Material Safety Data Sheet

Revision Date: 07-10-2013
Product Code: 70620

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	**PERMATHANE FR BASECOAT DARK GRAY**
Product Code:	70620
Document ID:	M70620
Company:	NEOGARD® - a Division of JONES-BLAIR® Company 2728 Empire Central Dallas, TX 75235 1-214-353-1600
Revision Number:	6
Prior Version Date:	11-05-2012
Chemical Family:	Urethane Coating
Intended use:	Roof Coating
Emergency Contact:	ChemTrec Center
Emergency Phone:	1-800-424-9300
International:	703-527-3887

II. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: **DANGER!**
Combustible liquid and vapor.
Causes skin irritation.
Causes eye irritation.
Vapor harmful.

Routes of Entry:

- Eye contact
- Inhalation
- Skin contact
- Ingestion

Target Organs Potentially Affected by Exposure:

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

Medical Conditions Aggravated by Exposure:

- Eye disorders.
- Skin disorders.
- Respiratory disorders, including but not limited to asthma and bronchitis.
- Eye irritation when/if dust or spray mist is generated.
- Lung disease
-

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. May cause allergic skin reaction.
Skin Absorption:	May be harmful if absorbed through skin.
Eye Contact:	Causes eye irritation.
Ingestion Toxicity:	Harmful if swallowed. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

Long-Term (Chronic) Health Effects:

Carcinogenicity: Cancer hazard: Contains Crystalline Silica, which can cause cancer. Risk of cancer depends on duration and level of exposure to dust generated from sanding surfaces or spray mists.
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.)
Possible cancer hazard. Contains carbon black which may cause cancer based on animal data. (Risk of cancer depends on duration and level of exposure.)

Inhalation: 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.
Overexposure may cause lung damage.

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
Stoddard solvent	3 - 7	8052-41-3
Butyl carbitol acetate	3 - 7	124-17-4
Quartz (Silica-Crystalline)	1 - 5	14808-60-7
Fumed Silica (Particles not otherwise regulated)	1 - 5	67762-90-7
Titanium dioxide	1 - 5	13463-67-7
(d)-Limonene	0.5 - 1.5	5989-27-5
Toluene diisocyanate	0.1 - 1	26471-62-5
Carbon black	0.1 - 1	1333-86-4

IV. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.

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. Induce vomiting as a last measure. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

Notes to Doctor: No additional first aid information available

V. FIRE FIGHTING MEASURES

Flammability Summary: **Combustible liquid and vapor.**

Extinguishing Media: 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 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):	108 / 42
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

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

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. Do not get in eyes, on skin and clothing. Wash thoroughly after handling.

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

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.

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:

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	OSHA PEL-TWA
Stoddard solvent	100 ppm TWA; 572 mg/m³ TWA		500 ppm TWA; 2900 mg/m³ TWA
Quartz (Silica-Crystalline)	0.05 mg/m³ TWA (respirable fraction)		see Table Z-3
Fumed Silica (Particles not otherwise regulated)			50 mppcf (15mg/m³) TWA Total Dust; 15 mppcf (5mg/m³) TWA Respirable fraction
Titanium dioxide	10 mg/m³ TWA		15 mg/m³ TWA (total dust)
Toluene diisocyanate	0.005 ppm TWA	0.02 ppm	
Carbon black	3.5 mg/m3 TWA		3.5 mg/m3 TWA

IX. PHYSICAL AND CHEMICAL PROPERTIES

Color: Grey
Physical State: Liquid
Boiling Point - Low (°F): 315.0
Boiling Point - High (°F): 456.0
Evaporation Rate: 0
Odor: Hydrocarbon
Vapor Density: 7.00 (air = 1)
Vapor Pressure: 68° F 0.52 MM HG
VOC (g/l) (Regulatory, Calculated): 206.35
(Actual, Calculated): 206.35
Viscosity: 105 - 120 KU
Solubility in Water: Reacts slowly with water.
Octanol/Water Partition Coefficient: Not Available
Volatiles, % by Volume (Calculated)**:** 24.20
Volatiles, % by weight (Calculated)**:** 16.08
Density: 10.61 - 10.81 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

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

Stoddard solvent	8052-41-3	Oral LD50 Rat > 5 g/kg Inhalation LC50 Rat > 6 mg/L
Butyl carbitol acetate	124-17-4	Oral LD50 Rat 6,960 - 11,960 mg/kg Dermal LD50 Rabbit 5,390 - 14,500 mg/kg
Quartz	14808-60-7	Oral LD50 Rat > 22,500 mg/kg
Fumed silica	67762-90-7	Oral LD50 Rat > 1,000 mg/kg
Titanium dioxide	13463-67-7	Oral LD50 Rat > 25 g/kg Dermal LD50 Rabbit > 10 g/kg Inhalation LC50 (4h) Rat > 7 mg/L
Toluene diisocyanate	26471-62-5	Dermal LD50 Rabbit > 9,400 mg/kg Oral LD50 Rat 4,130 - 5,110 mg/kg Inhalation LC50 (1h) Rat 66 ppm
Carbon black	1333-86-4	Oral LD50 Rat > 8,000 mg/kg

Carcinogens:

Chemical Name	CAS Number	IARC	NTP	OSHA
Quartz	14808-60-7	1	1	
Titanium dioxide	13463-67-7	2B		
Toluene diisocyanate	26471-62-5	2B	2	
Carbon black	1333-86-4	2B		

XII. ECOLOGICAL INFORMATION

Toxicity data, if available, are listed below.
Overview: No data available

Mobility: No data available

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

IMO Shipping Name: Paint
IMO Hazard Class: 3

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IMO UN Number: UN1263
IMO Packing Group: III

Marine Pollutant: N

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	**CAS #**	**%**
Toluene Diisocyanate	26471-62-5	0.1 - 1
CERCLA		
Toluene Diisocyanate	26471-62-5	0.1 - 1
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	**CAS #**	**%**
Crystalline Silica	14808-60-7	1 - 5
Titanium dioxide	13463-67-7	1 - 5
Toluene Diisocyanate	26471-62-5	0.1 - 1
Carbon Black	1333-86-4	0.1 - 1
Cumene	98-82-8	0.01 - 0.1
Benzene	71-43-2	0.001- 0.01
Reproductive		
Methyl Alcohol	67-56-1	0.001- 0.01
Benzene	71-43-2	0.001- 0.01

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.
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