TRANZ LUBRICANTS is a Division of
FIELD PERFORMANCE AUSTRALIA

Telephone 24/7 AH 02 6281 1805
technical@tranzlubricants.com
sales@tranzlubricants.com
PO Box 5014 GARRAN, ACT 2605
Website www.tranzlubricants.com

RESEARCH
ANALYSIS
CONSULTING
DEVELOPMENT
MANUFACTURE

Q40 Series ELECTRICAL INSULATING FLUIDS

TRANZ Q 40-1 to Q40-4

Electrical Energy Insulating Fluids, Low - Medium Viscosity

The range of TRANZ Q Series Energy Control compounds covers a wide range of fluid, semi-fluid and compound forms developed to enable the engineering influence of Light, Electrical, Thermal, Acoustical and Mechanical energy, within the capacity of the film thickness applicable.

A wide range of TRANZ Q 40 series for Electrical Insulation, is available. These oils are synthetic polymeric fluids developed with differing molecular weights which account for the range in viscosity. They are polar, lipophillic, extremely hydrophobic media, for electrical insulating use alone and / or, in combination with transfer of thermal and mechanical energy, in, to or from, positive and negative heat sources, under both aerobic and anaerobic conditions in electrical equipment.

The inherent characteristics of some of the TRANZ Q 40 Fluids series include compressibility, a very low rate of thermal expansion and low vapour pressure, enabling secure containment in suitably designed, closed, but not pressure sealed, reservoir systems of appropriate strength and temperature tolerance, but avoiding any metals of construction which are catalytic in their pure form, like copper, tin or zinc.

The Heat-life of the TRANZ Q 40 Series in closed systems that have been purged of air and placed under nitrogen blanket is more than 200 % of that in systems totally open to the air. The compressibility characteristic indicates that power is absorbed when these fluids are pumped by means of centrifugal impellers. Positive displacement pumps give best results.

ELECTRICAL ENERGY INSULATING FLUIDS
Low to Medium viscosity

TRANZ Grade	Q 40-1	Q 40-2	Q 40-3	Q 40-4
Molecular characterization.	25	60	170	280
Viscosity mm^2s^{-1}@25 ^oC	40	100	300	1000
Flash Point, ^oC	162	185	250	250
Thermal Exp. 25 to 100 C.	1.04×10^{-3}	0.955×10^{-3}	0.955×10^{-3}	0.955×10^{-3}
	PROPERTIES IN COMMON			
Appearance	Transparent, water white.			
Working Temp Range	-60 °C to + 180 °C			
Viscosity. / Temp. Coefficient	0.62			
Specific Gravity, @ 25 ^oC	0.96			
Vapour Pressure, @ 200 C, mBar,	1.35×10^{-2}			
Specific Heat, J/gm.K.	1.46			
Dielectric Strength	35 kV			
Dissipation Factor	0.0001			
Dielectric Constant	2.75			
Vol. Resistivity, Ohm/cm	1×10^{14}			