

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
P.O Box 563, Lewiston, NY, 14092
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

3.1 Substance

Not applicable

3.2 Mixture

Chemical Characterization: Mixture
Classification according to GHS: GHS08
Dangerous Components: Hydrocarbon, <22 cSt



| Component Name | Identification | Classification according to GHS | % |
|-----------------------|--------------------------------------|-------------------------------------|------------------|
| Hydrocarbon | CAS# 64742-54-7 CAS #: 64747-47-8 | GHS08 GHS08 Asp. Haz 1 – H304 | 55-80% 20-45% |
| Proprietary Additives | Trade Secret | Not classified | 5-10% |

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 accidentally 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 nitrile 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 nitrile 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 ASTM D92 (COC): | >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

Miscibility:

Not determined



Fat solubility / solvent: Not determined
 Conductivity: Not determined
 Surface tension: Not determined
 Solvents content: Not applicable

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

| DURATHERM 450 | | | | | |
|----------------------------------|----------|-------|---------------|----------|-------|
| Toxicity/effect | Endpoint | Value | Unit | Organism | Notes |
| Acute toxicity, by oral route: | LD50 | >5000 | mg/kg | Rat | |
| Acute toxicity, by dermal route: | LD50 | >2000 | mg/kg | Rat | |
| Acute toxicity, by inhalation: | LD50 | >2500 | mg/kg/ 4hr | Rat | |

Skin corrosion/irritation: Not classified – Unlikely to cause 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

| DURATHERM 450 | | | | | |
|-------------------------------------|----------|----------|----------------|----------|--------|
| Toxicity/effect | Endpoint | Value | Unit | Organism | Notes |
| Toxicity to fish: | LD50 | >100,000 | mg/kg /96hr | Trout | |
| Toxicity to daphnia: | | | | | n.d.a. |
| Toxicity to algae: | | | | | n.d.a. |
| Persistence and degradability: | | | | | n.d.a. |
| Bio-accumulative potential: | | | | | n.d.a. |
| Mobility in soil: | | | | | n.d.a. |
| Results of PBT and vPvB assessment: | | | | | n.d.a. |
| Other adverse effects: | | | | | n.d.a. |

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.

Untampered 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:

of MARPOL 73/78 and IB Code UN

"Model Regulation" Not applicable

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): All 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

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:

| | |
|----------------|--|
| AC | Article Categories |
| acc., acc. to | according, according to |
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| Art., Art. no. | Article number |
| ATE | Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP) |
| BOD | Biochemical oxygen demand |
| CAS | Chemical Abstracts Service |
| CEC | Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants |



| | |
|------------|--|
| CLP | Classification, Labeling and Packaging (REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures) |
| CTFA | Cosmetic, Toiletry, and Fragrance Association |
| e.g. | for example (abbreviation of Latin 'exempli gratia'), for instance |
| EC | European Community |
| ECHA | European Chemicals Agency |
| EEA | European Economic Area |
| EEC | European Economic Community |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EN | European Norms |
| EPA | United States Environmental Protection Agency (United States of America) |
| ERC | Environmental Release Categories |
| ES | Exposure scenario |
| Fax. | Fax number |
| gen. | general |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| HMIS | Hazardous Material Identification System |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IBC | Intermediate Bulk Container |
| IBC (Code) | International Bulk Chemical (Code) |
| IC | Inhibitory concentration |
| LC | lethal concentration |
| LC50 | lethal concentration 50 percent kill |
| LD50 | Lethal Dose, 50% kill |
| n.a. | not applicable |
| n.av. | not available |
| n.c. | not checked |
| n.d.a. | no data available |
| NFPA | National Fire Protection Association |
| ppm | parts per million |
| UN RTDG | United Nations Recommendations on the Transport of Dangerous Goods |
| VOC | Volatile organic compounds |
| WHO | World Health Organization |
| wwt | wet weight |

These statements were made by:
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