

TRANZ LUBRICANTS is a Division of
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TRANZ Q 40-5 to Q40-8

Electrical Energy Insulating Fluids, Medium to Medium-High Viscosities

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 Q40 Series Fluids for Electrical Insulation, is available. These oils are synthetic polymeric fluids developed with differing molecular weights which account for the range in viscosities. They are polar, lipophilic 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 Q40 Series 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.

TRANZ ELECTRICAL ENERGY INSULATING FLUIDS

Medium to High viscosity

TRANZ Grade	Q 40-5	Q 40-6	Q 40-7	Q 40-8
Molecular characterization.	85	160	550	980
Viscosity, ISO @ 40 °C	550	1100	2200	5000
mm ² s ⁻¹ @25°C.	1000	2000	10 000	25 000
Flash Point, °C	272	305	310	320
Thermal Exp. 25 to 100 °C	1.04 x 10 ⁻³	0.955 x 10 ⁻³	0.955 x 10 ⁻³	0.955 x 10 ⁻³
PROPERTIES IN COMMON				
Appearance,	Transparent, water white.			
Working Temp Range,	-40°C to + 200 °C			
Viscosity. / Temp. Coefficient,	0.62			
Specific Gravity, @ 25°C.,	0.96 – 0.97			
Vapour Pressure, @ 200°C, mBar	1.35 x 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 x 10 ¹⁴			
PACKAGING	1 L. Bottles, 5 L. lined cans, 20, 60 & 200 L. lined steel.			