

Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

RelaTECH Transformer Oil

Product Use: Transformer Oil

Product Number(s):

Company Identification

RelaDyne, LLC
8280 Montgomery Road, Suite 101
Cincinnati, OH 45236
888-830-3156
www.reladyne.com

Transportation Emergency Response/ Health Emergency
INFOTRAC 800-535-5053

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Aspiration toxicant: Category 1.



Signal Word: Danger

Health Hazards: May be fatal if swallowed and enters airways.

PRECAUTIONARY STATEMENTS:

Response: IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SUPPLEMENTAL INFORMATION: None

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

| COMPONENTS | CAS NUMBER | AMOUNT |
|---|------------|--------------|
| Distillates (Petroleum) Hydrotreated Light Naphthenic | 64742-53-6 | 59.7 - 99.9% |
| Distillates (Petroleum) Hydrotreated Light Paraffinic | 64742-55-8 | 0 - 40% |
| Distillates (Petroleum) Solvent-Dewaxed Light Paraffinic | 64742-56-9 | 0 - 20% |
| 2,6 DI-TERT-BUTYL-P-CRESOL [BUTTLATED HYDROXYTOLUENE] (BHT) | 128-37-0 | < 0.3 % |

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: Flush thoroughly with water. If irritation occurs get medical assistance.

Skin: Wash contact areas with soap and water. Removed contaminated clothing. Launder contaminated clothing before reuse. If skin irritation or an allergic reaction develops, get medical attention.

Ingestion: Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Call a poison control center immediately.

Inhalation: Move to fresh air. Oxygen or artificial respiration if needed. IF exposed or concerned: Get medical advice/attention.

Most important symptoms and effects, both acute and delayed

DELAYED OR OTHER SYMPTOMS AND HEALTH EFFECTS: Defatting of the skin.

Indication of any immediate medical attention and special treatment needed

Note to Physicians: Treat symptomatically.

General Information: Contact physician if discomfort continues.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use Halon, dry chemicals, foam, carbon dioxide (CO2) water spray or fog to extinguish flames. Do not use water jet as an extinguisher, as this will spread the fire. Do not use a solid water stream as it may scatter and spread the fire.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: No unusual fire or explosion hazards noted.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Cool containers exposed to flames with water until well after the fire is out. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Use pressurized air mask if product is involved in a fire.

General Fire Hazards: No unusual fire or explosion hazards noted. Flammability Class: IIIB

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation.

Spill Management: Large Spills: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth or absorbent material then place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.

Reporting: Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewer, basements or confined areas. Avoid discharge to the aquatic environment. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. If this material is spilled into navigable waters and creates a visible sheen, it is reportable to the National Response Center.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands after handling and before eating. Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure. All handling to take place in well-ventilated area. Shower after work. Remove and wash contaminated clothing promptly.

Container Warnings: Store locked up. Keep away from heat, sparks and open flame. Store in a well ventilated place. Use care in handling/storage.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Component | Type | Value | Form |
|---|------|---------------------|-------|
| Distillates (Petroleum) Hydrotreated Light Naphthenic (CAS 64742-53-6) | PEL | 5 mg/m ³ | Mist. |
| Distillates (Petroleum) Hydrotreated Light Paraffinic (CAS 64742-55-8) | PEL | 5 mg/m ³ | Mist. |
| Distillates (Petroleum) Solvent-Dewaxed Light Paraffinic (CAS 64742-56-9) | PEL | 5 mg/m ³ | Mist. |

US. ACGIH Threshold Limit Values

| Component | Type | Value | Form |
|--|------|---------------------|-------------------------------|
| 2,6 DI-TERT-BUTYL-P-CRESOL [BUTTLATED HYDROXYTOLUENE] (BHT) (CAS 128-37-0) | TWA | 2 mg/m ³ | Inhalable fraction and vapor. |
| Distillates (Petroleum) Hydrotreated Light Paraffinic (CAS 64742-55-8) | TWA | 5 mg/m ³ | Inhalable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Material | Type | Value | Form |
|---|-------------|---|----------------|
| HyVolt II (CAS Mixture) | STEL TWA | 10 mg/m ³ 5 mg/m ³ | Mist. Mist. |
| Components | | | |
| 2,6 DI-TERT-BUTYL-P-CRESOL [BUTTLATED HYDROXYTOLUENE] (BHT) (CAS 128-37-0) | TWA | 10 mg/m ³ | |
| Distillates (Petroleum) Hydrotreated Light Naphthenic (CAS 64742-53-6) | STEL TWA | 10 mg/m ³ 5 mg/m ³ | Mist. Mist. |
| Distillates (Petroleum) Hydrotreated Light Paraffinic (CAS 64742-55-8) | STEL TWA | 10 mg/m ³ 5 mg/m ³ | Mist. Mist. |
| Distillates (Petroleum) Solvent-Dewaxed Light Paraffinic (CAS 64742-56-9) | STEL TWA | 10 mg/m ³ 5 mg/m ³ | Mist. Mist. |

Biological Limit Values: No biological exposure limits noted for the ingredient(s).

GENERAL CONSIDERATIONS:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

ENGINEERING CONTROLS:

Adequate ventilation should be provided whenever the material is heated or mists are generated. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Wear safety glasses with side shields as a good safety practice.

Skin Protection: Chemical resistant gloves are recommended. If contact with firearms is likely wear gauntlet style gloves. Chemical/oil resistant clothing is recommended. Launder contaminated clothing before reuse.

Respiratory Protection: Under normal conditions, respirator is not normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal Hazards: Not available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Physical State: Liquid

Color: Water White to Pale

Odor: Mild petroleum odor

Odor Threshold: No data available

pH: Not Applicable

Melting Point/Freezing Point: < -40 °F (< -40 °C) ASTM D 5949

Initial Boiling Point and Boiling Range: > 460 °F (> 237.78 °C) ASTM D 2887/ ISO 3294

Vapor Pressure: Not available

Vapor Density (Air = 1): Not available

Relative Density: 0.89 (59 °F (15 °C) ASTM D 4052/ ISO 12185)
Solubility: insoluble in water
Octanol/Water Partition Coefficient: Not established
Decomposition temperature: No Data Available
Viscosity: 9.3 cSt (104 °F (40 °C) ASTM D 445)

FLAMMABLE PROPERTIES:

Flammability (solid, gas): No Data Available

Flashpoint: (Cleveland Open Cup) >= 293.0 °F (>= 145.0 °C) ASTM D 92/ ISO 2592

Autoignition: > 599 °F (> 315 °C) ASTM E 659

Flammability (Explosive) Limits (% by volume in air): Lower: Not Available Upper: Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Ingestion: May cause gastrointestinal discomfort if swallowed. Do not induce vomiting. Vomiting may increase risk of product aspiration. May be fatal if swallowed and enters airways.

Inhalation: May be fatal if swallowed and enters airways.

Skin contact: Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Eye contact: May be irritating to eyes.

Symptoms related to the physical, chemical and toxicological characteristics: Defatting of the skin. Coughing. Shortness of breath. Discomfort in the chest.

Acute Toxicity: Not applicable

| Components | Species | Test Results |
|---|----------------------------|--|
| 2,6 DI-TERT-BUTYL-P-CRESOL [BUTTLATED HYDROXYTOLUENE] (BHT) (CAS 128-37-0) | | |
| Acute <i>Oral</i> LD50 | Guinea Pig Mouse Rat | 10700 mg/kg 1040 mg/kg 890 mg/kg |

Not available. * Estimates for product may be based on additional component data not shown.

Skin Corrosion/Irritation: May cause defatting of the skin, but is neither an irritant nor a sensitizer.

Serious Eye Damage/Eye Irritation: Not classified. May cause minor irritation on eye contact.

Respiratory Sensitization: Not classified.

Skin Sensitization: Not classified. May cause defatting of the skin, but is neither an irritant nor a sensitizer.

Germ Cell Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Nota L - Meets EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound (PAC) using IP 346. Not classified.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.

Reproductive Toxicity: Contains no ingredient listed as toxic to reproduction

Specific Target Organ Toxicity - Single Exposure: Not classified.

Specific Target Organ Toxicity - Repeated Exposure: Not classified.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Chronic Effects: Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Further Information: Risk of chemical pneumonia after aspiration.

SECTION 12 ECOLOGICAL INFORMATION

| Components | Species | Test Results |
|--|----------------------------|-------------------------------------|
| HyVolt II (CAS Mixture) Crustacea EC50 | Daphnia | 863.8272 mg/l 48 hours estimated |
| 2,6 DI-TERT-BUTYL-P-CRESOL [BUTTLATED HYDROXYTOLUENE] (BHT) (CAS 128-37-0) Aquatic Crustacea EC50 | Water flea (Daphnia Pulex) | 1.44 mg/l 48 hours |

Not available. * Estimates for product may be based on additional component data not shown.

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms.

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

Not inherently biodegradable.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

Other Adverse Effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13 DISPOAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS DANGEROUS GOODS

IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS

IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not available

SECTION 15 REGULATORY INFORMATION

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. CERCLA/SARA Hazardous Substances - Not applicable.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

| | | |
|---------------------------|---------------------|-----|
| Hazard Categories: | Immediate Hazard - | Yes |
| | Delayed Hazard - | No |
| | Fire Hazard - | No |
| | Pressure Hazard - | No |
| | Reactivity Hazard - | No |

SARA 302 Extremely Hazardous Substance: Not listed.

SARA 311/312 Hazardous Chemical: No

SARA 313 (TRI reporting): Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.

Safe Drinking Water Act (SDWA): Not regulated.

US State Regulations: This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List: Not regulated.

US. New Jersey Worker and Community Right-to-Know Act: Not regulated.

US. Pennsylvania RTK - Hazardous Substances: Not regulated.

US. Rhode Island RTK: Not regulated.

US. California Proposition 65: Not Listed.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|-------------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines (PICCS) | Philippine Inventory of Chemicals and Chemical Substances | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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| SECTION 16 OTHER INFORMATION |
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REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 1

Revision Date: June 1, 2018

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

| | |
|---|---|
| TLV - Threshold Limit Value | TWA - Time Weighted Average |
| STEL - Short-term Exposure Limit | PEL - Permissible Exposure Limit |
| GHS - Globally Harmonized System | CAS - Chemical Abstract Service Number |
| ACGIH - American Conference of Governmental Industrial Hygienists | MO/IMDG - International Maritime Dangerous Goods Code |
| API - American Petroleum Institute | SDS - Safety Data Sheet |
| HMIS - Hazardous Materials Information System | NFPA - National Fire Protection Association (USA) |
| DOT - Department of Transportation (USA) | NTP - National Toxicology Program (USA) |
| IARC - International Agency for Research on Cancer | OSHA - Occupational Safety and Health Administration |
| NCEL - New Chemical Exposure Limit | EPA - Environmental Protection Agency |
| SCBA - Self-Contained Breathing Apparatus | |

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| Amended to conform to the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (OSHA/GHS). |
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