



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

**Product name:** DOWTHERM™ T Heat Transfer Fluid

**Issue Date:** 06/07/2018

**Print Date:** 07/17/2018

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. IDENTIFICATION

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**Product name:** DOWTHERM™ T Heat Transfer Fluid

### **Recommended use of the chemical and restrictions on use**

**Identified uses:** Heat transfer fluid. Intended as a heat transfer fluid for closed-loop systems. For industrial use only. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

### **COMPANY IDENTIFICATION**

THE DOW CHEMICAL COMPANY  
2030 DOW CENTER  
MIDLAND MI 48674-0000  
UNITED STATES

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

### **EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

**Local Emergency Contact:** 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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### **Hazard classification**

GHS classification in accordance with 29 CFR 1910.1200  
Not a hazardous substance or mixture.

### **Other hazards**

No data available

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Synonyms:** Benzene, C14-30-alkyl derivs.

This product is a substance.

**Component**

**CASRN**

**Concentration**

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Benzene, C14-30-alkyl derivatives

68855-24-3

100.0%

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## 4. FIRST AID MEASURES

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### Description of first aid measures

#### General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Wash off with plenty of water.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

#### Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## 5. FIREFIGHTING MEASURES

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**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: Hydrocarbons. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** 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. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

**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). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep upwind of spill. Ventilate area of leak or spill. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Small spills: Absorb with materials such as: Non-combustible material. Collect in suitable and properly labeled containers. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

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**7. HANDLING AND STORAGE**

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**Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

**Conditions for safe storage:** Do not store in: Opened or unlabeled containers. Store away from incompatible materials. See STABILITY AND REACTIVITY section. Avoid contact with air (oxygen). Store in tightly closed container. See Section 10 for more specific information. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

**Storage stability**

**Shelf life: Use within 60 Month**

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

### 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 when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. 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:** Wear clean, body-covering clothing.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	Liquid.
Color	Yellow
Odor	Odorless
Odor Threshold	Odorless
pH	Not applicable
Melting point/range	Not applicable to liquids
Freezing point	< -40 °C (< -40 °F) <i>Literature</i> Pour point
Boiling point (760 mmHg)	> 320 °C (> 608 °F) <i>ASTM D86</i> (@ 1 atmosphere)
Flash point	<b>closed cup</b> > 170 °C (> 338 °F) <i>ASTM D 93</i>

Evaporation Rate (Butyl Acetate = 1)	< 0.1 <i>Estimated.</i>
Flammability (solid, gas)	Not applicable to liquids
Lower explosion limit	Not determined
Upper explosion limit	Not determined
Vapor Pressure	< 0.01 mmHg at 20 °C (68 °F) <i>Measured</i>
Relative Vapor Density (air = 1)	Not determined
Relative Density (water = 1)	0.86 - 0.89 at 15 °C (59 °F) <i>Literature</i>
Water solubility	0.0001 % <i>Literature</i>
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	375 °C (707 °F) <i>ASTM D2155</i>
Decomposition temperature	No test data available
Kinematic Viscosity	12 - 27 mm <sup>2</sup> /s at 40 °C (104 °F) <i>ASTM D7042</i>
Explosive properties	No data available
Oxidizing properties	No data available
Molecular weight	318 g/mol <i>Literature</i>

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** No data available

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

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

**Conditions to avoid:** Avoid temperatures above 310 °C  
Avoid contact with air (oxygen). Exposure to elevated temperatures can cause product to decompose.

**Incompatible materials:** Avoid contact with oxidizing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

LD50, Rat, > 15,800 mg/kg

#### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rabbit, > 7,940 mg/kg

**Acute inhalation toxicity**

At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material may cause respiratory irritation and other effects. Excessive exposure to solvent(s) may cause respiratory irritation and central nervous system depression. Signs and symptoms of excessive exposure may include: Increased respiratory rate. Headache. Dizziness. Incoordination. Nausea and/or vomiting. Loss of appetite. Unconsciousness. The LC50 has not been determined.

**Skin corrosion/irritation**

Prolonged contact may cause moderate skin irritation with local redness.

**Serious eye damage/eye irritation**

May cause slight eye irritation.

**Sensitization**

For skin sensitization:

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant information found.

**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)**

In animals, effects have been reported on the following organs:

Central nervous system.

**Carcinogenicity**

No relevant data found.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

No relevant data found.

**Mutagenicity**

No relevant data found.

**Aspiration Hazard**

Based on available information, aspiration hazard could not be determined.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Benzene, C14-30-alkyl derivatives**

**Acute inhalation toxicity**

The LC50 has not been determined.

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## 12. ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

### Toxicity

#### Acute toxicity to aquatic invertebrates

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

EC50, Daphnia magna (Water flea), 48 Hour, 600 mg/l

### Persistence and degradability

**Biodegradability:** Biodegradation may occur under aerobic conditions (in the presence of oxygen).

### Bioaccumulative potential

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

### Mobility in soil

No relevant data found.

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## 13. DISPOSAL CONSIDERATIONS

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**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: Recycler. Reclaimer. Incinerator or other thermal destruction device.

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## 14. TRANSPORT INFORMATION

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### DOT

Not regulated for transport

### Classification for SEA transport (IMO-IMDG):

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

Not regulated for transport  
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.

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**15. REGULATORY INFORMATION**

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

No SARA Hazards

**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:**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**United States TSCA Inventory (TSCA)**

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.

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**16. OTHER INFORMATION**

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**Hazard Rating System****NFPA**

Health	Flammability	Instability
1	1	0

**Revision**

Identification Number: 74886 / A001 / Issue Date: 06/07/2018 / Version: 8.0



Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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