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MATERIAL SAFETY DATA SHEET
Howard Industries, Inc., P.O. Box 1588, Laurel, MS 39441-1588

SECTION 1 – Identification and Emergency Information

PRODUCT NAME Transformer Oil	PRODUCT CODE 331831-01831
CHEMICAL NAME Petroleum Electrical Insulating Oil	CAS NUMBER Complex Mixture CAS Number not applicable
PRODUCT APPEARANCE AND ODOR Clear water-white liquid Mild, bland petroleum odor	
EMERGENCY TELEPHONE NUMBERS (601) 425-3151 or (601) 425-1341	

SECTION 2 – Composition/Information on Ingredients

A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon number predominantly in the range of C15 through C30 and produces a finished oil with a viscosity near 60 SUS @ 100° F.

Ingredient Name	CAS Number	%
Severely Hydrotreated Light Naphthenic Petroleum Oil	64742-53-6	100.0
Butylated Hydroxy Toluene	128-37-0	<0.3

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Severely Hydrotreated Light Naphthenic Petroleum Oil	5mg/m (oil mist)	none estab.	5 mg/in (oil mist)	10mg/m (oil mist)	none estab.	none estab.	none estab.

SECTION 3 – Hazards Identification

*****Emergency Overview*****
Not Expected to cause a severe emergency hazard.

HMIS
H 1
F 1
R 0
PPE†B
†Sec. 8

Potential Health Effects

Primary Entry Routes: Skin

Inhalation: Inhalation of vapors or mist may be irritating to respiratory passages. Prolonged exposure may result in dizziness and nausea.

Eye: Eye contact may result in irritation and redness.

Skin: Prolonged and repeated contact can defat the skin, which may result in dryness, dermatitis, and cracking of the skin.

Ingestion: May result in nausea or stomach discomfort.

Carcinogenicity: Based on OSHA 1910.1200 and IARC study requirements, this product does not require labeling. Meets EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound (PAC) using 1P 346.

Medical Conditions Aggravated by Long-Term Exposure: Personnel with pre-existing skin disorders should avoid contact with this product.

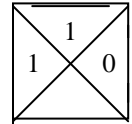
SECTION 4 – First Aid Measures

Inhalation: Remove to fresh air. Assist breathing if necessary. Seek medical help.
Eye Contact: Wash with water. If irritation or redness persists seek medical help.
Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing. Reuse only after cleaning.
Ingestion: If swallowed, observe for signs of stomach discomfort or nausea. If symptoms persist, seek medical help.

SECTION 5 – Fighting Measures

Flash Point: 295°F (145 °C)
Flash Point Method: COC
Burning Rate: not available
Autoignition Temperature: >600 °F (>315 °C)
Lower Explosive Level (LEL): not determined
Upper Explosive Limit (UEL): not determined
Flammability Classification: OSHA Class III-B Combustible Liquid
Extinguishing Media: Halon, dry chemical, foam, CO₂ and water mist or fog. Water may be used to cool below flash point.
Unusual Fire or Explosion Hazards: Do not use forced stream as this could cause fire to spread.
Combustion Products: Fumes, smoke, and carbon monoxide.
Fire-Fighting Instructions and Equipment: Use water to cool containers exposed to flames. Do not enter enclosed or a confined work space without proper protective equipment. Fire fighting personnel should wear respiratory protection (positive pressure if available).

NFPA



SECTION 6 – Accidental Release Measures

Spill/Leak Procedures: Stop spill at source if possible without risk. Contain spill. Eliminate sources of ignition. Spill area will be slick. Recover all possible material for reclamation. Use non-flammable absorbent material to pick up remainder of spill.

SECTION 7 – Handling and Storage

Handling and Storage Precautions: Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. NFPA Class 111B storage. Wash thoroughly after handling.
Work/Hygienic Practices: Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Discard contaminated shoes and leather gloves.

SECTION 8 – Exposure Controls/Personal Protection

Engineering Controls: Adequate ventilation is required where excessive heating or agitation may occur to maintain concentration below exposure limits.
Eye/Face Protection: Safety glasses or face shield where splashing is possible.
Skin Protection: As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.
Respiratory Protection: Not Normally Needed. Respirator should be used in areas where vapor concentrations are excessive due to high temperatures or where oil misting occurs.

SECTION 9 – Physical and Chemical Properties

Physical State: Liquid	Water Solubility: nil
Appearance: golden oily liquid	Boiling Point: 500-700°F (260-370°C)
Odor: mild petroleum odor	Melting Point: -65°F (-55°C)
Odor Threshold: not determined	% Volatile: nic
Vapor Pressure: <1mm Hg at 20°C	Evaporation Rate: not available
Vapor Density (Air-1): >5	pH: not applicable
Specific Gravity (H₂O-1): 0.88	

SECTION 10 – Stability and Reactivity

Stability: Stable

Polymerization: Polymerization will not occur.

Chemical Incompatibilities: strong oxidizers.

Conditions to Avoid (Stability): sources of ignition.

Hazardous Decomposition Product: Combustion products include carbon dioxide and carbon monoxide.

SECTION 11 – Toxicological Information

Acute Studies: Tests on similar materials show a low order of acute oral and dermal toxicity.

Eye Effects: Minimal irritation on contact.

Skin Effects: Practically non-toxic if absorbed. May cause mild irritation with prolonged and repeated exposure.

Acute Oral Effects: Tests on similar materials indicate low order of acute oral toxicity.

Acute Inhalation Effects: Low acute toxicity expected on inhalation.

This product is severely hydrotreated. Severely hydrotreated naphthenic petroleum oils have not been found to be carcinogenic or potential carcinogens.

SECTION 12 – Ecological Information

Aquatic Release: Advise authorities if product has entered or may enter watercourses or sewer drains.

SECTION 13 – Disposal Consideration

Follow federal, state, and local regulations. Not a RCRA hazardous waste if uncontaminated. If "used", RCRA criteria must be determined.

Do not flush to drain/storm sewer. Contract to authorized disposal service. If permitted incineration may be practical. Consider recycling

SECTION 14 – Transport Information

Proper Shipping Name: Not regulated by DOT (Contains oil)

Hazard Class: Not Applicable

DOT ID No.: Not Applicable

DOT Shipping Label: Not regulated by DOT

SECTION 15 – Regulatory Information

U.S. Federal Regulatory Information:

SARA 311 Categories:	Immediate (Acute) Health Effects	No
	Delayed (Chronic) Health Effects	No
	Fire Hazard	No
	Sudden Release of Pressure Hazard	No
	Reactivity Hazard	No

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.

SECTION 16 – Other Information

NFPA Hazard Rating -	Health	1 Slight
	Fire	1 Slight
	Reactivity	0 Least

Prepared by: Kevin Davis Phone: 601-422-1266

Date: 4/8/2010 (Supersedes MSDS Dated 04/25/97)

Disclaimer: Howard Industries, Inc., believes this information is accurate but not all inclusive in all circumstances. It is the Responsibility of the user to determine suitability of the material for their purposes. No warranty, expressed or implied, is given.