

# SAFETY DATA SHEET

## 1. Identification

### Identification

**Product name:** PARATHERM™ CR

### Additional identification

**Chemical name:** Diethylbenzenes

### 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

#### Physical Hazards

Flammable liquids Category 3

#### Health Hazards

Skin Corrosion/Irritation Category 2

Serious Eye Damage/Eye Irritation Category 1

Specific Target Organ Toxicity - Single Exposure Category 3

Aspiration Hazard Category 1

#### Unknown toxicity

Acute toxicity, oral 0.0 %

Acute toxicity, dermal 0.0 %

Acute toxicity, inhalation, vapor 99.9 %

Acute toxicity, inhalation, dust or mist 100.0 %

### Label Elements:

**Hazard Symbol:**



**Signal Word:**

Danger

**Hazard Statement:**

Flammable liquid and vapour.  
Causes skin irritation.  
Causes serious eye damage.  
May cause respiratory irritation.  
May be fatal if swallowed and enters airways.

**Precautionary Statements:**

**Prevention:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Take off contaminated clothing. In case of fire: Use CO<sub>2</sub>, dry chemical or foam to extinguish. Water can be used to cool and protect exposed material.

**Storage:**

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

**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
Diethylbenzenes	25340-17-4	60 - 70%
Dibutyl ether	142-96-1	30 - 40%
++ 1,3-Diethyl benzene	141-93-5	40 - 50%
++ Diethylbenzene	105-05-5	10 - 20%
++ Diethylbenzene	135-01-3	1 - 5%

++ The listed components are subcomponents of the hazardous ingredients listed above.

#### 4. First-aid measures

- Ingestion:** Do NOT induce vomiting. 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. Rinse mouth. Immediately call a POISON CENTER/doctor.
- Inhalation:** Remove exposed person to fresh air if adverse effects are observed.
- Skin Contact:** Take off immediately all contaminated clothing. Take off contaminated clothing and wash before re-use. Wash skin thoroughly with soap and water. If skin irritation occurs, get medical attention.
- Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

#### 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:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** CO<sub>2</sub>, 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:** Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations. Vapors may travel considerable distance to a source of ignition and flash back. Water may cause splattering. Container may rupture on heating. 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:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. 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. Keep upwind. Keep unauthorized personnel away. See Section 8 of the SDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** In case of leakage, eliminate all ignition sources. 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. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

**Environmental Precautions:** Avoid release to the environment. Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**7. Handling and storage**

**Precautions for safe handling:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Ground and bond container and receiving equipment. Use non-sparking tools. Do not get in eyes. Avoid contact with skin. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Launder contaminated clothing before reuse. Avoid environmental contamination.

**Maximum Handling Temperature:** Not determined.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep cool. Store in a well-ventilated place. Do not store near potential sources of ignition.

**Maximum Storage Temperature:** Not determined.

## 8. Exposure controls/personal protection

### Control Parameters:

#### Occupational Exposure Limits

None of the components have assigned exposure limits.

#### Appropriate engineering controls:

Use explosion-proof ventilation equipment to stay below exposure limits.

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

#### General information:

Use explosion-proof ventilation equipment. Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) 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.

#### Eye/face protection:

Wear tight-fitting goggles or face shield.

#### Skin Protection

##### Hand Protection:

Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water.

##### Other:

Wear apron or protective clothing in case of contact. Do not wear rings, watches or similar apparel that could entrap the material.

#### Respiratory Protection:

A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.

#### Hygiene measures:

Observe good industrial hygiene practices. Do not get in eyes. Avoid contact with skin. Wash contaminated clothing before reuse. When using do not smoke. Wash hands before breaks and immediately after handling the product.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Colorless to white
<b>Odor:</b>	Sweet
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Freezing point:</b>	No data available.
<b>Boiling Point:</b>	358 °F (181 °C)

<b>Flash Point:</b>	> 102 °F (39 °C) (ASTM D 93 ( Pensky-Martens Closed Cup))
<b>Evaporation rate:</b>	< 1 n-butyl acetate=1
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	< 10 torr (21 °C 70 °F)
<b>Vapor density:</b>	> 1
<b>Relative density:</b>	0.831 - 0.837 60.1 °F (15.6 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Insoluble in water
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	< 0.8 mm <sup>2</sup> /s ( 104 °F (40 °C) )

## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Will not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames.
<b>Incompatible Materials:</b>	None known, avoid contact with reactive chemicals.
<b>Hazardous Decomposition Products:</b>	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

<b>Inhalation:</b>	No data available.
<b>Ingestion:</b>	May be harmful if swallowed.
<b>Skin Contact:</b>	Causes skin irritation.
<b>Eye contact:</b>	Causes serious eye damage.

### Information on toxicological effects

#### Acute toxicity

##### Oral

Product: ATEmix > 2,000 mg/kg.

**Dermal**

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

**Inhalation**

Product: High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor.  
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: Causes skin irritation.

**Serious Eye Damage/Eye Irritation:**

Product: Remarks: Causes serious eye damage.

**Respiratory sensitization:**

No data available

**Skin sensitization:**

No data available

**Specific Target Organ Toxicity - Single Exposure:**

++ 1,3-Diethyl benzene Nose, throat and lung irritant.

Dibutyl ether May cause respiratory irritation.

**Aspiration Hazard:**

Product: May be fatal if swallowed and enters airways.

**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:**

Diethylbenzenes This material has not exhibited mutagenic or genotoxic potential in laboratory tests.

**Reproductive toxicity:**

No data available

**Specific Target Organ Toxicity - Repeated Exposure:**

Diethylbenzenes Prolonged or repeated exposures may result in adverse effects on the liver, kidney and/or nervous system.  
Unknown: Target Organ(s): Kidney, Liver, Central nervous system.

++ Diethylbenzene Oral: Target Organ(s): Liver

**12. Ecological information**

**Ecotoxicity**

**Fish**

Diethylbenzenes LC 50 (Rainbow Trout, 4 h): 0.673 mg/l

**Aquatic Invertebrates**

Diethylbenzenes EC 50 (Water flea (Daphnia magna), 2 d): 2.01 mg/l

Dibutyl ether EC 50 (Water flea (Daphnia magna), 2 d): 26 mg/l

++ Diethylbenzene EC 50 (Water flea (Daphnia magna), 1 d): 32 mg/l  
EC 50 (Water flea (Daphnia magna), 21 d): 2.4 mg/l

**Toxicity to Aquatic Plants**

Diethylbenzenes LC 50 (Green algae (selenastrum capricomutum), 3 h): 1.21 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**

No data available

**Persistence and Degradability**

**Biodegradation**

Diethylbenzenes Miscellaneous, 4.7 %, 28 d, Not readily degradable.

++ Diethylbenzene 1.6 %, Not readily degradable.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

No data available

**Partition Coefficient n-octanol / water (log Kow)**

++ Diethylbenzene Log Kow: 0.1



**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 containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, spark or other sources of ignition.

**Contaminated Packaging:** Container packaging may exhibit hazards.

### 14. Transport information

#### DOT

UN Number:	NA 1993
UN Proper Shipping Name:	Combustible liquid, n.o.s.
Transport Hazard Class(es)	
Class:	CBL
Label(s):	NONE
Packing Group:	III
Marine Pollutant:	Yes
Special precautions for user:	None established
Reportable quantity	Dibutyl ether

#### IMDG

UN Number:	UN 3295
UN Proper Shipping Name:	HYDROCARBONS, LIQUID, N.O.S.
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-D
Packing Group:	III
Marine Pollutant:	Yes
Limited quantity	5.00L
Excepted quantity	E1
Special precautions for user:	None established

**IATA**

UN Number:	UN 3295
Proper Shipping Name:	Hydrocarbons, liquid, n.o.s.
Transport Hazard Class(es):	
Class:	3
Label(s):	3
Marine Pollutant:	Yes
Packing Group:	III
Limited quantity	10.00L
Exempted 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.

<b>15. Regulatory information</b>
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**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)**

<b>Chemical Identity</b>	<b>CAS number</b>	<b>Reportable quantity</b>	<b>Calculated<sup>1</sup></b>
n-Butyl alcohol	71-36-3	5000 lbs	> 50000 lbs > 22680 kgs

<sup>1</sup>This is the amount product/material required to be released before CERCLA reporting is required.

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

- Flammable (gases, aerosols, liquids, or solids)
- Skin Corrosion or Irritation
- Serious eye damage or eye irritation
- Specific target organ toxicity (single or repeated exposure)
- Aspiration Hazard

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>CAS number</u>	<u>Percent by Weight</u>	<u>Reportable quantity</u>
n-Butyl alcohol	71-36-3	720.0 PPM	5000 lbs

**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.*

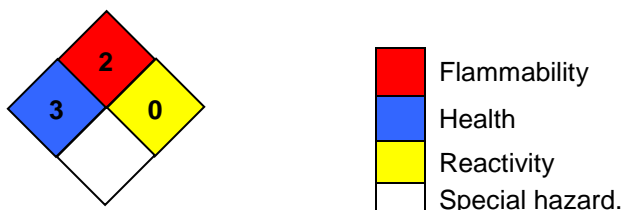
**16. Other information, including date of preparation or last revision**

**HMIS Hazard ID**

<b>Health</b>	*	3
<b>Flammability</b>	2	
<b>Physical Hazards</b>	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:** 02/19/2018
- Version #:** 3.0
- 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.