Safety Data Sheet (SDS)
OSHA HazCom Standard 29 CFR 1910.1200(g), Rev. 2012 and GHS Rev 03

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier
- Product form: Mixture
- Trade name: Duratherm 450
- Product code: Duratherm 450
- Recommended application: Heat Transfer Fluid

Details of the supplier of the safety data sheet
- Duratherm
- 5268 Highway Avenue, Jacksonville, FL 32254
- Telephone: 1-905-984-6677
- Qualified person's e-mail address: info@durathermfluids.com

Emergency telephone number:
- Tel.: 1-905-984-6677

SECTION 2: Hazards identification

Classification of the substance or mixture
- Asp. Haz 1 – H304

Label elements
- GHS label element: This product is classified and labeled according to the Globally Harmonized System (GHS)
- Hazard pictograms: GHS08
- Signal word: Danger

Hazard Statements:
- H304: May be fatal if swallowed and enters airways
- Precautionary Statements:
  - P301/310/331: IF SWALLOWED. Immediately call a POISON CONTROL CENTRE. Do not induce vomiting

Classification system
- NFPA Rating: Health: 0, Fire:1, Reactivity:0
- HMIS Rating: Health: 0, Fire:1, Reactivity:0

Other hazards
- Other Hazards: None known

SECTION 3: Composition/information on ingredients

- Chemical Characterization: Mixture
- Classification according to GHS: Not classified
- Dangerous Components: Hydrocarbon, <22 cSt
### SECTION 4: First aid measures

**Description of first aid measures**

- **Inhalation**: Supply person with fresh air and consult doctor according to symptoms.
- **Skin contact**: Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare) consult a doctor.
- **Eye contact**: Remove contact lenses. Wash thoroughly for several minutes using copious water. Seek medical help if necessary.
- **Ingestion**: Rinse the mouth thoroughly with water. Do not induce vomiting. Consult doctor immediately.

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

### SECTION 5: Firefighting measures

- **Suitable extinguishing media**: Water jet spray/foam/CO2/dry extinguisher
- **Unsuitable extinguishing media**: High volume water jet

**Special hazards arising from the substance or mixture**

In case of fire the following can develop: Oxides of carbon, toxic gases

**Advice for firefighters**

In case of fire and/or explosion do not breathe fume use protective respirator with independent air supply. According to size of fire use full protection, if necessary. Cool container at risk with water. Dispose of contaminated extinction water according to official regulations.

### SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

- **Personal precautions protective equipment**: Not required
- **Environmental precautions**:
  - If leakage occurs, dam spillage and resolve leaks as soon as possible.
  - Prevent fluid from entering drainage systems. If fluid accidently enters drainage system alert authorities

**Methods and material for containment and cleaning up**

Soak up with absorbent material (e.g. universal binding agent, oil-dry, sand, diatomaceous earth) and dispose in accordance with local regulations

**Reference to other sections**

See section 7 for information on safe handling, see Section 8 for information on personal protection equipment, see Section 13 for disposal information

### SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

- **Precautions for safe handling**: No special measures required
- **Information about protection against explosions or fires**: No special measures required
- **Requirements to be met by storerooms**: Store in a cool dry place
General guidelines: Ensure good ventilation; avoid contact with eyes or skin

Notes on general hygiene measures at the workplace
General hygiene measures for the handling of chemicals are applicable
Wash hands before breaks and at end of work
Keep away from food, drink and animal feed
Remove contaminated clothing and protective equipment before entering areas in which food is consumed

SECTION 8: Exposure controls/personal protection

Control parameters
No further data; see Section 7

Exposure controls:
Appropriate engineering controls: Contain with oil absorbing material (oil dry). Remove oil absorbing material and dispose lawfully

Personal protective equipment:
Hand protection: PVC, neoprene, or nitrite gloves. Gloves should be replaced immediately if damaged or worn
Eye protection: Eye protection necessary where liquid could be splashed or sprayed
Materials for protective clothing: PVC, neoprene, or nitrite gloves
Hand protection: In case of repeated or prolonged contact wear gloves and use moisturizing skin cream
Respiratory protection: In areas with poor ventilation or in the case of likely misting use appropriate respiratory equipment
Environmental exposure controls: See section 12
Consumer exposure controls: PVC gloves. Neoprene or nitrile rubber gloves
Other: Wash hands thoroughly after exposure. Do not eat drink or smoke during use. Wash contaminated clothing before use

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties
Physical state: Liquid
Color: Light yellow, clear
Odor: Characteristic
Odor threshold: Not determined
pH-value: Not determined
Melting point/freezing point: Not determined
Initial boiling point and boiling range: >430°F (>221°C)
Flash Point: >290°F (>143°C)
Evaporation Rate: NA
Flammability (solid, gas) NA
Lower explosive limit: Not determined
Upper explosive limit: Not determined
Density @ 20°C: 0.83-0.86 g/ml
Bulk density: NA
Solubility(ies): Not determined
Water solubility: Insoluble
Partition coefficient (n-octanol/water) Not determined
Auto-ignition temperature: Not determined
Decomposition temperature: Not determined
Viscosity: 4.25 cSt @ 40°C
Explosive properties NA
Oxidizing properties: Not determined

Other information
SECTION 10: Stability and reactivity

Reactivity: Stable under normal conditions
Chemical Stability: Stable under normal conditions
Possibility of hazardous reactions: No dangerous reactions known
Conditions to avoid: See section 7
Incompatible materials: Strong oxidizing agents, acids
Hazardous decomposition products: No dangerous decomposition products known

SECTION 11: Toxicological information

Possibly more information on health effects, see Section 2 (classification).

Acute toxicity: Not Classified

<table>
<thead>
<tr>
<th>DURATHERM 450</th>
<th>Toxicity/effect</th>
<th>Endpoint</th>
<th>Value</th>
<th>Unit</th>
<th>Organism</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute toxicity, by oral route:</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>mg/kg</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute toxicity, by dermal route:</td>
<td>LD50</td>
<td>&gt;2000</td>
<td>mg/kg</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute toxicity, by inhalation:</td>
<td>LD50</td>
<td>&gt;2500</td>
<td>mg/kg/4hr</td>
<td>Rat</td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified – Unlikely to cause harm to harm to skin with brief contact, long term contact may cause dermatitis

Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: Not classified
Repeated does toxicity: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Other information: No further information available

SECTION 12: Ecological information

<table>
<thead>
<tr>
<th>DURATHERM 450</th>
<th>Toxicity/effect</th>
<th>Endpoint</th>
<th>Value</th>
<th>Unit</th>
<th>Organism</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Toxicity to fish:</td>
<td>LD50</td>
<td>&gt;100,000</td>
<td>mg/kg/96hr</td>
<td>Trout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Toxicity to daphnia:</td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Toxicity to algae:</td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Persistence and degradability:</td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mobility in soil:</td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Results of PBT and vPvB assessment:</td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other adverse effects:</td>
<td></td>
<td></td>
<td></td>
<td>n.d.a.</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 13: Disposal considerations

Waste treatment methods
For the substance / mixture / residual amounts
Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of.

For contaminated packing material
Pay attention to local and national official regulations
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.
Do not perforate, cut up or weld un-cleaned container.

SECTION 14: Transport information

Transport statements
UN number
DOT, ADN, IMDG, IATA: Non-regulated material
ADR: Non-regulated material
UN proper shipping name:
DOT, ADR, ADN, IMDG, IATA: Non-regulated material
Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA: Non-regulated material
Packaging Group
DOT, ADR, IMDG, IATA: Non-regulated material
Environmental hazards
Marine pollutant: No
Special precautions for users: None
Transport in bulk according to Annex II: Not applicable
of MARPOL 73/78 and IB Code UN
“Model Regulation”

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
SARA Hazards: No SARA Hazards
TSCA (Toxic Substances Control Act): Hydrocarbon - <22 cSt – CAS# 72623-86-0
All other chemical substances in this mixture are included on or are exempted from listing on the TSCA Inventory for Chemical Substances
Proposition 65: Based on available information this product does not contain any components or chemicals currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65

Labeling requirements
GHS label element: This product is classified and labeled according to the Globally Harmonized System
Hazard pictograms: GHS08
Signal word Danger

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Identification</th>
<th>Classification according to GHS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon</td>
<td>CAS #: 72623-86-0</td>
<td>GHS08 Asp. Haz 1 – H304</td>
<td>90-95%</td>
</tr>
<tr>
<td>Proprietary Additives</td>
<td>Trade Secret</td>
<td>Not classified</td>
<td>5-10%</td>
</tr>
</tbody>
</table>
SECTION 16: Other information

These details refer to the product as it is delivered.

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

Any abbreviations and acronyms used in this document:

<table>
<thead>
<tr>
<th>AC</th>
<th>Article Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>acc., acc. to</td>
<td>according, according to</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises Dangereuses par Route</td>
</tr>
<tr>
<td>Art., Art. no.</td>
<td>Article number</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)</td>
</tr>
<tr>
<td>BOD</td>
<td>Biochemical oxygen demand</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service</td>
</tr>
<tr>
<td>CEC</td>
<td>Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants</td>
</tr>
<tr>
<td>CLP</td>
<td>Classification, Labeling and Packaging (REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures)</td>
</tr>
<tr>
<td>CTFA</td>
<td>Cosmetic, Toiletry, and Fragrance Association</td>
</tr>
<tr>
<td>e.g.</td>
<td>for example (abbreviation of Latin ‘exempli gratia’), for instance</td>
</tr>
<tr>
<td>EC</td>
<td>European Community</td>
</tr>
<tr>
<td>ECHA</td>
<td>European Chemicals Agency</td>
</tr>
<tr>
<td>EEA</td>
<td>European Economic Area</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EN</td>
<td>European Norms</td>
</tr>
<tr>
<td>EPA</td>
<td>United States Environmental Protection Agency (United States of America)</td>
</tr>
<tr>
<td>ERC</td>
<td>Environmental Release Categories</td>
</tr>
<tr>
<td>ES</td>
<td>Exposure scenario</td>
</tr>
<tr>
<td>Fax.</td>
<td>Fax number</td>
</tr>
<tr>
<td>gen.</td>
<td>general</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Material Identification System</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBC</td>
<td>Intermediate Bulk Container</td>
</tr>
<tr>
<td>IBC (Code)</td>
<td>International Bulk Chemical (Code)</td>
</tr>
<tr>
<td>IC</td>
<td>Inhibitory concentration</td>
</tr>
<tr>
<td>LC</td>
<td>lethal concentration</td>
</tr>
<tr>
<td>LC50</td>
<td>lethal concentration 50 percent kill</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose, 50% kill</td>
</tr>
<tr>
<td>n.a.</td>
<td>not applicable</td>
</tr>
<tr>
<td>n.av.</td>
<td>not available</td>
</tr>
<tr>
<td>n.c.</td>
<td>not checked</td>
</tr>
<tr>
<td>n.d.a.</td>
<td>no data available</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>ppm</td>
<td>parts per million</td>
</tr>
<tr>
<td>UN RTDG</td>
<td>United Nations Recommendations on the Transport of Dangerous Goods</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile organic compounds</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>wwt</td>
<td>wet weight</td>
</tr>
</tbody>
</table>

These statements were made by:

Duratherm

5268 Highway Avenue, Jacksonville, FL 32254, Tel.: 1-905-984-6677, info@durathermfluids.com