SAFETY DATA SHEET

1. Identification

Identification
Product name: PARATHERM™ GLT

Additional identification
Chemical name: Heavy alkylate

Recommended use and restriction on use
Recommended use: Heat Transfer Fluid
Restrictions on use: Lubricating oils; Hydraulic fluid additive

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:

<table>
<thead>
<tr>
<th>Hazard Symbol:</th>
<th>No symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Word:</td>
<td>No signal word.</td>
</tr>
<tr>
<td>Hazard Statement:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Precautionary Statement:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Other hazards which do not result in GHS classification:</td>
<td>None identified.</td>
</tr>
</tbody>
</table>

3. Composition/information on ingredients

General information: The components are not hazardous or are below required disclosure limits.

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. Get medical attention if symptoms occur.

Inhalation: Remove exposed person to fresh air if adverse effects are observed.

Skin Contact: Take off contaminated clothing and wash before re-use. Wash with soap and water. If skin irritation occurs, get medical attention.

Eye contact: Flush thoroughly with water. If irritation occurs, get medical assistance. Remove contact lenses, if present and easy to do. Continue rinsing.

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: 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: 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
None of the components have assigned exposure limits.

Other exposure limits

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long chain alkylbenzene</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

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: Suitable gloves can be recommended by the glove supplier.

Other: No data available.

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.

9. Physical and chemical properties
Appearance

- Physical state: liquid
- Form: liquid
- Color: Yellow
- Odor: Mild
- Odor threshold: No data available.
- pH: No data available.
- Freezing point: No data available.
- Boiling Point: > 649 °F (343 °C)
- Flash Point: 340 °F (171 °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: > 1 torr (20 °C 68 °F)
- Vapor density: > 1
- Relative density: 0.874 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: 18 - 23 mm2/s (104 °F (40 °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: Not determined.
- 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: Causes mild skin irritation.

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

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 mild skin irritation.

Serious Eye Damage/Eye Irritation:
Product: Remarks: Not classified as a primary eye irritant.

Respiratory sensitization: No data available

Skin sensitization: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Aspiration Hazard: No data available

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


Germ Cell Mutagenicity: No data available
Reproductive toxicity: No data available

**Specific Target Organ Toxicity - Repeated Exposure:**
No data available

### 12. Ecological information

<table>
<thead>
<tr>
<th>Ecotoxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>No data available</td>
</tr>
<tr>
<td>Aquatic Invertebrates</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Aquatic Plants</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to soil dwelling organisms</td>
<td>No data available</td>
</tr>
<tr>
<td>Sediment Toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Terrestrial Plants</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Above-Ground Organisms</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to microorganisms</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### Persistence and Degradability

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

| Bioaccumulative Potential Bioconcentration Factor (BCF) | No data available |

| Partition Coefficient n-octanol / water (log Kow) | No data available |

#### 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.

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 on 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 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 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 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**

<table>
<thead>
<tr>
<th>Health</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazards</td>
<td>0</td>
</tr>
</tbody>
</table>

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

**NFPA Hazard ID**

0 1 0 0

Flammability
Health
Reactivity
Special hazard.

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

**Issue Date:** 03/24/2016
**Version #:** 2.0
**Source of information:** Internal company data and other publically available resources.
**Further Information:** Contact supplier (see Section 1)
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