

Safety Data Sheet
According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
OSHA GHS

D005069AA

Revision: 4/23/2015

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

- **1.1 Product identifier**
- **Trade name:** Dowtherm SR-1 Premix 300650
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Water treatment
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Opti Temp
1500 International Drive
Traverse City, MI 49686
Tel: (231) 946.2931
E-mail: Information@OptiTemp.com
- **1.4 Emergency telephone number:**
(231) 946-2931

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).



health hazard

STOT RE 2 H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.



Acute Tox. 4 H302 Harmful if swallowed.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R22-48/22: Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if swallowed.

- **Information concerning particular hazards for human and environment:** Not applicable.
- **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 percent of the mixture consists of component(s) of unknown toxicity

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is additionally classified and labelled according to the Globally Harmonized System within the United States (GHS).

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The product is classified and labelled according to the CLP regulation.

• **Hazard pictograms**



GHS07 GHS08

• **Signal word** Warning

• **Hazard-determining components of labelling:**

ethanediol

• **Hazard statements**

H302 Harmful if swallowed.

H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

• **Precautionary statements**

P260 Do not breathe mist/vapours/spray.

P264 Wash thoroughly after handling.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Hazard description:**

• **WHMIS-symbols:**

D2A - Very toxic material causing other toxic effects



• **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 0

• **HMIS-ratings (scale 0 - 4)**



Health = *2

Fire = 1

Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

• **HMIS Long Term Health Hazard Substances**

None of the ingredients are listed.

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

• **PBT:** Not applicable.

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· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1	ethanediol	 Xn R22-48/22  STOT RE 2, H373  Acute Tox. 4, H302	50-100%
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· **Additional information:**

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.
For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

· **After inhalation:**

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

· **After skin contact:**

Immediately remove any clothing soiled by the product.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation is experienced, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

Headache

Coughing

Dizziness

Acidosis

Cramp

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

Disorientation

· **Hazards**

Harmful if swallowed.

May cause drowsiness or dizziness.

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May cause damage to organs.

Danger of cerebral oedema.

Danger of convulsion.

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

Medical supervision for at least 48 hours.

Monitor circulation, possible shock treatment.

SECTION 5: Firefighting measures

• **5.1 Extinguishing media**

• **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

• **For safety reasons unsuitable extinguishing agents:** None.

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

Formation of toxic gases is possible during heating or in case of fire.

• **5.3 Advice for firefighters**

• **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

• **Additional information** Use large quantities of foam as it is partially destroyed by the product.

SECTION 6: Accidental release measures

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

Use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

• **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

• **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Send for recovery or disposal in suitable receptacles.

• **6.4 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

• **7.1 Precautions for safe handling**

Prevent formation of aerosols.

Use only in well ventilated areas.

Avoid splashes or spray in enclosed areas.

• **Information about fire - and explosion protection:** No special measures required.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Provide ventilation for receptacles.
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with oxidising and acidic materials.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

107-21-1 ethanediol

IOELV (EU) Short-term value: 104 mg/m³, 40 ppm
Long-term value: 52 mg/m³, 20 ppm
Skin

TLV (USA) Long-term value: NIC-10* mg/m³
Ceiling limit: (100) mg/m³
(H);*as inhalable fraction and vapor

EL (Canada) Short-term value: 20** mg/m³
Long-term value: 10** mg/m³
Ceiling limit: 100* mg/m³, 50*** ppm
*Aerosol; **Particulate; ***Vapour

EV (Canada) Ceiling limit: 100 mg/m³

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.
Avoid close or long term contact with the skin.

· **Respiratory protection:**

Not required under normal conditions of use.
Use suitable respiratory protective device when high concentrations are present.

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Use suitable respiratory protective device when aerosol or mist is formed.

For spills, respiratory protection may be advisable.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

PVC gloves

Neoprene gloves

Nitrile rubber, NBR

· **Eye protection:**



Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No further relevant information available.

· **Risk management measures**

See Section 7 for additional information.

No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:

Liquid

Colour:

Colourless

· **Odour:**

Mild

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

Melting point/Melting range:

Not Determined.

Boiling point/Boiling range:

Undetermined.

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- **Flash point:** 111 °C (232 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Auto/Self-ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Self-igniting:** Not determined.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure:** Not determined.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Partly miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions**

Reacts with strong acids and alkali.
Reacts with strong oxidising agents.
Toxic fumes may be released if heated above the decomposition point.
- **10.4 Conditions to avoid** Store away from oxidising agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide
Phosphorus oxides (e.g. P₂O₅)

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SECTION 11: Toxicological information

• 11.1 Information on toxicological effects

• Acute toxicity:

• LD/LC50 values relevant for classification:

107-21-1 ethanediol

Oral LD50 5840 mg/kg (rat)

Dermal LD50 9530 mg/kg (rabbit)

• Primary irritant effect:

• **on the skin:** Slight irritant effect on skin and mucous membranes.

• **on the eye:** Slight irritant effect on eyes.

• **Sensitisation:** No sensitising effects known.

• Subacute to chronic toxicity:

May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

• Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Toxic and/or corrosive effects may be delayed up to 24 hours.

• Acute effects (acute toxicity, irritation and corrosivity):

Harmful if swallowed.

Vapours have narcotic effect.

• Repeated dose toxicity:

May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

SECTION 12: Ecological information

• 12.1 Toxicity

• **Aquatic toxicity:** No further relevant information available.

• **12.2 Persistence and degradability** biodegradable

• **12.3 Bioaccumulative potential** No further relevant information available.

• **12.4 Mobility in soil** No further relevant information available.

• Additional ecological information:

• General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

• 12.5 Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

• **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number

DOT, ADR, ADN, IMDG, IATA

Not Regulated

14.2 UN proper shipping name

DOT, ADR, ADN, IMDG, IATA

Not Regulated

14.3 Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

Not Regulated

14.4 Packing group

DOT, ADR, IMDG, IATA

Not Regulated

14.5 Environmental hazards:

Marine pollutant:

No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

UN "Model Regulation":

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SECTION 15: Regulatory information

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

United States (USA)

SARA

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

107-21-1 ethanediol

TSCA (Toxic Substances Control Act):

All ingredients are listed.

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• **Proposition 65 (California):**

• **Chemicals known to cause cancer:**

None of the ingredients is listed.

• **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

• **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

• **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

• **Carcinogenic Categories**

• **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

• **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

• **TLV (Threshold Limit Value established by ACGIH)**

107-21-1 | ethanediol

A4

• **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

• **Canada**

• **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

• **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients are listed.

• **Canadian Ingredient Disclosure list (limit 1%)**

107-21-1 | ethanediol

• **Other regulations, limitations and prohibitive regulations**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

• **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

• **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Relevant phrases**

H302 Harmful if swallowed.

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H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

R22 Harmful if swallowed.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

• **Sources**

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