

SAFETY DATA SHEET

1. Identification

Identification

Product name: PARATHERM(TM) OR

Additional identification

Chemical name: Mineral oil

Recommended use and restriction on use

Recommended use: Not determined.

Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

Supplier

Company Name: CPI FLUID ENGINEERING
A DIV. OF THE LUBRIZOL CORPORATION
Address: 2300 JAMES SAVAGE ROAD
MIDLAND, MI 48642
US
Telephone: 989-496-3780

Emergency telephone number:

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

2. Hazard(s) identification

Hazard Classification

Health Hazards

Specific Target Organ Toxicity - Category 2
Repeated Exposure

Unknown toxicity

Acute toxicity, oral	0.0 %
Acute toxicity, dermal	0.0 %
Acute toxicity, inhalation, vapor	99.0 %
Acute toxicity, inhalation, dust or mist	98.9 %

Label Elements:

Hazard Symbol:



Signal Word: Warning

Hazard Statement: May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement:

Prevention:	Do not breathe dust or mists.
Response:	Get medical advice/attention if you feel unwell.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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

3. Composition/information on ingredients**General information:**

Chemical name	CAS number	Percent by Weight
Mineral oil	8042-47-5	90 - 100%
Alkarylamine	68411-46-1	1 - 5%
Diphenylamine	122-39-4	0.1 - 0.5%

4. First-aid measures

General information:	Get medical advice/attention if you feel unwell.
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. Get medical attention if symptoms occur. Launder contaminated clothing before reuse.
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 or Foam. Water can be used to cool and protect exposed material.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.

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.

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. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes and prolonged or repeated contact with skin. Open container in a well ventilated area. Avoid breathing vapors. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures. Use grounding and bonding connection when transferring material. In case of spills, beware of slippery floors and surfaces. Do not breathe dust/fume/gas/mist/vapors/spray. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment.

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
Mineral oil - Inhalable fraction.	TWA	5 mg/m ³	US. ACGIH Threshold Limit Values (02 2012)
Mineral oil - Mist.	REL	5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Mineral oil - Mist.	STEL	10 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Mineral oil - Mist.	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Appropriate engineering controls:

No special requirements under ordinary conditions of use and with adequate ventilation.

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:

Nitrile. Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Gloves should always be inspected before each use and discarded if they show tears, pinholes, or signs of wear. Consult clothing/glove manufacturer to determine appropriate type of glove for given situation.

Other:

No data available.

Respiratory Protection:

Use disposable dust/mist mask if the recommended exposure limit is exceeded. 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:	Colorless to white
Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Freezing point:	No data available.
Boiling Point:	> 599.9 °F (315.5 °C)
Flash Point:	> 331 °F (166 °C) (Closed Cup)
Evaporation rate:	< 1 n-butyl acetate=1
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:	< 1 torr (21.1 °C 70.0 °F)
Vapor density:	> 1
Relative density:	0.875 - 0.895 60.1 °F (15.6 °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:	No data available.
Decomposition temperature:	No data available.
Viscosity:	40 mm ² /s (100.0 °F (37.8 °C)) 7 mm ² /s (98.89 °C (210.00 °F))

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. 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:	Not classified for acute toxicity based on available data.
Dermal Product:	Not classified for acute toxicity based on available data.
Inhalation Product:	Not classified for acute toxicity based on available data.
Skin Corrosion/Irritation:	

Product: 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.
Remarks: Not classified as a primary skin irritant.

Serious Eye Damage/Eye Irritation:

Product: Remarks: Not classified as a primary eye irritant.

Respiratory sensitization:

No data available

Skin sensitization:

Mineral oil Classification: Not a skin sensitizer. (Literature) Not a skin sensitizer.

Alkarylamine Classification: Not a skin sensitizer. (Literature) Not a skin sensitizer.

Diphenylamine Classification: Not a skin sensitizer. (Literature)

Specific Target Organ Toxicity - Single Exposure:

Mineral oil If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Alkarylamine If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Diphenylamine Exposure to a high concentration of vapor or mist may be irritating.

Aspiration Hazard:

Mineral oil 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.

Other effects:

Diphenylamine Kidney Blood 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:

Alkarylamine The Ames Salmonella test for mutagenicity was negative for this product.

Diphenylamine

The Ames Salmonella test for mutagenicity was negative for this product. The mouse micronucleus and the rat hepatocyte UDS tests for genotoxicity were negative for diphenylamine.

Reproductive toxicity:

Diphenylamine

There are conflicting reports in the literature concerning the teratogenicity of diphenylamine. However, because the predominant route of exposure was oral (via gavage or diet) and relatively high dose levels were administered in the studies where positive effects were observed, it would not seem to present a workplace hazard.

Specific Target Organ Toxicity - Repeated Exposure:

Alkarylamine

Repeated overexposure may result in liver and kidney damage.
Oral: Target Organ(s): Liver, Kidney

Diphenylamine

A two year feeding study in rats and dogs of diphenylamine demonstrated liver, kidney and blood cell damage. The effect was observed at levels as low as 100 ppm. A five month feeding study in rats of 1% diphenylamine produced renal cystic disease. A dose-dependent increase in Heinz body formation was evident during a 12 week study of 5 to 1000 ppm. The no effect level was at 10 ppm.
Dermal: Target Organ(s): Liver, Kidney
Inhalation: Target Organ(s): Kidney, Liver
Oral: Target Organ(s): Liver, Kidney

12. Ecological information

Ecotoxicity

Fish

Mineral oil

LC 50 (Not reported, 96 h): > 10,000 mg/l
NOEC (Not reported, 96 h): 10,000 mg/l

Alkarylamine

LC 50 (Zebra Fish, 4 d): > 100 mg/l

Diphenylamine

LC 50 (Not reported, 2 d): 2.2 mg/l

Aquatic Invertebrates

Mineral oil

EC 50 (Water flea (Daphnia magna), 2 d): > 100 mg/l
NOEC (Water flea (Daphnia magna), 2 d): >= 100 mg/l
EC 50 (Water flea (Daphnia magna), 21 d): > 10 mg/l
NOEC (Water flea (Daphnia magna), 21 d): 10 mg/l

Alkarylamine

EC 50 (Water flea (Daphnia magna), 2 d): 51 mg/l

Diphenylamine

EC 50 (Water flea (Daphnia magna), 2 d): 0.31 mg/l

Toxicity to Aquatic Plants

Mineral oil

LC 50 (Algae (Pseudokirchneriella subcapitata), 3 d): > 100 mg/l
NOEC (Algae (Pseudokirchneriella subcapitata), 3 d): > 100 mg/l

Alkarylamine

EC 50 (Green algae (Scenedesmus quadricauda), 3 d): > 100 mg/l

Diphenylamine

EC 50 (Green algae (Selenastrum capricornutum), 3 d): 1.51 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

Alkarylamine

EC 50 (Sludge, 0.1 d): > 100 mg/l

Persistence and Degradability

Biodegradation

Mineral oil

OECD TG 301 F, 31.13 %, 28 d, Not readily degradable.

Alkarylamine

OECD TG 301 B, 1 %, 28 d, Not readily degradable.

Diphenylamine

OECD TG 301 D, 26 %, 28 d, Not readily degradable.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available

Partition Coefficient n-octanol / water (log Kow)

Diphenylamine

Log Kow: 3.4 (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

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

None known.

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. 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)****Chemical Identity**

Diphenylamine

Reportable quantity

De minimis concentration: 0.1%

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**Chronic
(Delayed)**SARA 302 Extremely Hazardous Substance****SARA 304 Emergency Release Notification****SARA 311/312 Hazardous Chemical****SARA 313 (TRI Reporting)**

This product may contain chemical(s) regulated under the Superfund Amendments and Reauthorization Act (SARA). For additional information please contact Lubrizol Customer Assistance: America(s): AmerLZAMCustomerAssistance@Lubrizol.com ; Europe: EMEAICustomerAssistance@Lubrizol.com ; Asia: APCustomerAssistance@Lubrizol.com

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 components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

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 visit Lubrizol.com/REACH, or e-mail us at REACH_MSDS_INQUIRIES@Lubrizol.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 components of this material are on the US TSCA Inventory.

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

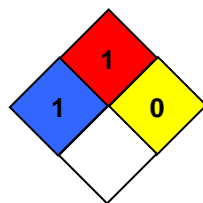
16. Other information, including date of preparation or last revision

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



	Flammability
	Health
	Reactivity
	Special hazard.

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

Issue Date:	03/05/2015
Version #:	1.0
Source of information:	Internal company data and other publically available resources.
Further Information:	Contact supplier (see Section 1)
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