

Safety data sheet according to Regulation (EC) No 1907/2006

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

1.1 Product identifier

Product form: Mixture
Product name: Duratherm 450
Product code: Duratherm 450
Product group: Heat Transfer Fluid

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture:

Heat Transfer Fluid

Uses advised against:

No information available at present

1.3 Details of the supplier of the safety data sheet

Duratherm
PO Box 563, Lewiston, NY 14092
Telephone: +1-905-984-6677
Qualified person's e-mail address: info@durathermfluids.com

1.4 Emergency telephone

Telephone number of the company in case of emergencies:

Telephone: +1-905-984-6677

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008

Aspiration hazard, Category 1 (Asp. TOX 1, H304)

2.2 Label elements

2.2.1 Labeling according to Regulation (EC) 1272/2008

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

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

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	CAS # / Reach Registration # / EC #	Classification according to Regulation (EC) 1272/2008	%
Distillates (petroleum), hydrotreated heavy paraffinic	CAS # 64742-54-7 / 01-2119484627-25-XXXX / EC: 265-157-1	Not Classified	55-80%
White mineral oil (petroleum)	CAS #: 8042-47-5 / 01-2119487078-27-XXXX / EC: 232-455-8	GHS08 Asp. Haz 1 – H304	20-45%
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	CAS # 68411-46-1 / 01-2119491299-23-XXXX / EC: 270-128-1	Aquatic Chronic 3 H412	0.2% -1.5%

SECTION 4: First aid measures

4.1 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.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation

May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition of the product

Symptoms/injuries after skin contact

Unlikely to cause harm to skin on brief or occasional contact. But prolonged or repeated exposure may lead to dermatitis.

Symptoms/injuries after eye contact

Unlikely to cause more than transient stinging or redness if accidental eye contact occurs

Symptoms/injuries after ingestion

Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhea

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

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

5.3 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

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.
Avoid contact with eyes or skin
If applicable, caution - risk of slipping

6.2 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

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

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.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid contact with eyes or skin.
Do not carry cleaning cloths soaked in product in trouser pockets.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.

7.1.2 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.

7.2 Conditions for safe storage, including any incompatibilities

Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Under all circumstances prevent penetration into the soil.
Store in a well-ventilated place.
Store in a dry place.
Store cool

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No information available at present.

8.2 Exposure controls

Appropriate engineering controls:

Contain with oil absorbing material (oil dry). Remove oil absorbing material and dispose lawfully

Personal protective equipment:

Hand: 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:

Normally not required in areas with adequate ventilation. 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

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Light yellow, clear
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	>221 ^o C
Flash Point:	>143 ^o C
Evaporation Rate:	NA
Flammability (solid, gas)	NA
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Density @ 20 ^o 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 ^o C
Explosive properties	NA
Oxidizing properties:	Not determined

9.2 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

10.1 Reactivity

Not to be expected

10.2 Possibility of hazardous reactions

Not to be expected

10.3 Conditions to avoid

See section 7.

10.4 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

10.5 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

Possibly more information on health effects, see Section 2.1 (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	Trout	

			/96hr		
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

13.1 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.

EC disposal code no:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)

13 03 08 synthetic insulating and heat transmission oils

Recommendation:

Pay attention to local and national official regulations

E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

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

14. 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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

These details refer to the product as it is delivered.

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 and Other Fluids
CLP	Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
COD	Chemical oxygen demand
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
EPA	United States Environmental Protection Agency (United States of America)
ERC	Environmental Release Categories
ES	Exposure scenario
etc.	et cetera
EU	European Union
Fax.	Fax number
gen.	general
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
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
OECD	Organization for Economic Co-operation and Development
PBT	persistent, bio accumulative and toxic
ppm	parts per million
PROC	Process category
PTFE	Polytetrafluorethylene
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals)
SVHC	Substances of Very High Concern

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DURATHERM 450



Tel.	Telephone
UN RTDG	United Nations Recommendations on the Transport of Dangerous Goods
VOC	Volatile organic compounds
vPvB	very persistent and very bio accumulative
WHO	World Health Organization
wwt	wet weight

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.

No responsibility.

These statements were made by:

Duratherm

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Qualified person's e-mail address: info@durathermfluids.com