



# Material Safety Data Sheet

## The Dow Chemical Company

**Product Name:** DOW TERMICO(TM) 2000 20 psi Slope D Tapered Roof Insulation

**Issue Date:** 06/26/2009

**Print Date:** 26 Jun 2009

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.

## 1. Product and Company Identification

### Product Name

DOW TERMICO(TM) 2000 20 psi Slope D Tapered Roof Insulation

### COMPANY IDENTIFICATION

The Dow Chemical Company  
2030 Willard H. Dow Center  
Midland, MI 48674  
USA

Customer Information Number:

800-258-2436

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:**

989-636-4400

**Local Emergency Contact:**

989-636-4400

## 2. Hazards Identification

### Emergency Overview

**Color:** White to off-white

**Physical State:** Solid.

**Odor:** Very slight

**Hazards of product:**

CAUTION! May cause skin irritation.

### OSHA Hazard Communication Standard

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

### Potential Health Effects

**Eye Contact:** Solid or dust may cause irritation or corneal injury due to mechanical action.

**Skin Contact:** Prolonged contact may cause skin irritation with local redness. Mechanical injury only. May cause itching.

**Skin Absorption:** No adverse effects anticipated by skin absorption.

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**Inhalation:** Vapors are unlikely due to physical properties. Dust may cause irritation to upper respiratory tract (nose and throat). Fumes/vapors released during thermal operations such as hot wire cutting may cause respiratory irritation.

**Ingestion:** Swallowing is unlikely because of the physical state. Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause choking if swallowed.

**Effects of Repeated Exposure:** Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs.

### 3. Composition Information

Component	CAS #	Amount
Polyisocyanurate Foam	Not applicable	> 60.0 - < 80.0 %
Pentane	109-66-0	<= 5.0 %
Carbon black	1333-86-4	<= 2.0 %
Glass, oxide, chemicals	65997-17-3	<= 5.0 %

### 4. First-aid measures

**Eye Contact:** Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

**Skin Contact:** Wash skin with plenty of water.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Ingestion:** If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

**Notes to Physician:** May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

**Medical Conditions Aggravated by Exposure:** Repeated excessive exposure may aggravate preexisting lung disease.

**Emergency Personnel Protection:** 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.

### 5. Fire Fighting Measures

**Extinguishing Media:** Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone.

**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.

**Unusual Fire and Explosion Hazards:** When product is stored in closed containers, a flammable atmosphere can develop. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This plastic foam product is combustible and should be protected from flames and other high heat sources. For more information, contact Dow. Dense smoke is emitted when burned without sufficient oxygen.

**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. In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Combustion products may include and are not limited to: Nitrogen oxides. Combustion products may include trace amounts of: Hydrogen cyanide.

## 6. Accidental Release Measures

**Steps to be Taken if Material is Released or Spilled:** Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

**Personal Precautions:** 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.

## 7. Handling and Storage

### Handling

**General Handling:** Avoid contact with skin and clothing. Avoid breathing dust. Wash thoroughly after handling. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

### Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. Flammable vapors may accumulate in some storage situations.

## 8. Exposure Controls / Personal Protection

### Exposure Limits

Component	List	Type	Value
Pentane	ACGIH	TWA	600 ppm
	OSHA Table Z-1	PEL	2,950 mg/m3
			1,000 ppm

Although some of the additives used in this product may have exposure guidelines, these additives are encapsulated in the product and no exposure would be expected under normal handling conditions.

### Personal Protection

**Eye/Face Protection:** Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

**Skin Protection:** Wear clean, body-covering clothing.

**Hand protection:** Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

**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. When respiratory protection is required for certain operations, including but not limited to saw, router or hot-wire cutting, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**Ingestion:** No precautions necessary due to the physical properties of the material.

### Engineering Controls

**Ventilation:** 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.

## 9. Physical and Chemical Properties

<b>Physical State</b>	Solid.
<b>Color</b>	White to off-white
<b>Odor</b>	Very slight
<b>Odor Threshold</b>	No test data available
<b>Flash Point - Closed Cup</b>	<i>Vendor</i> Not applicable
<b>Flammability (solid, gas)</b>	No
<b>Flammable Limits In Air</b>	<b>Lower:</b> <i>Vendor</i> Not applicable <b>Upper:</b> <i>Vendor</i> Not applicable
<b>Autoignition Temperature</b>	<i>Vendor</i> Not applicable
<b>Vapor Pressure</b>	<i>Vendor</i> Not applicable
<b>Boiling Point (760 mmHg)</b>	<i>Vendor</i> Not applicable.
<b>Vapor Density (air = 1)</b>	<i>Vendor</i> Not applicable
<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	< 1 <i>Vendor</i>
<b>Freezing Point</b>	<i>Vendor</i> Not applicable
<b>Melting Point</b>	121 °C (250 °F) <i>Vendor</i>
<b>Solubility in water (by weight)</b>	<i>Vendor</i> Not applicable
<b>pH</b>	<i>Vendor</i> Not applicable
<b>Decomposition Temperature</b>	No test data available
<b>Evaporation Rate (Butyl Acetate = 1)</b>	<i>Vendor</i> Not applicable
<b>Kinematic Viscosity</b>	<i>Vendor</i> Not applicable

## 10. Stability and Reactivity

### Stability/Instability

Thermally stable at typical use temperatures.

**Conditions to Avoid:** Avoid temperatures above 121 °C (250 °F). Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.

**Incompatible Materials:** Avoid contact with: Strong oxidizers.

### Hazardous Polymerization

Will not occur.

### Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

## 11. Toxicological Information

### Acute Toxicity

#### Ingestion

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

#### Skin Absorption

As product. The dermal LD50 has not been determined.

**Repeated Dose Toxicity**

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

**Chronic Toxicity and Carcinogenicity**

IARC's evaluation of data on continuous filament fiberglass is that there is inadequate evidence of carcinogenicity in animals and in humans. IARC's classification was based primarily on animal studies involving routes of administration (intratracheal, intrapleural, and intraperitoneal) which have limited relevance to typical exposures anticipated in industrial settings.

**Developmental Toxicity**

As product. No relevant information found.

**Reproductive Toxicity**

As product. No relevant information found.

**Genetic Toxicology**

As product. No relevant information found.

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## 12. Ecological Information

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### ENVIRONMENTAL FATE

**Movement & Partitioning**

In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float. No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

**Persistence and Degradability**

Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

**ECOTOXICITY**

Not expected to be acutely toxic, but may cause adverse effects by physical/mechanical means.

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## 13. Disposal Considerations

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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. Waste water treatment system. Landfill.

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## 14. Transport Information

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**DOT Non-Bulk**

NOT REGULATED

**DOT Bulk**

NOT REGULATED

**IMDG**

NOT REGULATED

**ICAO/IATA**

NOT REGULATED

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. 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.*

**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**

Immediate (Acute) Health Hazard Yes  
Delayed (Chronic) Health Hazard No  
Fire Hazard Yes  
Reactive Hazard No  
Sudden Release of Pressure Hazard No

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Formaldehyde	50-00-0	< 0.1 %

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:**

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Glass, oxide, chemicals	65997-17-3	<= 5.0 %
Pentane	109-66-0	<= 5.0 %
Carbon black	1333-86-4	<= 2.0 %

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:**

The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Formaldehyde	50-00-0	< 0.1 %

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103**

This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Pentane	109-66-0	<= 5.0 %
Formaldehyde	50-00-0	< 0.1 %

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Glass, oxide, chemicals	65997-17-3	5.0%
Carbon black	1333-86-4	<= 2.0 %
Formaldehyde	50-00-0	< 0.1 %

**US. Toxic Substances Control Act**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

**CEPA - Domestic Substances List (DSL)**

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

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**16. Other Information**

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**Revision**

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

**Legend**

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

*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.*