



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g), Rev. 2012 and GHS Rev 08

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

#### Product identifier

Product form: Mixture  
Trade name: Duratherm G WS-46  
Product code: Duratherm G WS-46  
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

#### Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Acute Toxicity – Category 4 (Inhalation mist)

#### Label elements

GHS label elements:



Signal word: **WARNING!**

#### Hazards

H332 Harmful if inhaled

#### Precautionary statements

##### Prevention

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves.

##### Response

IF ON SKIN: Wash with plenty of soap and water.  
Get medical advice/ attention if you feel unwell.  
If skin irritation or rash occurs: Get medical advice/ attention.  
Wash contaminated clothing before reuse.

##### Disposal

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Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

Other Hazards: None known

### SECTION 3: Composition/information on ingredients

#### 3.1 Substance

Not applicable

#### 3.2 Mixture

**Chemical nature:** Mixture

This product is a mixture

Component Name	Identification	%
Polyalkylene Glycol	CAS #: 9038-95-3	95-99%
N-Phenyl-1-Naphthylamine	CAS # 90-30-2	<1%
Amine	Trade secret	<1%

### SECTION 4: First aid measures

#### Description of first aid measures

**Eye contact** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.

**Skin contact** Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse

**Ingestion** Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.



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## SECTION 5: Firefighting measures

**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Unsuitable extinguishing media:** Do not use direct water stream. May spread fire.

### Special hazards arising from the substance or mixture

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Nitrogen oxides.

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Liquid mist of this product can burn. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

### Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal precautions protective equipment:

See s.8

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:

Avoid inhalation of mists/vapors

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

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**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

### Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields).

### Skin protection

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Physical state:	Liquid
Color:	Light amber, clear
Odor:	Characteristic
Odor threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Flash Point ASTM D92 (COC):	275 °C (527 °F)
Evaporation Rate:	NA
Flammability (solid, gas)	NA
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Density @ 20°C:	1.0496 g/cm <sup>3</sup>
Bulk density:	NA
Solubility(ies):	Not determined
Water solubility:	100 % <i>Visual</i> Approximately
Partition coefficient (n-octanol/water)	Not determined
Decomposition temperature:	Not determined
Viscosity:	46 cSt @ 40°C
Explosive properties	NA
Oxidizing properties:	Not determined

### Other information

Miscibility: Not determined



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Fat solubility / solvent:

Not determined

Conductivity:

Not determined

Surface tension:

Not determined

Solvents content:

Not applicable

## SECTION 10: Stability and reactivity

**Reactivity:** no data available

**Chemical stability:** Thermally stable at typical use temperatures.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Alcohols. Ethers. Hydrocarbons. Ketones. Organic acids. Polymer fragments.

## SECTION 11: Toxicological information

### Acute toxicity

#### Acute oral toxicity

Expected to have low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

CAS # 9038-95-3 LD50, Rat, > 2,000 mg/kg

CAS #90-30-2 LD50, Rat, > 1,625 mg/kg

#### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts. Possibly more information on health effects, see Section 2 (classification).

As product: The dermal LD50 has not been determined.

Based on information for component(s):

CAS #90-30-2 LD50, Rabbit, > 5,000 mg/kg Estimated.

#### Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous.

As product: The LC50 has not been determined.

Based on information for component(s):

CAS 9038-95-3, LC50 Rat, >1 to < 5 mg/l (4h)

#### Skin corrosion/irritation

Brief contact is essentially non-irritating to skin.

#### Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Corneal injury is unlikely.

#### Sensitization

Not expected to be a skin or respiratory sensitizer

#### Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

#### Specific Target Organ Systemic Toxicity (Repeated Exposure)

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Mist may cause irritation of upper respiratory tract (nose and throat) and lungs.

**Carcinogenicity**

Not expected to be a carcinogen

**Teratogenicity**

Not expected to cause birth defects

**Reproductive toxicity**

Not expected to be a reproductive toxin

**Mutagenicity**

Not expected to be cause genetic mutation

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

## SECTION 12: Ecological information

**Toxicity**

**Acute toxicity to fish**

The product has not been tested but is expected to have a low order of acute aquatic toxicity.

Components:

CAS #9038-95-3 LC50 >100mg/l (96h)

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 48 Hour, 25 mg/l, OECD Test Guideline 202 or Equivalent

**Toxicity to microorganisms**

DEV-L2 : > 1,000 mg/l

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

**Persistence and degradability**

**Biodegradability:** > 60% carbon dioxide formation (OECD 301B)

**Biological oxygen demand (BOD):** >60% BOD of the ThOD (>28 days) (OECD 301 F) Readily biodegradable

## SECTION 13: Disposal considerations

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

## SECTION 14: Transport information

**DOT** Not regulated for transport

**Classification for SEA transport (IMO-IMDG):** Not regulated for transport



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**Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):** Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## SECTION 15: Regulatory information

**OSHA Hazard Communication Standard** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**  
Acute Health Hazard

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**  
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:**  
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.  
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

## SECTION 16: Other information

### Hazard Rating System

#### NFPA Hazard codes:

Health : 2 Fire: 1 Reactivity: 0 Special:

#### HMIS III rating

Health: 2 Flammability: 1 Physical hazard:0

These statements were made by:  
Duratherm, P.O Box 563, Lewiston, NY, 14092, Tel.: 1-905-984-6677, info@durathermfluids.com