



#### 1. PRODUCT IDENTIFICATION:

**Product Name:** Transformer Oil

**Product Use:** Suitable for filling most types of transformers and switchgear. While the IEC specifications require a minimum electric strength (breakdown voltage) of 30 kV, it recognizes that oil in drums cannot be expected to retain the electric strength obtained at the time of filling. To ensure that the oil in service complies with the minimum requirements, it has a breakdown voltage exceeding 70 kV when filled in drums.

**Company:** Deojay Petroleum (PTY) LTD  
Unit 3A Rinaldo Industrial Park  
50 Moreland Drive  
Red Hill  
4016

**Emergency Number:** 031 569 1276 - Business Hours (07h30-16h00)  
083 264 8681 - After Hours

#### 2. PHYSICAL AND CHEMICAL PROPERTIES:

**Appearance:** The oil shall be clear, transparent, and free from suspended matter or sediment.

Density @ 20 °C, kg/DMm <sup>3</sup> :	0.880
Kinematic Viscosity @ 40 °C, cSt:	8.6
Interfacial Tension @ 25 °, mN/m:	48
Flash Point (PMCC), °C:	148
Pour Point, °C:	-57

**Neutralisation Value:**

(a) Total acidity mg KOH/gm:	0.01
(b) Inorganic Acidity/Alkalinity:	n/a

**Electric Strength (Breakdown Voltage)**

i. Prior Transport:	>70kv.
ii On delivery:	>60kv.

**Dielectric Dissipation Factor (Tan Delta)**

@ 50Hz@90 °C:	>0.001
(a) TAN mg KOH/mg:	030
(b) Sludge Content % by Wt.	0.1
(c) Volatile Acidity Max, mg KOH/g	nil
PCB Content %mass:	Nil
Antioxidan Additives:	Not Detectable.
Water Content mg/kg:	<20
Corrosive Sulphur :	Non Corrosive.
Presence of Oxidation Inhibitor:	0.15 min, 0.4 max.

#### 3. COMPOSITION:

Formulated using synthetic Group II base oils and supported by cutting-edge additive technology.

To present knowledge of the supplier this product does not contain any hazardous ingredients according to EU and National Regulations.

#### 4. HAZARDS IDENTIFICATION:

Emergency Response Data: Light Amber Liquid. DOT ERG NO. - NOT APPLICABLE.

**Potential Health Effects**

Note: No significant effects expected.

## 5. FIRST-AID MEASURES:

**Inhalation:** Not expected to be a problem. However, if respiratory irritation occurs due to excessive vapour or mist exposure, seek immediate medical assistance.

**Skin contact:** Remove contaminated clothing. Dry wipe exposed skin and cleanse with hand cleaner, soap and water. Launder contaminated clothing before reuse.

**Eye contact:** Flush thoroughly with water. If irritation occurs call a doctor.

**Ingestion:** Not expected to be a problem. However, if discomfort occurs seek medical attention. Do not induce vomiting.

## 6. FIRE FIGHTING MEASURES:

Extinguishing Media: Carbon dioxide, foam, dry chemical and water fog.

Special Firefighting Procedure: Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, municipal sewers, or drinking water supply.

Special Protective Equipment for Firefighters: For fires in enclosed areas, fire fighters must use Self-Contained Breathing Apparatus.

Unusual Fire and Explosive Hazards: None.

Products of Decomposition: Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

Flash Point : >210 °c (ASTM D-92)

Upper Explosion Limit : 7 %(v)

Lower Explosion Limit : 0.9 %(v)

NFPA Hazard ID : Health: 0; Flammability: 1; Reactivity: 0

## 7. ACCIDENTAL RELEASE MEASURES:

**Procedure if Material is Released or Spilled:** Report spills/accidental releases as required to appropriate authorities.

**Land Spill:** shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping using explosion-proof equipment or contain spilled liquid with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of absorbed residues as directed in section 13.

**Water Spill:** notify port and relevant authorities. Confine with booms if skimming equipment is available to recover the spill for later recycling or disposal.

**Environmental Precautions:** prevent spill from entering municipal sewers, water sources or low-lying areas. Advise the relevant authorities if contaminations have occurred.

## 8. HANDLING AND STORAGE:

Safe Handling Advice: No special precautions are necessary beyond normal good hygiene practices. See section 8 for additional personal protection advice when handling this product.

Storage Information: Keep containers closed when not in use. Do not store in open or unlabelled containers. Do not store near heat sources, sparks, flames, strong oxidizing agents and combustible materials.

Storage and Handling Procedures: Prevent small spills and leakages to avoid slip hazard.



#### 9. EXPOSURE CONTROLS:

**Occupational Exposure Limits (OELS) (Note: limits shown for guidance only. Follow applicable regulations.):**

**LTEL:** Long Term Exposure Limits - time weight average (twa) over 8 hours.

**STEL:** Short Term Exposure Limits - time weight average (twa) over 15 minutes

**Personal Protection Equipment (PPE):**

**Engineering Controls:** If mists are generated, use ventilation, local exhaust or enclosures to control below exposure limits.

**Respiratory Protection:** Approved respiratory equipment must be used when mist concentrations exceed the recommended exposure limits.

**Eye Protection:** If splash with liquid is possible, chemical type goggles should be worn.

**Skin and Body Protection:** No special equipment required. However, if frequent splashing or liquid contact is likely to occur, wear oil impervious gloves and clothing. Good hygiene practices should always be followed.

#### 10. STABILITY AND REACTIVITY:

**Stability:** Stable.

**Conditions to Avoid:** Extreme heat.

**Materials to Avoid:** Strong oxidizers.

**Hazardous Decomposition Products:** Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

#### 11. TOXICOLOGICAL & ECOLOGICAL INFORMATION:

**Acute Oral Toxicity:** practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or components.

**Acute Inhalation Toxicity:** Not applicable. Harmful concentrations of mists and/ or vapours are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of product.

**Acute dermal toxicity:** practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components.

**Skin irritation:** practically non-irritating (primary irritation index: 0.5 or less). Based on testing of similar products and/or the components.

**Eye Irritation:** practically non-irritating (Draize score: greater than 0 but 6 or less. Based on testing of similar products and/or the components.

**Repeated Dose Toxicity:** Severely solvent refined and severely hydrotreated mineral base oils have been tested at an environmental and health sciences laboratory by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

**Carcinogenicity:** Chronic mouse skin painting studies of severely solvent refined mineral base oils showed no evidence of carcinogenic effects.

**Other Toxicological Information:** Overexposure to oil mist may result in oil droplet deposition and/or granuloma formation.

**Elimination Information (Persistence and Degradability):**

**Biodegradability:** This product is expected to be inherently biodegradable at a slow to moderate rate.

**Physico-chemical Removability:** Adsorption to sediment and soil will be the predominant behaviour.

**Bioaccumulation:** Minimal owing to low water solubility.

**Ecotoxicity effects:**

**Aquatic Toxicity:** This substance is practically non-toxic to aquatic organisms (LL50:Organisms >1000 mg/l).

**Further Information on Ecology:** In the absence of specific environmental data for this product, this assessment is based on information for representative substances.



### **13. DISPOSAL CONSIDERATIONS:**

Waste Disposal: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and considerations of product characteristics at the time of disposal.

Other Regulations: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the toxicity characteristic leaching procedure (TCLP). However, used product may be regulated.

Flash Point: >210 °C (ASTM D-92)

### **14. TRANSPORT INFORMATION:**

**Note:** This product is not regulated by the following: U.S. DOT (CFR), ADR, IATA and IMDG.

**Static accumulator (50 picosiemens or less):** Yes

### **15. REGULATORY INFORMATION:**

**US OSHA Hazard Communication Standard:** When used for its intended purposes, this product is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**Governmental Inventory Status:** All components comply with TSCA, EINECS/ELINCS, AICS, METI, DSL, KECI, ENCS, PICCS and IECSC.

**EU Labelling:** Product is not dangerous as defined by the European Union Dangerous Substances/Preparations directives. EU labelling not required.

#### **SARA**

U.S. Superfund Amendments and Reauthorization Act SARA Title III: This product contains no "extremely hazardous substances".

SARA (311/312) Reportable Hazard Categories: none

### **16. SPECIAL CONSIDERATIONS:**

#### **Compiled By: Group Technical Services Department**

Deojay Petroleum  
PO Box 201654  
Durban North  
4016

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