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RESEARCH
ANALYSIS
CONSULTING
DEVELOPMENT
MANUFACTURE

TRANZ Q41 to Q44

Electrical Insulating Compounds

TRANZ Q41	Protected Service - The Ambient Internal & Semi-protected Outside uses -25°C to +80 °C
TRANZ Q42, Q44 & Q44SP	Full Outside Exposure -25°C to +80 °C
TRANZ Q43	Protected Service -50°C to +200°C

PERFORMANCE AREA

Rapidly hand applicable, high insulation value instant auxiliary di-electrics.

TRANZ Performance has specialized in providing Functional Compounds, or, Chemical Tools, as we describe them, to electric power generation and distribution Authorities, Electrical Trades Appliance and component manufacturers since 1951. These have included many original developments which have contributed to problem solving and efficiency in Australia's extensive power distribution networks. The achievement of developing world firsts in live line spraying solutions to eliminate high tension powerline insulator pollution flashover, together with the production a unique series of full service range HT electrical conducting compounds, are examples.

The TRANZ Q Series, ENERGY TRANSFER AND CONTROL Compounds, described in this data includes the TRANZ Q41 to Q44 Subseries range of highly water repellent, electrical insulating & lubricating compounds for service as rapidly applicable, instantly supplemental dielectrics equally suitable for low and high tension and electronics applications. The Dielectric strength of the TRANZ Q44 & Q44SP variation place these as the highest insulation value from soft film lubricating compounds available to Industry, from any source.

TRANZ Q43, in this subseries, is specifically designed to meet the Defence Spec. DEF (AUST) Silicone Compound S-736 / XG250 against the International MIL-S-8660 Specification, as amended (A,B & C). Also known as DEF STAN 68-69, in the UK & NZ.

NOTE

There are also the TRANZ Q10 to Q19 Sub Series which are Biphase Functional, exhibiting high insulation values and equal additional performance characteristics in respect of, such as, thermal conduction, copper corrosion protection, etc.

APPLICATIONS

The TRANZ Q 41- Q44 Series are a versatile group of pure grease like compounds of varying consistencies that can be very rapidly dispensed to provide an immediate and very high degree of auxiliary insulation value to any electrically energized assembly.

Some notable applications are:

- Total elimination of current leakage paths on glass, porcelain and plastic insulators in power and communication insulators, thus preventing any possible flashover, conserving current and eliminating destructive RF 'noise'.
- Provision of high dielectric strength, water repellency and lubricity to connectors, switchgear, terminals, ignition systems and potted components.
- Prevents AC or DC current tracking, inc. high voltage, especially under moisture condensing conditions, such as in the enclosures of domestic appliances, in aircraft ignition and power distribution boards and systems, electronic assemblies, etc.

CAUTION

Whilst these compounds have been proven safe with engineering elastomers and plastics, since plasticizer migration will always produce change in polymer properties, critical applications with unusual materials may require careful compatibility testing under service in real time. We have noted the periodic occurrence of environmental stress cracking uniquely in threaded low density polyethylene at the base of threads exposed to destructively high shearing forces from over-tightening.

The synthetic polymer bases can cause temporary irritation in the eyes if accidentally introduced. Applicators must wear eye protection and gloves before opening packages - handle carefully and work cleanly. Immediately re-cover opened containers. Spills or surplus removed easily with hand cleaners, or soap and water. Very slippery on floor and stairs - Collect spills immediately.

Table over....

Electrical Insulating Compounds

Synthetic, High Voltage Electrical Grades

TRANZ GRADE		Q42	Q43	Q44	Q44SP
Dielectric Strength, kV/mm		19	20.3	29.8	31.6
Dielectric Constant, 25°C.		2.9	2.9	3.8	4.0
Volume Resistivity, Ohm/cm X 10 to15th.		1.10	1.10	1.40	1.52
MIL Compliance		MIL8660			
Appearance		< Opaque white>			
Consistency, NLGI		2	3	3	4
Service Temp. Range, °C		-50 to +200	-50 to +200	-60 to + 230	-60 to + 230
Service Environment, Limits		None	Protect	None	None
Density, 25°C		1.15	1.18	1.7	1.9
Speed Factor Rating		Low	Low	Medium High	Medium High
Protect from weather		No	Yes	No	No
Weather service life (min years)		5	no	7	7
PACKAGING	450 G grease cartridge, 500 G, & 5 kG. cans, 20* open head steel pails, 60 & 200 kG. open head steel drums * 20 Kg pails are normally supplied tapered but on special request can be supplied with parallel sides to enable use of pumping / dispensing equipment with wall-sweeping eductor plates.				