

SAFETY DATA SHEET

1. Identification

Identification

Product name: PARATHERM™ HT

Additional identification

Chemical name: Terphenyl, hydrogenated

Recommended use and restriction on use

Recommended use: Heat Transfer Fluid

Restrictions on use: None identified.

Details of the supplier of the safety data sheet

Supplier

Company Name: PARATHERM
A DIV. OF THE LUBRIZOL CORPORATION
Address: 2009 Renaissance Boulevard
King of Prussia, PA 19406
US
Telephone: 610-941-4900

Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1)703 527 3887, OR WITHIN USA 800 424 9300

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements:

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: not applicable

Precautionary Statements: not applicable

Other hazards which do not result in GHS classification: None identified.

3. Composition/information on ingredients

Chemical name	CAS number	Percent by Weight
Terphenyl, hydrogenated	61788-32-7	70 - 80%
Terphenyl	26140-60-3	5 - 10%

4. First-aid measures

Ingestion: Treat symptomatically. Get medical attention.

Inhalation:	Remove exposed person to fresh air if adverse effects are observed.
Skin Contact:	Wash with soap and water. If skin irritation occurs, get medical attention.
Eye contact:	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

Most important symptoms/effects, acute and delayed

Symptoms: See section 11.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire-fighting measures

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

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: CO₂, dry chemical, foam, water spray, water fog.

Unsuitable extinguishing media: Not determined.

Specific hazards arising from the chemical: See section 10 for additional information. Water may cause splattering.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Recommend wearing self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Ventilate area if spilled in confined space or other poorly ventilated areas.

Methods and material for containment and cleaning up: Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid environmental contamination.

Maximum Handling Temperature: Not determined.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. See section 10 for incompatible materials.

Maximum Storage Temperature: Not determined.

8. Exposure controls/personal protection

Control Parameters:

Occupational Exposure Limits

Chemical name	type	Exposure Limit Values		Source
Terphenyl, hydrogenated	Ceiling	1 ppm	9 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Terphenyl, hydrogenated	TWA	0.5 ppm	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Terphenyl, hydrogenated	TWA	0.5 ppm		US. ACGIH Threshold Limit Values (02 2012)
Terphenyl, hydrogenated	REL	0.5 ppm	5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Terphenyl	Ceiling	1 ppm	9 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Terphenyl	Ceiling	0.5 ppm	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Terphenyl	Ceiling		5 mg/m ³	US. ACGIH Threshold Limit Values (02 2012)

Appropriate engineering controls: No special requirements under ordinary conditions of use and with adequate ventilation. Use material in well ventilated area only. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: If contact is likely, safety glasses with side shields are recommended.

Skin Protection

Hand Protection: Suitable gloves can be recommended by the glove supplier.

Other: Long sleeve shirt is recommended.

Respiratory Protection: Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator.

Hygiene measures: 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.

9. Physical and chemical properties

Appearance

Physical state: liquid

Form: liquid

Color:	Pale yellow
Odor:	Characteristic
Odor threshold:	No data available.
pH:	No data available.
Freezing point:	No data available.
Boiling Point:	> 658 °F (348 °C)
Flash Point:	> 356 °F (180 °C) (ASTM D93 (Pensky-Martens (A and B Closed Cup)))
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	0.00174 hPa (20 °C 68 °F)
Vapor density:	No data available.
Relative density:	1.001 - 1.007 77 °F (25 °C)
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	705 °F (374 °C)
Decomposition temperature:	No data available.
Viscosity:	25 - 32 mm ² /s (100.0 °F (37.8 °C))

Other information

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Will not occur.
Conditions to avoid:	Do not expose to excessive heat, ignition sources, or oxidizing materials.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition Products:	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.
Skin Contact:	No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity

Oral

Product: ATEmix > 10,000 mg/kg.

Dermal

Product: Not classified for acute toxicity based on available data.

Inhalation

No data available

Skin Corrosion/Irritation:

Terphenyl, hydrogenated Classification: Not irritating (Literature); Rabbit. Not expected to be a primary skin irritant.

Terphenyl Classification: Not irritating (Literature); Rabbit. Not expected to be a primary skin irritant.

Serious Eye Damage/Eye Irritation:

Terphenyl, hydrogenated Classification: Not irritating (Literature); Rabbit.

Respiratory sensitization:

No data available

Skin sensitization:

No data available

Specific Target Organ Toxicity - Single Exposure:

Aspiration Hazard:

No data available

Other effects:

Terphenyl, hydrogenated Liver

Chronic Effects

Carcinogenicity:

No data available

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity:

No data available

Reproductive toxicity:
No data available

Specific Target Organ Toxicity - Repeated Exposure:
No data available

12. Ecological information

Ecotoxicity

Fish

Terphenyl, hydrogenated LC 50 (Fathead Minnow, 4 h): > 1,000 mg/l
LC 50 (Bluegill Sunfish, 4 h): > 100 mg/l
LC 50 (Rainbow Trout, 4 h): > 1,000 mg/l

Terphenyl LC 50 (Fathead Minnow, 4 h): > 7.5 mg/l
NOEC (Fathead Minnow, 4 h): > 1.5 mg/l
LC 50 (Rainbow Trout, 4 h): > 27 mg/l
NOEC (Fathead Minnow, 4 h): > 10 mg/l

Aquatic Invertebrates

Terphenyl, hydrogenated No toxicity at solubility limit.

Terphenyl EC 50 (Water flea (Daphnia magna), 2 d): 0.007 mg/l
EC 50 (Water flea (Daphnia magna), 2 d): 0.022 mg/l
EC 50 (Water flea (Daphnia magna), 2 d): 0.066 mg/l
NOEC (Water flea (Daphnia magna), 2 d): 0.006 mg/l
NOEC (Water flea (Daphnia magna), 2 d): 0.011 mg/l

Toxicity to Aquatic Plants

Terphenyl, hydrogenated LC 50 (Green algae (selenastrum capricomutum), 4 h): 56 mg/l

Toxicity to soil dwelling organisms

No data available

Sediment Toxicity

No data available

Toxicity to Terrestrial Plants

No data available

Toxicity to Above-Ground Organisms

No data available

Toxicity to microorganisms

Terphenyl, hydrogenated NOEC (Sludge, 0.1 h): 103 mg/l
LC 50 (Sludge, 0.1 h): 103 mg/l

Persistence and Degradability

Biodegradation

No data available

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available

Partition Coefficient n-octanol / water (log Kow)

Terphenyl, hydrogenated Log Kow: 5.5 (calculated)

Mobility: No data available

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

Contaminated Packaging: Container packaging may exhibit hazards.

14. Transport information

DOT

UN Number: UN 3082
UN Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.(Terphenyl)
Transport Hazard Class(es)
Class: 9
Label(s): 9
Packing Group: III
Marine Pollutant: Yes
Special precautions for user: None established

IMDG

UN Number: UN 3082
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Terphenyl)
Transport Hazard Class(es)
Class: 9
Label(s): 9
EmS No.: F-A, S-F
Packing Group: III
Marine Pollutant: Yes
Limited quantity 5.00L
Excepted quantity E1
Special precautions for user: None established

IATA

UN Number:	UN 3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.(Terphenyl)
Transport Hazard Class(es):	
Class:	9
Label(s):	9MI
Marine Pollutant:	Yes
Packing Group:	III
Limited quantity	30.00KG
Excepted quantity	E1
Environmental Hazards	Marine Pollutant
Special precautions for user:	None established
Other information	
Passenger and cargo aircraft:	Allowed.
Cargo aircraft only:	Allowed.

Transport in bulk according to Annex II of MARPOL and the IBC Code

None known.

The DOT shipping information in this section is based on a bulk container. Please review the accompanying shipping papers for the correct shipping descriptions based the size of the package. Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. During transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

15. Regulatory information**US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4)

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 311 Classifications**

None known.

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

US State Regulations**US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

Inventory Status

Australia (AICS)

All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDSL)

All substances contained in this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL) or are exempt.

China (IECSC)

All components of this product are listed on the Inventory of Existing Chemical Substances in China.

European Union (REACH)

To obtain information on the REACH compliance status of this product, please e-mail REACH@SDSInquiries.com.

Japan (ENCS)

All components are in compliance with the Chemical Substances Control Law of Japan.

Korea (ECL)

All components are in compliance in Korea.

New Zealand (NZIoC)

All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)

All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

Switzerland (SWISS)

All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

Taiwan (TCSCA)

All components of this product are listed on the Taiwan inventory.

United States (TSCA)

All substances contained in this product are listed on the TSCA inventory or are exempt.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

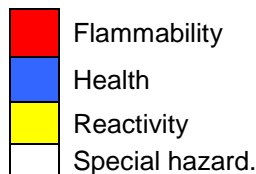
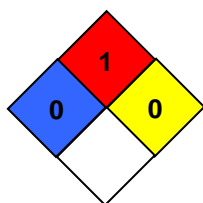
16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	0
Flammability	1
Physical Hazards	0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	01/18/2017
Version #:	2.1
Source of information:	Internal company data and other publically available resources.
Further Information:	Contact supplier (see Section 1)
Disclaimer:	As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.