ester fluids with the brand name Rokolub FR.

CLASSIFICATION & LABELLING

In order to obtain all this information, please refer to the Safety Date Sheet for Rokolub FR T-46 ultra. The document is available on request from your sales representative.

STORAGE & SHELF LIFE

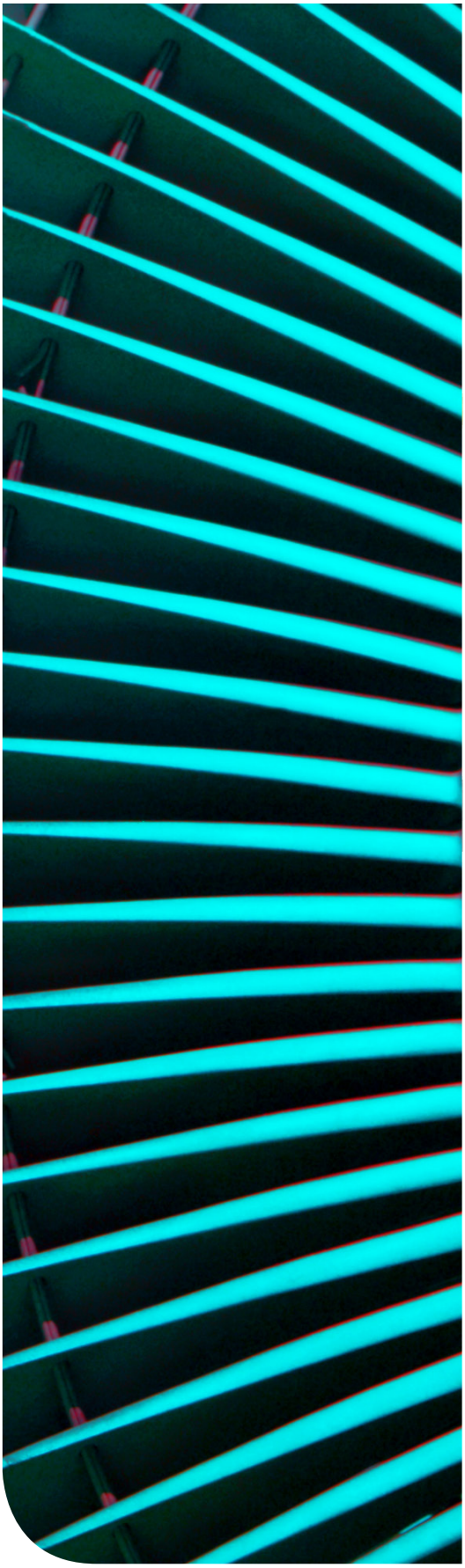
Please see the Technical Date Sheet for general safety guidelines. The document is available on request from your sales representative.

DELIVERY

PCC offers the delivery of Rokolub T-46 ultra in drums, IBC containers, bulk deliveries (road tankers, isocontainers) and other packaging as agreed with the customer.

TYPICAL PROPERTIES

Properties	Test method	Value
Appearance, at 20-25°C	visual method	clear liquid
Density, at 25°C	EN ISO 2811	1.13 - 1.18 g/ml
Kinetic Viscosity at 40°C at 100°C	ISO 3104	 41.4 - 50.6 mm^2/s 5 - 10 mm^2/s
ISO Viscosity Grade	ISO 3448	46
Viscosity Index	ISO 2909	25
Acid Number	ISO 6619	< 0.1 mgKOH/g
Water Content, w/w	ISO 760	< 0.1 %
Air Release, at 50°C	ISO 9120	< 6 minutes
Foaming Tendency, seq. I Stability	ISO 6247	 < 100 ml < 450 s
Particle Distribution NAS Cleanliness Code ISO Cleanliness Code	 NAS 1638 ISO 4406:1994	 6 16/14/11
Resistivity, at 20°C	EN 60247	> $5 \cdot 10^7$ Ω•cm
Metal Content	atomic absorption method	< 10 ppm
Chlorine Content	ISO 15597	< 50 ppm
Flash Point	ISO 2592	> 250°C
Ignition Temperature	ASTM E659	> 500°C
Pour Point	ISO 3016	< -15°C
Wick Test	ISO 14935	4 seconds
Manifold Ignition Test	ISO 20823	> 700°C
Stability Oxidation Hydrolytic	 EN 14832 EN 14833	 < 2.0 mgKOH/g < 2.0 mgKOH/g



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February 2019

The information in the catalogue is believed to be accurate and to the best of our knowledge, but should be considered as introductory only. Detailed information about products is available in TDS and MSDS.
Suggestions for product applications are based on our the best of our knowledge.

The responsibility for the use of products in conformity or otherwise with the suggested application and for determining product suitability for your own purposes rests with the user.

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