

Product Bulletin

supresta™
BUILT-IN DEFENSE

Fyrquel® GT Gas Turbine Bearing Lubricant



Overview

Fyrquel® GT is a premium ISO 32 viscosity grade fire-resistant synthetic phosphate ester turbine lubricant used in:

- Large frame industrial gas turbine bearing lubrication;
- Centrifugal compressor bearing lubrication;
- Steam isolation valves; and
- Plant hydraulics.

Fyrquel® GT is formulated with synthetic butylated triphenyl phosphates to provide:

- Self extinguishing fire resistant properties;
- Superior oxidation and thermal stability;
- Good hydrolytic stability;
- Excellent lubrication properties; and
- Biodegradable fluids.

Fyrquel® fluids are self extinguishing, non-aqueous hydraulic fluids that do not support their own combustion. This self extinguishing property exceeds the limits established for “Less Hazardous Hydraulic Fluids” and incorporates phosphate esters’ unique true self extinguishing property easily proven by simple flame and wick tests. Fyrquel® fire resistant fluids reduce the risk of catastrophic fires.

Maintenance & Handling

Fyrquel® products are easily maintained in like new, clean condition using standard off line chemical filtration and the GT-CHECK® Routine Fluid Analysis service available on request, along with other service assists from experienced field representatives. The new generation fluid products feature equal or better stability for continued long service life. Refer to Supresta Material Data Sheets (MSDS) for additional information, storage, handling, and transport guidelines. A review of the MSDS will show Fyrquel® products with a low degree of hazard when used as intended.

Safety & Handling

Consult the Material Safety Data Sheet for these products.

Shipping Information

Available in 55 gallon drums and 5 gallon pails.

Typical Fire Properties

	Fyrquel® GT	PAO	Polyol Ester	Mineral Oil
Flash Point, °F	475	455	595	420
Fire Point, °F	675	530	675	465
Autoignition Temperature, °F	1050	730	775	600
Heat of Combustion, kBTU/lb	13.3	17.2	17.1	17.3
Burning after Heat Source Removal	No	Yes	Yes	Yes

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Typical Properties

ISO Viscosity Grade	32
Viscosity, SUS @ 100°F	168
Acidity, mgKOH/g	0.05
Moisture, wt % K-F	0.03
Viscosity Index	20
Pour Point, °F	-18
ASTM Rust Test, D-665 A	Pass
Color, ASTM	1.5

Typical Physical Properties

Appearance	clear, transparent liquid
Viscosity, SUS @ 100°F	168
ISO Grade	32
Viscosity Index	+20
Specific Gravity @ 60/60°F	1.160
Weight (lb/gal) 60/60°F	9.70
Pour Point, (°F)	-15
Boiling Point (°F @ 760 mmHG)	755
Water Content, wt. %	0.10 max
Acid Number, mg KOH/g	0.03
ASTM Rust Test, Procedure A	Pass

Engineering Design Data

Evaporation Loss, wt. % (22 hrs @ 300°F)	1.50
Coefficient of Thermal Expansion @ 100°F (ml/ml/°F)	0.0003
Thermal Conductivity @ 77°F (btu/hr/ft ² /°F/ft)	0.0721
Surface Tension (dynes/cm) @ 68°F	42

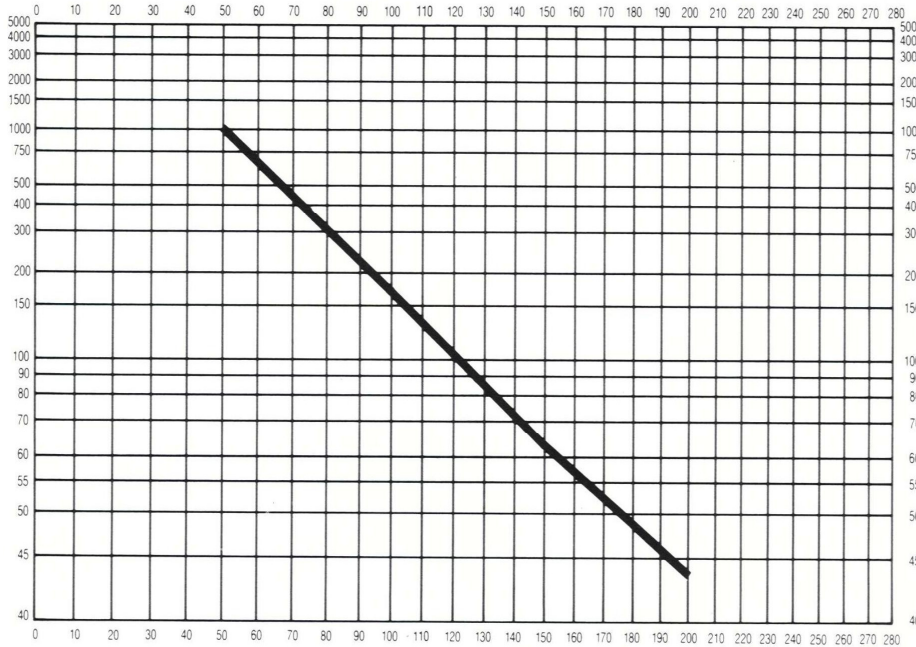
Refractive Index @ 68°F	1.555
Heat of Combustion (btu/lb)	13,466
Specific Heat (btu/lb/°F)	
@ 100°F	0.376
@ 300°F	0.469
	24.7 kcal/mole

Lubricity Data

Shell 4-Ball Test	
1 kg, load, Scar dia. mm., avg.	0.19
10 kg load, Scar dia. mm., avg.	0.38
40 kg. load, Scar dia. mm., avg.	0.48
V-104C Vickers Vane Pump Test (ASTM D-2882)	
Ring Wear, grs. cumulative	
24 hours	0.0037
100 hours	0.0043
Vane Wear, grs. cumulative	
24 hours	0.0030
100 hours	0.0085
Viscosity, SUS @ 100°F	
Initial	158
24 hours	160
100 hours	161
Total Acid Number, mg KOH/g	
Initial	0.03
24 hours	0.06

Temperature, Degrees Fahrenheit

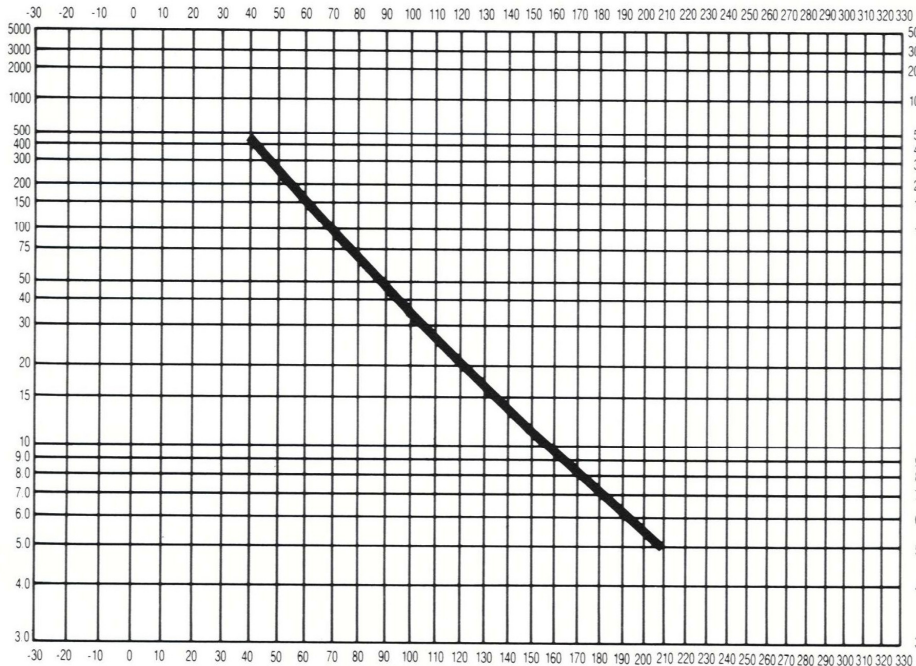
Viscosity, Saybolt Universal Seconds



Viscosity, Saybolt Universal Seconds

Temperature, Degrees Fahrenheit

Kinematic Viscosity, Centistokes



Kinematic Viscosity, Centistokes

Temperature, Degrees Fahrenheit

For more information about our products and to place an order, please contact one of Supresta's regional sales offices.

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