



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Cenex Transformer Oil Type II  
**Other means of identification** None.  
**Recommended use** Electrical insulating oil  
**Recommended restrictions** None known.  
**Manufacturer/Importer/Supplier/Distributor information**  
CHS Inc  
Mail Station 525  
PO Box 64089  
St. Paul, MN 55164-9887, USA  
www.chsinc.com  
Tel: 620- 241-2340  
Emergency telephone:  
1-800-424-9300 (within USA & Canada)

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Aspiration hazard Category 1  
**Environmental hazards** Hazardous to the aquatic environment, long-term hazard Category 3  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Danger  
**Hazard statement** May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.  
**Precautionary statement**  
**Prevention** Avoid release to the environment.  
**Response** If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.  
**Storage** Store locked up.  
**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Hazard(s) not otherwise classified (HNOC)** None known.  
**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	0 - 100%
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	0 - 100%
Butylated hydroxytoluene	128-37-0	< 0.3

**Composition comments** All concentrations are in percent by weight. The manufacturer has claimed the exact percentage as trade secret under the OSHA Hazard Communication Standard.

## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Aspiration may cause pulmonary edema and pneumonitis. Repeated inhalation of oil mists may result in irritation to the nose and throat. Swallowing may cause gastrointestinal irritation. May cause skin and eye irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and unidentified organic compounds will be evolved when this material undergoes combustion.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Cool containers exposed to heat with water spray and remove container, if no risk is involved. Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Will burn if involved in a fire.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Ensure adequate ventilation. Take precautionary measures against static discharge. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>The product is immiscible with water and will spread on the water surface. Prevent product from entering drains.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Absorb spillage with suitable absorbent material. Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p>
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not taste or swallow. Avoid inhalation of oil mist and contact with skin and eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value	Form
Oil mist, mineral	PEL	5 mg/m3	Mist.
Product	Type	Value	Form
Highly refined mineral oil	PEL	5 mg/m3	Mist.

#### US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Butylated hydroxytoluene (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor.
Oil mist, mineral	TWA	5 mg/m3	Inhalable fraction.

#### NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Oil mist, mineral	IDLH	2500 mg/m3
Product	Type	Value
Highly refined mineral oil	IDLH	2500 mg/m3

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Butylated hydroxytoluene (CAS 128-37-0)	TWA	10 mg/m3	
Oil mist, mineral	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Product	Type	Value	Form
Highly refined mineral oil	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Good general ventilation 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.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles). Face shield is recommended.

<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Nitrile gloves are recommended. Suitable gloves can be recommended by the glove supplier.
<b>Skin protection</b>	
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Wear a NIOSH approved cartridge respirator equipped with organic vapor cartridge.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Petroleum.
<b>Odor threshold</b>	Not determined.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	Not determined.
<b>Initial boiling point and boiling range</b>	> 500 °F (> 260 °C)
<b>Flash point</b>	≥ 293 °F (≥ 145 °C) Cleveland Open Cup
<b>Evaporation rate</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not determined.
<b>Explosive limit - upper (%)</b>	Not determined.
<b>Vapor pressure</b>	< 0.01 mmHg (100 °F (37.78 °C))
<b>Vapor density</b>	> 1
<b>Relative density</b>	0.855 - 0.895 (60.1 °F (15.61 °C))
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble in water.
<b>Solubility (solvents)</b>	Soluble in hydrocarbon solvents.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable, product is a mixture.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition temperature</b>	Not determined.
<b>Viscosity</b>	Not determined.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Kinematic viscosity</b>	9 - 11 mm <sup>2</sup> /s (104 °F (40 °C))
<b>Oxidizing properties</b>	Not oxidizing.
<b>Pour point</b>	≤ 104 °F (≤ 40 °C)

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.

<b>Conditions to avoid</b>	High temperatures. Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids. Strong oxidizing agents. Chlorites. Nitrates. Peroxides.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Prolonged skin contact may cause temporary irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics**      Aspiration may cause pulmonary edema and pneumonitis.

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
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Butylated hydroxytoluene (CAS 128-37-0)

#### Acute

##### **Dermal**

LD50                      Rat    > 2000 mg/kg

##### **Oral**

LD50                      Rat    > 2930 mg/kg

Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)

#### Acute

##### **Dermal**

LD50                      Rabbit    > 5000 mg/kg, 24 Hours

##### **Inhalation**

###### *Aerosol*

LC50                      Rat    > 5.53 mg/l, 4 Hours

##### **Oral**

LD50                      Rat    > 5000 mg/kg

Distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)

#### Acute

##### **Dermal**

LD50                      Rabbit    > 5000 mg/kg, 24 Hours

##### **Inhalation**

###### *Aerosol*

LC50                      Rat    > 5.53 mg/l, 4 Hours

##### **Oral**

LD50                      Rat    > 5000 mg/kg

**Skin corrosion/irritation**                      Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation**                      Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitization

**Respiratory sensitization**                      Not a respiratory sensitizer.

**Skin sensitization**                      This product is not expected to cause skin sensitization.

**Germ cell mutagenicity**                      No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**                      Not classifiable as to carcinogenicity to humans.

## IARC Monographs. Overall Evaluation of Carcinogenicity

Butylated hydroxytoluene (CAS 128-37-0)

3 Not classifiable as to carcinogenicity to humans.

Highly refined mineral oil (CAS -)

3 Not classifiable as to carcinogenicity to humans.

## NTP Report on Carcinogens

Not listed.

## OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged or repeated contact with used oil may cause serious skin diseases.

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
Butylated hydroxytoluene (CAS 128-37-0)			
<b>Aquatic</b>			
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	0.07 mg/l, 21 days
Distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	NOEL	Pseudokirchneriella subcapitata	>= 100 mg/l, 72 hours
Crustacea	EL50	Daphnia magna	> 1000 mg/l, 48 hours
Fish	LL50	Pimephales promelas	> 100 mg/l, 96 hours

**Persistence and degradability** Expected to be inherently biodegradable. The product is not expected to be readily biodegradable. Persistent.

## Bioaccumulative potential

### Partition coefficient n-octanol / water (log Kow)

Butylated hydroxytoluene (CAS 128-37-0) 5.1

**Mobility in soil** No data available.

**Other adverse effects** Oil spills are generally hazardous to the environment.

## 13. Disposal considerations

**Disposal instructions** Recover and recycle, if practical. Used oil can be returned to a collection center or provided to a licensed recycler. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Toxic Substances Control Act (TSCA)**

All components of the mixture on the TSCA 8(b) inventory are designated "active".

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Aspiration hazard

**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****US. Massachusetts RTK - Substance List**

Butylated hydroxytoluene (CAS 128-37-0)  
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)  
Highly refined mineral oil (CAS -)

**US. New Jersey Worker and Community Right-to-Know Act**

Butylated hydroxytoluene (CAS 128-37-0)  
Highly refined mineral oil (CAS -)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Butylated hydroxytoluene (CAS 128-37-0)  
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)

**US. Rhode Island RTK**

Butylated hydroxytoluene (CAS 128-37-0)  
Highly refined mineral oil (CAS -)

**California Proposition 65**

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. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)  
Highly refined mineral oil (CAS -)

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Industrial Chemicals (AICIS)	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)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	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).

**16. Other information, including date of preparation or last revision**

**Issue date** 19-October-2023  
**Revision date** -  
**Version #** 01  
**HMIS® ratings** Health: 3  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**



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