

Material Safety Data Sheet

according to 1907/2006 EC, Article 31

Duratherm 630 High Temperature Heat Transfer Fluid

Revision Date: 01/2011
Revision #: 1

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

| | |
|----------------------------|--|
| Product Name | Duratherm 630 - High Temperature Heat Transfer Fluid |
| Company Name | Duratherm Extended Life Fluids P.O. Box 563, Lewiston, NY 14092 |
| Telephone | 800-446-4910 |
| Fax | 905-984-6684 |
| Website | www.heat-transfer-fluid.com |
| Emergency telephone number | 800-446-4910 |

2. HAZARDS IDENTIFICATION

| | |
|--------------------|---|
| Physical State | Viscous Liquid |
| Odor | Very slight hydrocarbon odor |
| HMIS (Canada) | Not controlled under HMIS (Canada) |
| OSHA/HCS Status | This material is not considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910.1200). Refer to and retain this MSDS for safety and handling information |
| Emergency Overview | No specific hazard |
| Routes of Enter | Dermal contact, eye contact, inhalation, ingestion |

Potential Acute Health Effect

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|------------|--|
| Inhalation | No known significant effects or critical hazards |
| Ingestion | No known significant effects or critical hazards |
| Skin | No known significant effects or critical hazards |
| Eyes | No known significant effects or critical hazards |

Potential Chronic Health Effect

| | |
|---|--|
| Chronic Effects | No known significant effects or critical hazards |
| Carcinogenicity | Not listed as a carcinogenic by OSHA, NTP, or IARC |
| Mutagenicity | No known significant effects or critical hazards |
| Teratogenicity | No known significant effects or critical hazards |
| Development Effects | No known significant effects or critical hazards |
| Fertility Effects | No known significant effects or critical hazards |
| Medical Conditions Aggravated by Overexposure | Repeated or prolonged exposure with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis |

3. COMPOSITION / INFORMATION ON INGREDIENTS

| | |
|-------------|--|
| Description | This product does not contain any substances classified as hazardous to health |
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4. FIRST AID MEASURES

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| Skin contact | Wash affected areas thoroughly with soap and water. Wash contaminated clothing before reuse. See medical attention if irritation or symptoms persist |
| Eye contact | Flush with clean, lukewarm water (low pressure) occasionally lifting eyelids. Seek physician assessment if eyes are inflamed. |
| Inhalation | Avoid breathing oil mists. Remove to fresh air. Give artificial respiration if not breathing. Oxygen may be given by qualified personnel if breathing is difficult. Get medical attention. |
| Ingestion | Do not induce vomiting. Force fluid. Has laxative effect. |

5. FIRE FIGHTING MEASURES

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| Extinguishing media | For small fires: Carbon dioxide (CO ₂) Dry chemical. Foam. Water spray. |
| Fire hazards | LOW FIRE HAZARD - Do not cut, drill, or weld empty containers |
| Protective equipment | Wear suitable respiratory equipment when necessary. |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions | Ensure adequate ventilation of the working area. |
| Environmental precautions | Do not allow product to enter drains. Prevent further spillage if safe. |
| Clean up method | Absorb with inert, absorbent material. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water. |

7. HANDLING AND STORAGE

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| Handling | Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing. |
| Storage | Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers. Store at a maximum of 40°C. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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|------------------------------|--|
| Engineering measures | Ensure adequate ventilation of the working area. |
| Occupational exposure contd. | Keep away from food, drink and animal feed. |
| Respiratory protection | Normally not necessary. If mist is generated, wear approved organic vapor respirator suitable for oil mist areas with sufficient oxygen. |
| Skin/Hand Protection | Normally none required, for direct contact of more than 2 hours, PVC, Viton, or Nitrile gloves are recommended. |
| Eye protection | Normally none required, chemical goggles if splashing is likely or high pressure systems are used. |
| Ventilation | General ventilation |
| Exposure limits | <u>Practically non-toxic</u> ACGIH TL (United States). Notes: (Oil Mist) TWA: 5mg/m ³ , 8 hour(s) / STEL: 10 mg/m ³ 15 minute(s) |
| Protective equipment | Protect clothing from contact with the product. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|------------------------|------------------------------|
| Description | Liquid |
| Color | Clear liquid |
| Odor | Very slight hydrocarbon odor |
| Boiling point | >570°F (>298°C) |
| Flash point | >430°F (>221°C) |
| Vapor pressure | <0.003 kPa @ 25°C |
| Specific Gravity | 0.84 - 0.92 |
| Volatilities, % Volume | 0% |
| Solubility in water | Negligible |
| Evaporation rate | Nil |
| Viscosity @40 °C (cSt) | Varies depending on grade |

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10. STABILITY AND REACTIVITY

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|--------------------------|---|
| Stability | Stable under normal conditions. |
| Hazardous polymerization | Will not occur |
| Materials to avoid | Strong oxidizing agents. |
| Decomposition products | Analogous compounds evolve, carbon monoxide, carbon dioxide, and other undefined fragments. |

11. TOXICOLOGICAL INFORMATION

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| General | Acute Toxicity (LD ₅₀): LD ₅₀ (oral, rabbit): > 5000 mg/kg LD ₅₀ (dermal, rat): > 2000 mg/kg LD ₅₀ (inhalative, rat): > 2500 mg/kg/4h |
| Other | In case of inhalation: no data available Skin contact: no data available Eye contact: no data available Ingestion: no data available Irritation: skin and eye irritating Sensitization: no sensitizing effects known Subacute toxicity: Intensive or prolonged exposition. Repeated or prolonged exposure with spray or mist may product chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis. Chronic Toxicity: not available Subchronic Exposure: not available Specific symptoms observed in animal studies: no data available CMR Effects: Carcinogenity: no data available Reproductive toxicity: no data available Mutagenicity: no data available Summarized evaluation of the CMR properties: not available |

12. ECOLOGICAL INFORMATION

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|------------------------|--|
| Ecological Information | Do not allow to enter sewer/soil/surface or ground water Ecological Information: LC50 (Rainbow Trout): > 100 000 MG/1/96 h Mobility: no data available Persistence and biodegradation: not readily biodegradable Bioaccumulation potential: no data available Results of PBT assessments: no data available Other adverse side effects: no data available |
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13. DISPOSAL CONSIDERATIONS

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| General information | Used product must be disposed of in accordance with Federal, State, and Local environmental control regulations. Incineration is preferred. DO NOT HEAT OF CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH. |
|---------------------|---|

14. TRANSPORTATION INFORMATION

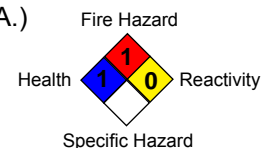
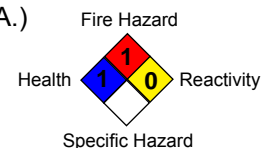
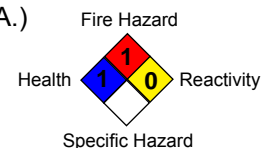
| | |
|---------------------|--|
| Technical Name | Paraffinic Hydrocarbon |
| D.O.T. hazard class | Not regulated |
| U.N. N.A. # | Not regulated |
| Product label | Duratherm 630 - Duratherm High Temperature Heat Transfer Fluid |

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15. REGULATORY INFORMATION

| | |
|-------------------|--|
| EU Risk phrases | NSH - No Significant Hazard This product is not classified according to EU regulations |
| HMIS | Not controlled under HMIS (Canada) |
| EC Classification | Not classified as dangerous under EC classifications |
| EC Symbols | Not classified |
| OSHA status | Non Hazardous under 29 CFR 1910.1200 |
| TSCA status | N/A |
| RCRA status | If discarded in its purchased form this product would not be a hazardous waste either by listing or characteristic. However it is the responsibility of the product user to determine at the time of disposal, whether the material being disposed of is a hazardous waste (40 CFR 261.20-24). |
| Other Information | Environmental Protection Act 1990 (as amended). Health and Safety at Work Act 1974. Consumers Protection Act 1987. Control of Pollution Act 1974. Environmental Act 1995. Factories Act 1961. Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations. Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. Control of Substances Hazardous to Health Regulations 1994 (as amended). Road Traffic (Carriage of Dangerous Substances in Packages) Regulations. Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations. Road Traffic (Carriage of Dangerous Substances in Road Tankers in Tank Containers) Regulations. Road Traffic (Training of Drivers of Vehicles Carrying Dangerous Goods) Regulations. Reporting of Injuries, Diseases and Dangerous. Other Regulations. Health and Safety (First Aid) Regulations 1981. Personal Protective Equipment (EC Directive) Regulations 1992. Personal Protective Equipment at Work Regulations 1992. |

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|---|--|---|---------------|---|-------------|---|---------------------|---|---|--|---|--|
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| HMIS status | <table style="width: 100%; border: none;"> <tr> <td style="border: none;"> <table border="1" style="border-collapse: collapse; width: 150px;"> <tr><td style="padding: 2px;">Health Hazard</td><td style="text-align: center; padding: 2px;">①</td></tr> <tr><td style="padding: 2px;">Fire Hazard</td><td style="text-align: center; padding: 2px;">①</td></tr> <tr><td style="padding: 2px;">Reactivity</td><td style="text-align: center; padding: 2px;">①</td></tr> <tr><td style="padding: 2px;">Personal Protection</td><td style="text-align: center; padding: 2px;">B</td></tr> </table> </td> <td style="border: none; text-align: center; padding: 10px;"> <p>NFPA (U.S.A.)</p>  <p>Health Fire Hazard Reactivity</p> <p style="margin-left: 100px;">Specific Hazard</p> </td> <td style="border: none; padding: 10px;"> <p>Rating</p> <p>0= Insignificant, 1=Slight, 2=Moderate, 3= High, 4= Extreme</p> </td> </tr> </table> | <table border="1" style="border-collapse: collapse; width: 150px;"> <tr><td style="padding: 2px;">Health Hazard</td><td style="text-align: center; padding: 2px;">①</td></tr> <tr><td style="padding: 2px;">Fire Hazard</td><td style="text-align: center; padding: 2px;">①</td></tr> <tr><td style="padding: 2px;">Reactivity</td><td style="text-align: center; padding: 2px;">①</td></tr> <tr><td style="padding: 2px;">Personal Protection</td><td style="text-align: center; padding: 2px;">B</td></tr> </table> | Health Hazard | ① | Fire Hazard | ① | Reactivity | ① | Personal Protection | B | <p>NFPA (U.S.A.)</p>  <p>Health Fire Hazard Reactivity</p> <p style="margin-left: 100px;">Specific Hazard</p> | <p>Rating</p> <p>0= Insignificant, 1=Slight, 2=Moderate, 3= High, 4= Extreme</p> |
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| Reactivity | ① | | | | | | | | | | | |
| Personal Protection | B | | | | | | | | | | | |

16. OTHER INFORMATION

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| Further information | This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Duratherm Extended Life Fluids. The data on this sheet related only to the specific material designed herein. Duratherm Extended Life Fluids assumes no legal responsibility for the use or reliance upon these data. |
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