

# Material Safety Data Sheet

Revision Date: 02-15-2011

Product Code: 70613

## I. PRODUCT AND COMPANY IDENTIFICATION

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**Product Name:** PERMATHANE TOP COAT WHITE  
**Product Code:** 70613  
**Document ID:** M70613  
**Company:** NEOGARD® - a Division of JONES-BLAIR® Company  
2728 Empire Central  
Dallas, TX 75235  
1-214-353-1600

**Revision Number:** 3  
**Prior Version Date:** 10-29-2008  
**Chemical Family:** Urethane Coating  
**Intended use:** Roof Coating, Urethane  
**Emergency Contact:** ChemTrec Center  
**Emergency Phone:** 1-800-424-9300  
**International:** 703-527-3887

## II. HAZARDS IDENTIFICATION

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**EMERGENCY OVERVIEW:** **DANGER!**  
Combustible liquid and vapor.  
Causes skin irritation.  
Causes eye irritation.  
Harmful if inhaled.  
Vapor and spray mist harmful. Causes nose and throat irritation. Overexposure may cause lung damage. May cause allergic skin and respiratory reaction. Effects may be permanent.

**Routes of Entry:**

- Inhalation
- Ingestion
- Skin contact
- Eye contact

**Target Organs Potentially Affected by Exposure:**

- Respiratory Tract
- Skin
- Central nervous system
- Eyes
- Lungs
- Liver
- Kidneys

**Medical Conditions Aggravated by Exposure:**

- Skin allergies.
- Individuals with lung or breathing problems or prior reaction to isocyanates must not be exposed to vapor or spray mist.
- Respiratory disorders, including but not limited to asthma and bronchitis.
- Eye disorders.
- Lung disease
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### Immediate (Acute) Health Effects by Route of Exposure:

**Inhalation Irritation:** Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.

**Inhalation Toxicity:** Vapor harmful. May affect the brain or nervous system causing dizziness, headache or nausea.

**Skin Contact:** Can cause moderate skin irritation. Sensitizer. Avoid exposure. If sensitized, repeated exposures will result in irritation, reddening, and rashes even for very low exposures.

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**Skin Absorption:** May cause allergic skin reaction.  
May be harmful if absorbed through skin.  
**Eye Contact:** Causes eye irritation.  
**Ingestion Toxicity:** Harmful if swallowed.

## Long-Term (Chronic) Health Effects:

**Carcinogenicity:** Contains Titanium Dioxide which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence with respect to humans and sufficient evidence in experimental animals.  
Possible cancer hazard. Contains toluene diisocyanate which may cause cancer based on animal data. (Risk of cancer depends on duration and level of exposure.)

**Inhalation:** Isocyanate vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Exposure well above the TLV may lead to generally reversible bronchitis, bronchial spasm and pulmonary edema. Repeated overexposure causes sensitization in some individuals resulting in asthma-like symptoms on subsequent exposures below the TLV.  
Persons with preexisting bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack.  
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**Skin Contact:** Prolonged contact may cause an allergic skin reaction.

## III. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	%	CAS #
Polymer of TDI	10 - 30	53272-20-1
Polyisocyanate Resin	10 - 30	9057-91-4
Calcium carbonate	10 - 30	471-34-1
Titanium dioxide	7 - 13	13463-67-7
Stoddard solvent	3 - 7	8052-41-3
Butyl carbitol acetate	3 - 7	124-17-4
Fumed Silica (Particles not otherwise regulated)	1 - 5	67762-90-7
(d)-Limonene	1 - 5	5989-27-5
Toluene diisocyanate	0.1 - 1	26471-62-5

## IV. FIRST-AID MEASURES

**Inhalation:** Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If breathing difficulty persists or occurs later, consult a physician and have MSDS available.

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

**Skin Contact:** Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists. Thoroughly wash or discard clothing and shoes before reuse.

**Ingestion:** No hazard in normal industrial use. Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

## V. FIRE FIGHTING MEASURES

### Flammability Summary: Extinguishing Media:

### Combustible liquid and vapor.

Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid.

### Fire and/or Explosion Hazards:

Vapors may be ignited by sparks, flames or other sources of ignition if

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material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back. Container may explode in heat of fire. Empty containers that retain product residue (liquid, solid/sludge, or vapor) can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury or death.

**Fire Fighting Methods and Protection:** Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment.

**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide, Hydrogen cyanide, Nitrogen containing gases, Hydrocarbons, Toxic fumes, Toxic gases, Isocyanates, Isocyanic Acid

**Flash Point (°F/°C):** 109 / 43  
**Autoignition Temperature (°F/°C):** 439.0 / 226.0  
**Lower Flammable/Explosive Limit, % in air:** 0.8  
**Upper Flammable/Explosive Limit, % in air:** 10.7

## VI. ACCIDENTAL RELEASE MEASURES

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**Personal Precautions and Equipment:** Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section VIII of this MSDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

**Methods for Clean-up:** Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Dike with suitable absorbent material. Gather and store in a sealed container pending disposal.

## VII. HANDLING AND STORAGE

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**Handling Technical Measures and Precautions:** Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Wash thoroughly after handling. Do not get in eyes, on skin and clothing.

**Storage Technical Measures and Conditions:** Store in a cool dry place. Keep container(s) closed. Keep away from sources of ignition.

## VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Engineering Measures:** Local exhaust ventilation or other engineering controls may be required when handling or using this product to avoid overexposure. Engineering controls must be designed to meet the OSHA chemical specific standard in 29 CFR 1910.

**Respiratory Protection:** General or local exhaust ventilation is the preferred means of protection. In cases where ventilation is inadequate, respiratory protection may be required to avoid overexposure. Follow respirator manufacturer's directions for respirator use. For poorly ventilated areas

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or during spray application use NIOSH approved supplied air respirator unless air monitoring demonstrates vapor/mist levels below applicable limits. When monomeric isocyanate concentrations are below 0.05 ppm (10 times the 8 hour TWA exposure limit), an appropriate combination organic vapor and particulate respirator (NIOSH approved) may be appropriate. An end-of-service-life Indicator (ESLI) or a change schedule is mandatory.

**Eye Protection:** Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available.

**Skin Protection:** Avoid all skin contact by covering as much of the exposed skin area as possible with appropriate clothing to prevent skin contact. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Clothing suitable to prevent skin contact. Wear chemical resistant gloves.

## Control Parameters:

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH STEL</u>	<u>OSHA PEL-TWA</u>
Calcium carbonate			15 mg/m <sup>3</sup> TWA total dust; 5mg/m <sup>3</sup> TWA Respirable Dust
Titanium dioxide	10 mg/m <sup>3</sup> TWA		15 mg/m <sup>3</sup> TWA (total dust)
Stoddard solvent	100 ppm TWA; 572 mg/m <sup>3</sup> TWA		500 ppm TWA; 2900 mg/m <sup>3</sup> TWA
Fumed Silica (Particles not otherwise regulated)			50 mppcf (15mg/m <sup>3</sup> ) TWA Total Dust; 15 mppcf (5mg/m <sup>3</sup> ) TWA Respirable fraction
Toluene diisocyanate	0.005 ppm TWA	0.02 ppm	

## IX. PHYSICAL AND CHEMICAL PROPERTIES

<b>Color:</b>	White
<b>Physical State:</b>	Liquid
<b>Boiling Point - Low (°F):</b>	350.0
<b>Boiling Point - High (°F):</b>	512.6
<b>Evaporation Rate:</b>	0.05
<b>Odor:</b>	Characteristic, Hydrocarbon
<b>Vapor Density:</b>	7.00 (air = 1)
<b>Vapor Pressure:</b>	68° F 0.52 MM HG
<b>VOC (g/l) (Regulatory, Calculated):</b>	215.21
<b>(Actual, Calculated):</b>	215.21
<b>Viscosity:</b>	105 - 115 KU
<b>Solubility in Water:</b>	Reacts slowly with water.
<b>Octanol/Water Partition Coefficient:</b>	Not Available
<b>Volatiles, % by Volume (Calculated):</b>	25.32
<b>Volatiles, % by weight (Calculated):</b>	16.95
<b>Density:</b>	10.5 - 10.7 lbs./Gal.

Physical and Chemical Properties are calculated target or range values for single packaged items and do not represent compliance values for multi-component (mixed) systems.

## X. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	Temperatures above flash point in combination with sparks, open flames, or other sources of ignition. Contamination. Contact with water.
<b>Materials to Avoid/Chemical Incompatibility:</b>	Acids, Oxidizing agents, Metals, Amines, Caustics (bases,

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**Polymerization:** alkalis), Water, Alcohols  
Contact with moisture, other materials that react with isocyanates or temperatures above 350° F may cause polymerization.

**Hazardous Decomposition Products:** Carbon dioxide, Carbon monoxide, Hydrogen cyanide, Nitrogen containing gases, Hydrocarbons, Toxic fumes, Toxic gases, Hydrogen chloride

## XI. TOXICOLOGICAL INFORMATION

### Component Toxicology Data:

Chemical Name	CAS Number	LD50/LC50
Titanium dioxide	13463-67-7	Oral LD50 Rat > 25 g/kg Dermal LD50 Rabbit > 10 g/kg Inhalation LC50 (4h) Rat > 6.82 mg/L
Stoddard solvent	8052-41-3	Oral LD50 Rat > 5 g/kg
Butyl carbitol acetate	124-17-4	Inhalation LC50 Rat > 6.1 mg/L Oral LD50 Rat 6960 - 11960 mg/kg Dermal LD50 Rabbit 5390 - 14500 mg/kg
Fumed silica	67762-90-7	Oral LD50 Rat > 1000 mg/kg
Toluene diisocyanate	26471-62-5	Dermal LD50 Rabbit > 9400 mg/kg Oral LD50 Rat 4130 - 5110 mg/kg Inhalation LC50 (1h) Rat 66 ppm

### Carcinogens:

Chemical Name	CAS Number	IARC	NTP	OSHA
Titanium dioxide	13463-67-7	2B		
Toluene diisocyanate	26471-62-5	2B	2	

## XII. ECOLOGICAL INFORMATION

Toxicity data, if available, are listed below.

## XIII. DISPOSAL CONSIDERATIONS

**Disposal Methods:** Refer to other sections of this MSDS to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

## XIV. TRANSPORTATION INFORMATION

This section provides basic shipping classification information and does not contain all regulatory transportation details. Refer to all applicable regulations for domestic, international, air, vessel and ground transportation requirements and restrictions.

**DOT Basic Description:** Paint  
**Hazard Class:** 3  
**UN Number:** UN1263  
**Packing Group:** III  
**Other:** Not regulated for non-bulk domestic ground shipments for packaging of 450 liters (119 gallons) or less (DOT 49CFR 173.150(f)).

**IATA Air Shipping Name:** Paint  
**IATA Hazard Class:** 3  
**IATA UN Number:** UN1263  
**IATA Packing Group:** III

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## XV. REGULATORY INFORMATION

### United States Federal Regulations:

**TSCA Status** All components of this product are either listed on the TSCA Inventory; or, are not subject to the inventory notification requirements.

#### **SARA EHS Chemicals**

	<b>CAS #</b>	<b>%</b>
Toluene Diisocyanate	26471-62-5	0.1 - 1

#### **CERCLA**

Toluene Diisocyanate	26471-62-5	0.1 - 1
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#### **SARA 313**

2-(2-Butoxyethoxy)ethyl acetate	124-17-4	3 - 7
Toluene diisocyanate (mixed isomers)	26471-62-5	0.1 - 1

#### **SARA 311/312**

Health (Acute):	Y
Health (chronic):	Y
Fire (Flammable):	Y
Pressure:	N
Reactivity:	Y

### U. S. State Regulations:

#### **California Prop 65 Chemicals**

##### **Cancer**

	<b>CAS #</b>	<b>%</b>
Toluene Diisocyanate	26471-62-5	0.1 - 1
Benzene	71-43-2	< 10 ppb

##### **Reproductive**

Benzene	71-43-2	< 10 ppb
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### Canadian Regulations:

**CEPA DSL:** The components of this product ARE listed on the Canadian Domestic Substances List.

**WHMIS Hazard Class:** B3 D2A

## XVI. ADDITIONAL INFORMATION

**Prepared By:** Regulatory Department

**Disclaimer:** This MSDS has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada's Controlled Product Regulations (CPR). To the best of our knowledge the information contained herein is accurate. Determination of safe handling, application and use of this material is the responsibility of the end user. This information is furnished without warranty, expressed or implied.

**Print Date:** February 15, 2011