SAFETY DATA SHEET

STO-50 Silicone Transformer Oil

Data Prepared: May 19, 2015

SECTION 1: Identification

Product name : STO-50 Silicone Transformer Oil
Product code : STO-50

Manufacturer or supplier details
Company name of supplier : Clearco Products Co Inc.
Address : 15 York Rd.
Willow Grove, PA 19090 U.S.A.
Telephone : 215-366-7860
Emergency Telephone : CHEM TEL: 1-800-255-3924 (DOMESTIC)
+01-813-248-0585 (INTERNATIONAL)

Recommended use of the chemical and restrictions on use
Recommended use : Electrical industry and electronics
Insulating materials

SECTION 2: Hazards identification

GHS Classification
Not a hazardous substance or mixture.

GHS Label element
Not a hazardous substance or mixture.

Other hazards
None known.

SECTION 3: Composition/information on ingredients

Substance/ Mixture : Substance
Substance Name : Dimethyl Siloxane, Trimethylsilox/terminated
CAS –no. : 63148-62-9
Chemical nature : Silicone

Hazardous components : No hazardous ingredients

SECTION 4: First aid measures

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

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
If swallowed: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed: None known.

Protection of first-aiders: No special precautions are necessary for first aid responders.

Notes to physician: Treat symptomatically and supportively.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray
Alcohol-resistant foam
Dry chemical
Carbon dioxide (CO2)

Unsuitable extinguishing media: None known.

Specific hazards during firefighting: Exposure to combustion products may be a hazard to health

Hazardous combustion products: Carbon oxides
Silicon oxides
Formaldehyde

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool unopened containers/tanks with water spray. Remove undamaged containers from fire area if it is safe to do so. evacuate area.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Follow safe handing advice and personal protective equipment recommendations

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining
materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7: Handling and storage

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labelled containers. Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

\[\text{Strong oxidizing agents}\]

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

Engineering measures
Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

Personal protective equipment
Eye protection : Wear the following personal protective equipment: Safety glasses

Hand protection

Remarks : Wash hands before breaks and at the end of workday.

Skin and body protection : Skin should be washed after contact.

Respiratory protection : No personal respiratory protective equipment normally required.
Hygiene measures: Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding the use of silicones/organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Clearco Products customer service group.

### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>liquid</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>colourless</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>characteristic</td>
</tr>
<tr>
<td><strong>Odour Threshold</strong></td>
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</tr>
<tr>
<td><strong>pH</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Initial boiling point and boiling range</strong></td>
<td>&gt; 65 °C</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt; 101 °C</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>closed cup</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Upper explosion limit</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Lower explosion limit</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Relative vapour density</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>0.96</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td>Water solubility: No data available</td>
</tr>
<tr>
<td><strong>Partition coefficient:</strong></td>
<td>noctanol/water: No data available</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>No data available</td>
</tr>
</tbody>
</table>
Thermal decomposition: No data available

Viscosity
Viscosity, kinematic: 50 cSt

Explosive properties: Not explosive

Oxidizing properties: The substance or mixture is not classified as oxidizing.

Molecular weight: No data available

SECTION 10: Stability and reactivity

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

Hazardous decomposition products
Thermal decomposition: Formaldehyde

SECTION 11: Toxicological information

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.

Product:
Acute oral toxicity: LD50 (Rat): > 15,400 mg/kg
Assessment: The substance or mixture has no acute oral toxicity.
Remarks: Based on data from similar materials

Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation
Not classified based on available information.
**Product:**
Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

**Serious eye damage/eye irritation**
Not classified based on available information.

**Product:**
Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

**Respiratory or skin sensitization**
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

**Product:**
Assessment: Does not cause skin sensitisation.

Test Type: Maximization Test (GPMT)
Species: Guinea pig
Remarks: No known sensitizing effect.
Based on test from similar material

**Germ cell mutagenicity**
Not classified based on available information.

**Product:**
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on test data

**Carcinogenicity**
Not classified based on available information.

**Product:**
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity – Assessment: Animal testing did not show any carcinogenic effects.

**IARC**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

Product:

Effects on fertility
Species: Rabbit, male
Application Route: Ingestion
Symptoms: No effects on fertility.
Remarks: Based on data from similar materials.

Effects on fetal development
Test Type: Prenatal development toxicity study (teratogenicity)
Species: Rabbit, female
Application Route: Skin contact
Symptoms: No effects on fetal development.
Remarks: Based on data from similar materials.

Reproductive toxicity – Assessment
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure
Not classified based on available information.

STOT - repeated exposure
Not classified based on available information.

Product:

Exposure routes: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Exposure routes: Skin contact
Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

Repeated dose toxicity

Product:
Species: Rat
Application Route: Ingestion
Remarks: Based on data from similar materials

Species: Rabbit
Application Route: Skin contact
Remarks: Based on data from similar materials

Aspiration toxicity
Not classified based on available information.
SECTION 12: Ecological information

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13: Disposal considerations

Disposal methods
Resource Conservation and Recovery Act (RCRA) : This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

International Regulation

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15: Regulatory information

EPCRA-Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.
SARA 311/312 Hazards: No SARA Hazards
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations
Pennsylvania Right to Know
- Dimethyl Siloxane, Trimethylsiloxy-terminated: 63148-62-9 90-100%

New Jersey Right To Know
- Diemethyl Siloxane, Trimethysiloxy-terminated: 63148-62-9 90-100%

California Prop 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:
- KECI: All ingredients listed, exempt or notified.
- REACH: All ingredients (pre)-registered or exempt.
- TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
- AICS: All ingredients listed or exempt.
- IECSC: All ingredients listed or exempt.
- ENCS/ISHL: All components are listed on ENCS/ISHL or exempted from inventory listing.
- PICCS: All ingredients listed or exempt.
- DSL: All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances list (DSL).
- NZIoC: All ingredients listed or exempt.

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA(USA).

SECTION 16: Other information

Further Information

NFPA:
- Health: 0
- Flammability: 0
- Special hazard: 

HMIS III:
- HEALTH: 0
- FLAMMABILITY: 1
- PHYSICAL HAZARD: 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Revision Date: 01/07/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.