



Prepared according to 29CFR 1910.1200.

1	Chemical Product and Company Identification
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Paratherm
31 Portland Road
West Conshohocken, PA 19428 USA
Tel: (610) 941-4900

Product Trade Name	PARATHERM(TM) NF
CAS Number	Confidential.
Synonyms	None.
Generic Chemical Name	Mineral oil
Product Type	Heat Transfer Fluid
Preparation/Revision Date	30 October 2014
Transportation Emergency Phone No.	FOR TRANSPORT EMERGENCY call CHEMTREC: (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)
MSDS No.	14439240-5531120-5149421-102103

2	Hazards Identification
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Appearance	Clear water white liquid.
Odor	Mild hydrocarbon
Principal Hazards	This material has no known health hazards.

See Section 11 for complete health hazard information.

3	Composition/Information on Ingredients
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Hazardous Ingredients	This material has no known hazards under applicable laws.
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4	First Aid Measures
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Eyes	Rinse cautiously with water for 20 minutes or until chemical is removed. Remove contact lenses, if present and easy to do.
Skin	Wash with soap and water. Immediately remove all contaminated clothing. If skin irritation occurs, seek medical attention. Launder contaminated clothing before reuse.
Inhalation	Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. If experiencing respiratory symptoms call a poison center or doctor.
Oral	Do NOT induce vomiting. Immediately call a poison center or doctor. Aspiration of material due to vomiting can cause chemical pneumonitis which can be fatal. If vomiting occurs naturally, the casualty should lean forward to reduce the risk of aspiration.
Additional Information	Note to physician: Treat symptomatically.

5	Fire Fighting Measures
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Flash Point	>= 149 °C, 300.2 °F ASTM D 93 (Minimum)
Extinguishing Media	CO2, dry chemical, or foam. Water can be used to cool and protect exposed material.
Firefighting Procedures	Recommend wearing self-contained breathing apparatus. Water or foam may cause frothing. Avoid solid streams of water. Use water spray. Use water to cool containers exposed to fire. Material creates a special hazard because it floats on water. Do not release chemically contaminated water into drains, soil or surface water.
Unusual Fire & Explosion Hazards	Container may rupture in a fire situation. DO NOT USE a solid stream of water. See section 10 for additional information.

6	Accidental Release Measures
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Spill 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. Shut off leak if without risk. Prevent entry into sewers and waterways. Material on floors may be slippery. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

7	Handling and Storage
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Pumping Temperature

Not determined.

Maximum Handling Temperature

Not determined.

Handling Procedures

Use with adequate ventilation. Keep containers closed when not in use. Avoid eye contact. Avoid repeated or prolonged skin contact. When handling, do not eat, drink, or smoke. Avoid drinking, tasting, swallowing or ingesting this product. Product can accumulate static charge when handled. Equipment should be grounded. Wash thoroughly after handling. Launder contaminated clothing before reuse. Empty container contains product residue which may exhibit hazards of product. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Maximum Storage Temperature

Not determined.

Storage Procedures

Store in a cool, dry, well-ventilated area. Keep container tightly closed. Do not store in open, unlabeled or mislabeled containers. Store locked up. See section 10 for incompatible materials.

Maximum Loading Temperature

Not determined.

8	Exposure Controls/Personal Protection
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Exposure Limits

None established

Other Exposure Limits

Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH TWA of 5 mg per cubic meter.

Engineering Controls

Use material in well ventilated area only. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits.

Gloves Procedures

Nitrile. Neoprene. When needed, use gloves with insulation for thermal protection. Consult clothing/glove manufacturer to determine appropriate type of glove for given situation. Gloves should always be inspected before each use and discarded if they show tears, pinholes, or signs of wear.

Eye Protection

Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.

Respiratory Protection

Use NIOSH/MSHA approved respirator with a combination organic vapor and high efficiency filter cartridge if recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.

Clothing Recommendation

Long sleeve shirt is recommended. When working with heated material, wear an insulated apron or an insulated chemical protective suit. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction. Launder contaminated clothing before reuse.

9	Physical and Chemical Properties
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Flash Point

≥ 149 °C, 300.2 °F ASTM D 93 (Minimum)

Upper Flammable Limit

Not determined.

Lower Flammable Limit

Not determined.

Autoignition Point

Not determined.

Explosion Data

Material does not have explosive properties.

Vapor Pressure

< 0.1 kPa (20 °C)
< 1.33 mBars (21 °C)

pH

Not determined.

Specific Gravity

0.85 (20 °C)

Bulk Density

Not determined.

Water Solubility

Insoluble.

Percent Solid

Not determined.

Percent Volatile

Not determined.

Volatile Organic Compound

Not determined.

Vapor Density

> 1 Air=1

Evaporation Rate

Not determined.

Odor

Mild hydrocarbon

Appearance

Clear water white liquid.

Viscosity

18.9 Centistokes (40 °C)

Odor Threshold

Not determined.

Boiling Point

> 343 °C, > 650 °F(Typical)

Pour Point Temperature

Not determined.

Melting / Freezing Point

Not determined.

The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise noted.

10	Stability and Reactivity
Stability	Material is normally stable at moderately elevated temperatures and pressures.
Decomposition Temperature	Not determined.
Incompatibility	Strong oxidizing agents.
Polymerization	Will not occur.
Thermal Decomposition	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.
Conditions to Avoid	Do not expose to excessive heat, ignition sources, or oxidizing materials.
11	Toxicological Information
-- ACUTE EXPOSURE --	
Eye Irritation	Not expected to cause eye irritation. Based on data from similar materials.
Skin Irritation	Not expected to be a primary skin irritant. Based on data from similar materials. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.
Respiratory Irritation	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Based on data from components or similar materials.
Dermal Toxicity	The LD50 in rabbits is > 2000 mg/Kg. Based on data from components or similar materials.
Inhalation Toxicity	No data available to indicate product or components may be a toxic inhalation hazard.
Oral Toxicity	The LD50 in rats is > 5000 mg/Kg. Based on data from components or similar materials. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.
Dermal Sensitization	No data available to indicate product or components may be a skin sensitizer.
Inhalation Sensitization	No data available to indicate product or components may be respiratory sensitizers.
-- CHRONIC EXPOSURE --	
Chronic Toxicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.
Carcinogenicity	This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive Toxicity	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.
Teratogenicity	No data available to indicate product or any components contained at greater than 0.1% may cause birth defects.
-- ADDITIONAL INFORMATION --	
Other	No other health hazards known.
12	Ecological Information
-- ENVIRONMENTAL TOXICITY --	
Freshwater Fish Toxicity	The acute LC50 is > 1000 mg/L based on component data.
Freshwater Invertebrates Toxicity	The acute EC50 is 100 - 1000 mg/L based on component data. Chronic effects expected at 10 - 100 mg/L based on component data.
Algal Inhibition	The acute EC50 is 100 - 1000 mg/L based on component data.
Saltwater Fish Toxicity	Not determined.
Saltwater Invertebrates Toxicity	Not determined.
Bacteria Toxicity	Not determined.
Miscellaneous Toxicity	Not determined.
-- ENVIRONMENTAL FATE --	
Biodegradation	At least 25% of the components in this product show moderate biodegradation based on OECD 301-type test data.
Bioaccumulation	There is no data available to evaluate this material for bioconcentration.
Soil Mobility	Not determined.
13	Disposal Considerations
Waste Disposal	This material, if discarded, is not a hazardous waste under RCRA Regulation 40 CFR 261. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

14	Transport Information
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ICAO/IATA I	Not regulated.
ICAO/IATA II	Not regulated.
IMDG	Not regulated.
IMDG EMS Fire	Not applicable.
IMDG EMS Spill	Not applicable.
IMDG MFAG	Not applicable.
MARPOL Annex II	Not determined.
USCG Compatibility	Not determined.
U.S. DOT Bulk	Not regulated.
DOT NAERG	Not applicable.
U.S. DOT (Intermediate)	Not regulated.
U.S. DOT Intermediate NAERG	Not applicable.
U.S. DOT Non-Bulk	Not regulated.
U.S. DOT Non-Bulk NAERG	Not applicable.
Canada	Not regulated.
Mexico	Not regulated.
Bulk Quantity	85000 KG, 187391 lbs.
Intermediate Quantity	11000 KG, 24251 lbs.
Non-Bulk Quantity	400 KG, 882 lbs.

Review classification requirements before shipping materials at elevated temperatures.

15	Regulatory Information
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-- Global Chemical Inventories --

USA	All components of this material are on the US TSCA Inventory or are exempt.
Other TSCA Reg.	None known.
EU	To obtain information on the REACH compliance status of this product, please visit Lubrizol.com/REACH , or e-mail us at REACH_MSDS_INQUIRIES@Lubrizol.com
Japan	All components are in compliance with the Chemical Substances Control Law of Japan.
Australia	All components are in compliance with chemical notification requirements in Australia.
New Zealand	All components are in compliance with chemical notification requirements in New Zealand.
Canada	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.
Switzerland	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Korea	All components are in compliance in Korea.
Philippines	All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).
China	All components of this product are listed on the Inventory of Existing Chemical Substances in China.
Taiwan	All components of this product are listed on the Taiwan inventory.

-- Other U.S. Federal Regulations --

SARA Ext. Haz. Subst.	This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances list.								
SARA Section 313	This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substance) of any chemical substances listed under SARA Section 313.								
SARA 311 Classifications	<table border="1"> <tr> <td>Acute Hazard</td><td>No</td></tr> <tr> <td>Chronic Hazard</td><td>No</td></tr> <tr> <td>Fire Hazard</td><td>No</td></tr> <tr> <td>Reactivity Hazard</td><td>No</td></tr> </table>	Acute Hazard	No	Chronic Hazard	No	Fire Hazard	No	Reactivity Hazard	No
Acute Hazard	No								
Chronic Hazard	No								
Fire Hazard	No								
Reactivity Hazard	No								
CERCLA Hazardous Substances	None known.								

-- State Regulations --

Cal. Prop. 65	This product does not intentionally contain any chemicals known by the State of California to cause cancer and/or birth defects. Moreover, we do not routinely analyze its products for impurities which may be such chemicals.
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-- Product Registrations --

U.S. Fuel Registration	Not applicable.
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PARATHERM(TM) NF

Finnish Registration Number	Not Registered
Swedish Registration Number	Not Registered
Norwegian Registration Number	Not Registered
Danish Registration Number	Not Registered
Swiss Registration Number	Not Registered
Italian Registration Number	Not Registered

-- Other / International --

Miscellaneous Regulatory Information	Not determined.
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16	Other Information
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US NFPA Codes

Health	Fire	Reactivity	Special
0	1	0	N/E

(N/E) - None established

HMIS Codes

Health	Fire	Reactivity
0	1	0

Precautionary Labels

- This material has no known health hazards.

Revision Indicators

Section: 1 Product type.	Changed: 15 July 2014
Section: 2 Appearance.	Changed: 28 March 2014
Section: 4 Inhalation first aid.	Changed: 16 October 2014
Section: 4 Skin first aid.	Changed: 12 March 2014
Section: 5 Flash point.	Changed: 7 October 2014
Section: 5 Special firefighting procedures.	Changed: 12 March 2014
Section: 8 Clothing recommendations.	Changed: 12 March 2014
Section: 8 Glove protection.	Changed: 12 March 2014
Section: 8 Ventilation procedures.	Changed: 28 March 2014
Section: 9 Appearance.	Changed: 28 March 2014
Section: 9 Boiling point.	Changed: 30 October 2014
Section: 9 Boiling point.	Changed: 7 October 2014
Section: 9 Flash point.	Changed: 7 October 2014
Section: 9 Pour point temperature.	Changed: 8 October 2014
Section: 9 Specific gravity.	Changed: 27 March 2014
Section: 9 Vapor density.	Changed: 28 March 2014
Section: 9 Vapor pressure.	Changed: 28 March 2014
Section: 9 Viscosity.	Changed: 7 October 2014
Section: 11 Inhalation toxicity.	Changed: 16 October 2014
Section: 15 SARA section 311/312.	Changed: 16 October 2014
Section: 16 HMIS codes.	Changed: 16 October 2014
Section: 16 NFPA Codes.	Changed: 16 October 2014

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