

EXHIBIT E

Transformer Mineral Oil SDS

Petition No. 1609

RS/DS

SAFETY DATA SHEET
SUNOCO TYPE II TRANSFORMER OIL



Lubricants
United States

Section 1 - Identification

1.1 Product Identifiers

Product Name : SUNOCO TYPE II TRANSFORMER OIL
Product Code(s) : 1013-000, 1013-055, 1013-005, 1013-016, 1013-330

1.4 Supplier Information

SUNOCO LUBRICANTS
PO BOX 16270
Philadelphia, PA 19154
United States

Phone : 800-660-0761
Fax : 215-352-0140

1.2 Product Usage

Recommended Usage : Transformer Oil
Restricted Usage : Not Intended for any other usage

1.3 Emergency Support

Emergency Support : CHEMTREC
United States/Canada +1(800) 424-9300

Section 2 - Hazards Identification

2.1 Classification of the Substance or the Mixture

GHS Rating(s) : Aspiration Category 1
Signal Word : Warning

H304: May be fatal if swallowed and enters airways

2.2 Label Elements



Precautionary : **P201** Obtain Special Instructions Before Use.
: **P202** Do Not Handle Until All Safety Precautions Are Understood.
: **P281** Use Personal Protective Equipment As Required.
Response : **P308** If Exposed Or Concerned: Get Medical Advice/attention.
Storage : **P405** Store Locked Up.
Disposal : **P501** Dispose Of Container According To Regional Regulations.

2.3 Other Hazards

Section 3 - Composition / Information on Ingredients

3.1 Substance Details

Chemical Name	CAS #	%Weight
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENTIC	64742-53-6	90.0
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC	64742-55-8	5.0
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED LIGHT PARAFFINIC	64742-56-9	5.0

Products containing mineral oil with less than 3% DMSO extract as measured by IP-346.

Section 4 - First Aid Measures

4.1 First Aid Measures

- Eye Contact** : Immediately flush eyes with plenty of water occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for atleast 20 minutes. Get Medical Attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Maintain an open airway. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. get medical attention if symptoms occur.

4.2 Symptoms & Effects

- To Physician** : Treat symptomatically. Contact poison specialist if product has been ingested.
- Specific Treatment** : No Specific Treatment.

4.3 Medical Attention

- Protection of First Aiders** : No action should be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Note To Doctor** : Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach contents is necessary, use method least likely to cause aspiration.

Section 5 - Fire Fighting

5.1 Extinguishing Media

Suitable Media : CO2, Dry chemical, or Foam. Water can be used to cool and protect product. Do not use
Unsuitable Media water jet as an extinguisher, it will spread the fire.

Specific hazards arising from this product : When heated, hazardous gases may be released including: sulfur dioxide. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. This material creates a special hazard because it floats on water. This material is harmful to aquatic life. Any fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

5.3 Firefighters Advice

Special protective equipment : Fire Equipment Information: Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus(SCBA) with a full face -piece operated in positive pressure mode.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment

General Measures : No health effects expected from the cleanup of this material if contact can be avoided. Follow personal protective equipment recommendations found in section 8 of this SDS.

6.2 Environmental Precautions

Non-Emergency Personnel : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform authorities if the product has caused environmental pollution. Water Polluting Material may be harmful to the environment if released in large quantities.

6.3 Materials & Methods to Contain and Cleanup

Reference Section 8 : Follow all protective equipment recommendations provided in Section 8.

Spill Control Measures : Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Dispose of according to Federal, State, Local, or Provincial regulations. Used fluid should be disposed of at a recycling center.

Containment and Cleanup : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillage's with noncombustible, absorbent material e.g. sand earth vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via licensed waste disposal contractor. Contaminated absorbent material may pose the same threat hazard as the spilled product.

Section 11 - Toxicological Information Continued

Sensitizer	: No data available to indicate product or components may be a skin sensitizer.
Mutagenicity	: No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.
Carcinogenicity	: Not expected to cause cancer. This product meets the IP-346 criteria.
Reproductive Toxicity	: No data available if components greater than 0.1% may cause birth defects.

Section 12 - Ecological Information

12.1 Aquatic Toxicity

Persistence and degradability	: No Data Available.
Bioaccumulative potential	: Bioconcentration may occur. No Data Available.
Mobility in soil	: No Data Available.
Results of PBT and vPvB assessment	: Not Determined.
Other adverse effects	: No Data Available.

12.2 LC50 Toxicity Data

CAS	Chemical Name	Test	Value	Species	Source
64742-55-8	Distillates, petroleum, hydrotreated light paraffinic	LC50	5000.0mg/L 96h	Oncorhynchus	IUCLID
64742-56-9	Distillates, petroleum, solvent-dewaxed light paraffinic	LC50	5000.0mg/L 96h	Oncorhynchus	IUCLID
64742-53-6	Distillates, petroleum, hydrotreated light naphthenic	LC50	5000.0mg/L 96h	Oncorhynchus	IUCLID

12.3 Other Toxicity Data

CAS	Chemical Name	Test	Value	Species	Source
64742-55-8	Distillates, petroleum, hydrotreated light paraffinic	EC50	1000.0mg/L 48h	Daphnia magna	IUCLID
64742-56-9	Distillates, petroleum, solvent-dewaxed light paraffinic	EC50	1000.0mg/L 48h	Daphnia magna	IUCLID
64742-53-6	Distillates, petroleum, hydrotreated light naphthenic	EC50	1000.0mg/L 48h	Daphnia magna	IUCLID

Section 13 - Disposal Considerations

13.1 Waste treatment

Waste treatment methods	: Dispose of according to Federal, State, Local, or Provincial regulations.
Disposal Methods	: Recycle used oil.
Waste Disposal	: Use material is non-hazardous according to environmental regulations.
Contaminated packaging	: Recycle containers whenever possible!

Section 14 - Transportation Information

14.1 U.S. Department of Transportation (DOT)

14.2. Shipping Description	: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil) International Maritime Dangerous Goods (IMDG)
14.2. DOT Compliance Note	: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)
14.2. DOT Compliance Requirement	: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23, 24



SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

1.1 Product Identifier:

Product ID: D-A Cross Transformer Oil Revision Date: Sep 09, 2016
Product Name: D-A Cross Transformer Oil Version: 1.0

1.2 Relevant Identified Uses of the Substance or Mixture: Date Printed: Dec 26, 2017
Electrical insulating oil. Supersedes Date: N.A.

1.3 Details of the Supplier of the Safety Data Sheet:

Suppliers's Name: D-A Lubricant Company, Inc.
Address: 801 Edwards Drive, Lebanon, IN 46052
Information Phone Number: T 317-923-5321, Toll-Free 1-800-873-2582

1.4 Emergency Information: CHEMTREC
Emergency Phone: (800) 424-9300 (24 Hours)

SECTION 2) HAZARDS IDENTIFICATION

2.1 Classification

Acute aquatic toxicity - Category 3
Aspiration Hazard - Category 1
Chronic aquatic toxicity - Category 3

2.2 Label Elements

Pictograms



Signal Word

danger

Hazardous Statements - Health

H304 - May be fatal if swallowed and enters airways

Hazardous Statements - Environmental

H402 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention

P273 - Avoid release to the environment.

Precautionary Statements - Response

P391 - Collect spillage.
P301 + P331 - IF SWALLOWED: Do NOT induce vomiting.

Precautionary Statements - Storage

P405 - Store locked up.

Precautionary Statements - Disposal

P501 - Dispose of contents/container in accordance with local/national/international regulations.

2.3 Other hazards

No Data Available

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

CAS	Chemical Name	GHS Classifications	% By Weight	EC No
0064742-53-6	MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) LIGHT NAPHTHENIC	Asp. Tox. 1, H304; Carc. 1, H350	77% - 100%	265-156-6
0000128-39-2	2,6-DI-T-BUTYLPHENOL	Eye Irr. 2, H319; Acute Tox. Oral 4, H302; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. Derm. 4, H312; Skin Irr. 2, H315	0.0% - 0.3%	-

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

4.1 Description of measures

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.

Eye Contact

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact

Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Ingestion

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

If more than several mouthfuls have been swallowed, give two glasses of water (16 Oz.).

Notes

High velocity injection of grease under the skin may result in serious injury. If left untreated, the affected area is subject to infection, disfigurement, lack of blood circulation and may require amputation. When dispensed by high-pressure equipment, this material can easily penetrate the skin and leave a bloodless puncture wound. Material injected into a finger can be deposited into the palm of the hand and in rare occasions up to the elbow. Within 24 to 48 hours the patient may experience swelling, discoloration, and throbbing pain in the affected area. Immediate treatment by a surgical specialist is recommended.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5) FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide, water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous

use of foam and water on the same surface is to be avoided as water destroys the foam. Water or foam may cause frothing. If leak or spill has not ignited, use water spray to cool the containers and to provide protection for personnel attempting to stop the leak.

Unsuitable Extinguishing Media

Do not use water in a jet.

5.2 Specific Hazards Arising from the substance of mixture

Hazardous combustion products may include: Toxic levels of carbon monoxide, carbon dioxide, irritating aldehydes and ketones.

5.3 Advice for firefighters

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray or fog may be useful in minimizing or dispersing vapors and to protect personnel.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Emergency Procedure

Immediately turn off or isolate any source of ignition. Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately. Contain spill. Wipe up or add suitable absorbent, non-combustible, inert material such as sand, sawdust, etc. to spill area and shovel into appropriate container for disposal. Local authorities should be advised immediately if required or if significant spillages cannot be contained.

Ventilate area.

Recommended Equipment

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Will not produce vapors unless heated to temperatures of ~300 °F.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains/surface waters/ groundwater. Retain and dispose of contaminated wash water.

SECTION 7) HANDLING AND STORAGE

7.1 Precautions for safe handling

General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

7.2 Conditions for safe storage, including incompatibilities

Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.

Minimum feasible handling temperature should be maintained. Periods of exposure to high temperature should be minimized. Water

Serious Eye Damage/Irritation

No Data Available

Skin Corrosion/Irritation

No Data Available

Serious Eye Damage/Irritation

Irritating, but will not permanently injure eye tissue.

Skin Corrosion/Irritation

Prolonged or repeated contact may cause skin irritation.

Specific Target Organ Toxicity - Repeated Exposure

No Data Available

Specific Target Organ Toxicity - Single Exposure

No Data Available

0064742-53-6 MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) LIGHT NAPHTHENIC

LC50 (Rodent - rat, Inhalation) : 2180 mg/m3 (4 hours exposure) Toxic effects : Lungs, Thorax, or Respiration - structural or functional change in trachea or bronchi.

LD50 (Rodent - rat, Oral) : >5000 mg/kg, Toxic effects : Behavioral - somnolence (general depressed activity).

LD50 (Rodent - rabbit, Administration onto the skin) : >2000 mg/kg, Toxic effects : Skin and Appendages - primary irritation (after topical exposure)

SECTION 12) ECOLOGICAL INFORMATION

12.1 Toxicity

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration.

If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration.

This product may cause gastrointestinal distress in birds and mammals through ingestion.

12.2 Persistence and degradability

Is rapidly biodegradable. Biodegradation is possible with 100 to 120 days in aerobic environments at temperatures above 70 °F (21 °C).

12.3 Bioaccumulative potential

No Data Available.

12.4 Mobility in Soil

No Data Available.

12.5 Other Adverse Effects

No Data Available.

SECTION 13) DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste.

SECTION 14) TRANSPORT INFORMATION

ADR Information

- 14.1 UN number: Not Regulated
- 14.2 UN shipping name: N/A
- 14.3 Hazard class: N/A
- 14.4 Packaging group: N/A
- 14.5 Environmental hazards: No data available
- 14.6 Special precautions for users: No data available
- 14.7 Annex II of MARPOL 73/78 and the IBC code by bulk freight: No data available

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0064742-53-6	MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) LIGHT NAPHTHENIC	77% - 100%	DSL,SARA312,TSCA
0000128-39-2	2,6-DI-T-BUTYLPHENOL	0.0% - 0.3%	DSL,SARA312,TSCA

SECTION 16) OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

Full text of H-Statements referred to under Section 3

- H302 Harmful if swallowed
- H304 May be fatal if swallowed and enters airways
- H312 Harmful in contact with skin
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H350 May cause cancer.
- H400 Very toxic to aquatic life
- H410 Very toxic to aquatic life with long lasting effects

SAFETY DATA SHEET



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Uninhibited Transformer Oil
Product code 67552-BE02
SDS no. 467552
Product type Liquid.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture Transformer fluid.
 For specific application advice see appropriate Technical Data Sheet or consult our company representative.

1.3 Details of the supplier of the safety data sheet

Supplier BP Europa SE, Oddział w Polsce
 Skrytka pocztowa nr 126
 00-961 Warszawa
 Poland
 22 307 77 77
E-mail address MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER Carechem: +44 (0) 1235 239 670 (24/7)
 + 48 22 582 65 80 (toxicology information)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition Mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
 Asp. Tox. 1, H304

See Section 16 for the full text of the H statements declared above.
 See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

2.2 Label elements

Hazard pictograms



Signal word Danger
Hazard statements H304 - May be fatal if swallowed and enters airways.

Precautionary statements

Prevention Not applicable.
Response P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
Storage P405 - Store locked up.
Disposal P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients Distillates (petroleum), hydrotreated, light naphthenic
Supplemental label elements Not applicable.

[EU Regulation \(EC\) No. 1907/2006 \(REACH\)](#)

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		Language ENGLISH

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings Not applicable.

Tactile warning of danger Not applicable.

2.3 Other hazards

Other hazards which do not result in classification

Defatting to the skin.
 USED OILS FROM TRANSFORMERS AND SWITCHGEAR:
 Because polychlorinated biphenyls (PCBs) were often used in older transformers and switchgear equipment, there is a possibility that oil drained from older equipment may have become contaminated with PCB.

SECTION 3: Composition/information on ingredients

Substance/mixture Mixture

Highly refined base oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Distillates (petroleum), hydrotreated, light naphthenic	REACH #: 01-2119480375-34 EC: 265-156-6 CAS: 64742-53-6 Index: 649-466-00-2	≥75 - ≤90	Asp. Tox. 1, H304	[1] [2]
Base oil - unspecified	Varies - See Key to abbreviations	≥10 - ≤25	Not classified.	[2]

See Section 16 for the full text of the H statements declared above.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact

Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

Inhalation

If inhaled, remove to fresh air. Get medical attention if symptoms appear.

Ingestion

Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

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SECTION 4: First aid measures

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide)

5.3 Advice for firefighters

Special precautions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Contact emergency personnel.
For emergency responders	Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 5 for firefighting measures.
See Section 8 for information on appropriate personal protective equipment.
See Section 12 for environmental precautions.
See Section 13 for additional waste treatment information.

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SECTION 10: Stability and reactivity

10.1 Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
10.2 Chemical stability	The product is stable.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
10.4 Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
10.5 Incompatible materials	Reactive or incompatible with the following materials: oxidising materials.
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity estimates

Route	ATE value
Not available.	

Information on likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Inhalation	Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.
Ingestion	Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.
Skin contact	Defatting to the skin. May cause skin dryness and irritation.
Eye contact	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.
Ingestion	Adverse symptoms may include the following: nausea or vomiting
Skin contact	Adverse symptoms may include the following: irritation dryness cracking
Eye contact	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.

Potential chronic health effects

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Environmental hazards Not classified as dangerous

12.2 Persistence and degradability

Not expected to be rapidly degradable.

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SECTION 12: Ecological information

12.3 Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Mobility Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

PBT Not applicable.

vPvB Not applicable.

12.6 Other adverse effects

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.
USED OILS FROM TRANSFORMERS AND SWITCHGEAR:
 Used oil contaminated with PCBs requires expert handling and disposal to avoid serious pollution. If it is suspected that oil is contaminated with PCBs it should be kept separate from, and never mixed with other waste oils. Contact the Local Authority for disposal advice.

Hazardous waste Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 03 07*	mineral-based non-chlorinated insulating and heat transmission oils

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Other information

At sea, used or unwanted product should be stored for eventual discharge into port approved waste oil disposal facilities.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

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