

MATERIAL SAFETY DATA SHEET

PILGRIM PERMOCOAT, INC.  
402 S. 22<sup>ND</sup> STREET  
TAMPA, FL 33605

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SECTION 1 - MATERIAL IDENTIFICATION

PRODUCT NAME UROFLEX 65, B COMPONENT  
CHEMICAL NAME - Polyether Polyol System

DOT CLASS -NON-REGULATED  
HMIS: H-2, F-1, R-0  
MOLECULAR WEIGHT - NA

FORMULA -Not Applicable

EMERGENCY CONTACT - ROBERT FORLONG

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EMERGENCY OVERVIEW

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WARNING! Color: White to amber; Form: Liquid; Odor: Amine Type Odor; May cause eye, skin, and respiratory tract irritation; Inhalation, skin absorption, or ingestion may cause methemoglobin formation resulting in a reduced ability of the blood to carry oxygen; a symptom of this may be cyanosis (purple-blue coloring of the skin, fingernails, and lips); Harmful if inhaled or ingested; May cause allergic skin reaction; Harmful if absorbed through skin; May cause a temporary fogging of the eyes; Water may cause frothing; Use cold water spray to cool fire exposed containers to minimize the risk of rupture; toxic gases/fumes are given off during burning or thermal decomposition.  
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SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS:

INGREDIENT NAME	CAS-NO.	CONCENTRATION (%)
**** HAZARDOUS COMPONENTS ****		
Diethyltoluenediamine (DEDTA)	68479-98-1	10-20%
Tertiary Amine	CAS# is a trade secret	.1-1%

SECTION 3- HEALTH

ROUTES OF ENTRY.....: Inhalation; Skin Contact; Skin Absorption; Eye Contact

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE INHALATION.....: Due to the low vapor pressure of the major components used in this product, it is unlikely that inhalation exposure will occur when handling this product under normal working conditions and at room temperature, using good industrial hygiene practices. However, during heating, spray/misting applications or processing of this product, it is possible that an exposure could occur. This product as a whole may then be expected to cause irritation of the upper respiratory tract and mucous membranes of the mouth, nose and throat. Symptoms may include coughing, headache, nausea, vomiting, and chest pain. This product contains an aromatic diamine, diethyltoluenediamine, inhalation exposure can cause methemoglobinemia, with symptoms of cyanosis, a purplish-blue color of the skin, fingernails and lips.

CHRONIC INHALATION.....: None reported for this product. Effects are expected to be similar to those listed above for acute exposure.

ACUTE SKIN CONTACT.....: Upon contact, irritation and defatting of the skin are possible. The hindered amine and aliphatic amine components are considered to be fairly strong skin sensitizers and may cause an allergic skin reaction. The diethyltoluenediamine (DETA) component of this product is fat-soluble and can penetrate the skin. Based on animal tests, DETA is expected to be toxic. Skin contact and skin absorption of DETA can cause methemoglobinemia with symptoms of cyanosis, a purplish-blue color of the fingernails, skin and lips. Contact can cause irritation with redness, and severe swelling and blistering.

CHRONIC SKIN CONTACT.....: None reported for this product. Effects are expected to be similar to those listed above for acute exposure.

ACUTE EYE CONTACT.....: This product as a whole can cause severe irritation to the eyes. Diethyltoluenediamine (DETA) is considered severely irritating to the eyes. The vapors from the amine components have also been reported to cause transient fogging of the eyes as a result of corneal edema. This condition is referred to as "halo vision", "Blue haze", "Blue-gray haze" or glaucopsia. Glauropsia produces a blurring of vision against a general bluish haze and the appearance of halos around bright objects. Glauropsia is not necessarily detrimental to the eye, but it predisposes a person to physical accidents and reduces the ability of the affected individual to perform skilled tasks such as operating heavy equipment or driving motorized vehicles.

CHRONIC EYE CONTACT.....: None reported for this product. Effects are expected to be similar to those listed above for acute exposure.

ACUTE INGESTION.....: None reported for this product. However, if ingested this product is expected to cause irritation of the mouth, throat, esophagus and stomach with possible abdominal pain, vomiting and diarrhea. The diethyltoluenediamine component if ingested can cause methemoglobinemia with cyanosis, a purplish blue discoloration of the skin, fingernails and lips.

CHRONIC INGESTION.....: None reported for this product. However, ingestion may produce inflammatory and ulcerative effects on the oral mucous membranes.

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE.....: Asthma, other respiratory disorders (bronchitis, emphysema\* Skin disorders and allergies\* Eye disease.

EXPOSURE LIMITS.....:Not established for this product as a whole, refer to Section II for exposure limits of hazardous constituents.

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**SECTION 4 - FIRST AID**  
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EYE CONTACT

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes.

Refer individual to physician or ophthalmologist for immediate follow-up.

SKIN CONTACT

Remove product and immediately flush area with water for at least 15 minutes. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. Seek medical attention if irritation develops or persists after the area is washed.

INHALATION

Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

INJECTION

In the event of ingestion, administer 2 glasses of water. DO NOT INDUCE VOMITING. Seek medical advice.

NOTE TO PHYSICIAN.....: Treat any ill effects symptomatically. If cyanotic (lips and fingernails turn blue) give oxygen. Treat for symptoms of methemoglobinemia. Absorption of this product into the body leads to the formation of methemoglobin that in sufficient concentrations causes cyanosis. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated area of the body including scalp and nails is extremely important.

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**SECTION 5 - FIRE FIGHTING MEASURES:**  
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FLASH POINT.....: 340.0F (178.8C) Pensky-Martens Closed Cup (ASTM D-93)

EXTINGUISHING MEDIA.....: Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

#### SPECIAL FIRE FIGHTING PROCEDURES

Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers. Material supports combustion. During a fire, irritating and toxic gases such as carbon monoxide may be generated by thermal decomposition or combustion. DO NOT spray fire directly. A solid stream of water directed into the hot burning liquid could cause frothing.

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### SECTION 6 - ACCIDENTAL RELEASE MEASURES

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CONTAINMENT TECHNIQUES (Removal of ignition sources, diking etc) Stop the leak if possible. Ventilate the space involved. Shut off or remove all ignition sources. Construct a dike to prevent spreading.

#### CLEAN-UP PROCEDURES

Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%), or; water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO<sub>2</sub> escape. Clean-up: Decontaminate floor with decontamination solution, letting stand for at least 15 minutes.

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### SECTION 7 - HANDLING AND STORAGE

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STORAGE TEMPERATURE(MIN/MAX): 60F (15C)/ 95 F (35C)

SHELF LIFE.....: 6 months @ 77 F (25 C)

SPECIAL SENSITIVITY.....: Material is hygroscopic and may absorb small amounts of atmospheric moisture.

HANDLING/STORAGE.....:Store in tightly sealed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors.If contamination with isocyanates is suspected, do not reseal containers. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

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### SECTION 8 - PERSONAL PROTECTION/EXPOSURE CONTROLS

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#### EYE PROTECTION

Chemical safety glasses. Splash-proof eye goggles.  
Contact lenses should not be worn.

#### HAND PROTECTION

Nitrile rubber gloves. In emergency situations, wear impermeable gloves with cuffs to prevent spread of material to area above the wrists. Cover as much of the exposed skin area as possible with appropriate clothing.

#### VENTILATION/RESPIRATORY PROTECTION

The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA). Air purifying respirator

equipped with full face organic vapor cartridge if vapors are detected, or are irritating. In areas of high concentrations, fresh air-line respirators or self-contained breathing apparatus should be used. ADDITIONAL PROTECTIVE MEASURES.....:Safety showers and eyewash stations should be available. Educate and train employees in safe use of product.

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## SECTION 9 - TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL FORM	liquid
COLOR	Various colors
ODOR	Amine Type Odor
pH	Approximately 10
VAPOR PRESSURE	Less than 10-5 mmHg @ 77F
VAPOR DENSITY	8.64 lbs/gal
BOILING POINT	Not Established
FREEZING POINT	Not Established
SOLUBILITY IN WATER	Not Soluble. Reacts slowly with water to liberate CO <sub>2</sub> gas.
SPECIFIC GRAVITY (Water =1)	1.035 @ 77F
viscosity (CPS)	Not Applicable
STABILITY	This is a stable material.
HAZARDOUS POLYMERIZATION	Will not occur
INCOMPATIBILITES	Oxidizing materials, halogens, isocyanates and acids.
INSTABILITY CONDITIONS	Avoid high temperatures, sparks and flame.
DECOMPOSITION PRODUCTS	By fire- CO, CO <sub>2</sub> , oxides of nitrogen, amines, acrylonitrile, and other aliphatic fragments which have not been determined.

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## SECTION 11 - TOXICOLOGICAL PROPERTIES

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No toxicity data has been established for this product as a whole. The data listed is for individual components.

### TOXICITY DATA FOR Diethyltoluenediamine (DETA)

#### ACUTE TOXICITY

ORAL LD 50.....: 472 mg/kg (Female Rats); 542 mg/kg (Male Rats)

DERMAL LD 50.....: Greater than 700 mg/kg (Rabbit)

INHALATION LC50.....: Exposure of rats to aerosols for 1 hour at 2.45 mg/L did not produce mortality.

SKIN EFFECTS.....: Slightly irritating to rabbits. Skin sensitization tests in guinea pigs were negative.

EYE EFFECTS.....: Moderate to severe irritation to rabbit eyes.

SUBCHRONIC TOXICITY.....:A subchronic 21 day dermal toxicity study on diethyltoluenediamine (DETA) was conducted with rabbits. Repeated dermal applications of this compound at 1, 10 and 100 mg/kg for three weeks (five days/week) resulted in mild to moderate local irritation at the 10 and 100 mg/kg doses. No significant local effects were observed at the 1 mg/kg dose. There were no significant systemic effects observed at any of the dose levels of DETA.

CARCINOGENICITY.....: Preliminary information from a recent study in which DETA was administered in the diet of rats for two years suggests an increased incidence of tumors in the liver and thyroid of male rats, and in the liver and possibly in the mammary glands of female rats.

OTHER TOXICITY DATA.....: DEAT has been evaluated for mutagenic activity in a number of "in vitro" assays both in the absence or in the presence of liver microsomal enzyme preparations. In non-activated as well as activated Salmonella typhimurium, Saccharomyces cerevisiae D4, E. coli, DNA Repair Test and Mammalian Cell Transformation Assay systems this compound was judged to be without significant mutagenic activity. At some dilutions, DETA did produce significant response when tested in the Mammalian Cell Point Mutation Assay without metabolic activation. However, when DETA was assayed in the system in the presence of a liver microsomal preparation, no indication of a mutagenic response was seen. DETA has been examined for possible mutagenic activity in several "in vitro" assays in rodents. No statistically significant dose response was seen to DETA in the Dominant Lethal Test or in the Micronucleus Test. No suspect clastogenic activity

was seen in response to DETA in a Cytogenetic Assay. Therefore, DETA does not appear to be genetically active.

-----SECTION 12 - ECOLOGICAL INFORMATION-----

Biodegradation  
Aerobic, 0%, Exposure time: 28 days

Chemical Oxygen Demand  
2,370 mg/g

Acute and Prolonged Toxicity to Fish  
LC50: approximately 194 mg/l (Golden orfe (Lueciscus), 48 hrs)

Acute Toxicity to Aquatic Invertebrates  
EC50: approx. 0.5 mg/l (Water flea (Daphnia magna), 48 hrs)

Toxicity to Microorganisms  
EC10: 170 mg.l, (Pseudomonas putida), 24 hrs

-----SECTION 13 - DISPOSAL CONSIDERATIONS-----

WASTE DISPOSAL METHOD.....: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.  
EMPTY CONTAINER PRECAUTIONS: Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

-----SECTION 14 - TRANSPORT INFORMATION-----

TECHNICAL SHIPPING NAME                      Polyol System  
FREIGHT CLASS                                      Polypropylene Glycol

DOT (DOMESTIC SURFACE)

PROPER SHIPPING NAME                      Non-Regulated

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER              Non-Regulated

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER              Non-Regulated

-----SECTION 15 - REGULATORY INFORMATION-----

OSHA STATUS                                      This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.  
TSCA STATUS                                      On TSCA Inventory

CERCLA REPORTABLE QUANTITY None Reported

SARA TITLE III:

SECTION 302 EXTREMELY  
HAZARDOUS SUBSTANCES: None

SECTION 311/312  
HAZARD CATEGORIES Immediate Health Hazard; Delayed Health Hazard

SECTION 313  
TOXIC CHEMICALS: None

RCRA STATUS: If discarded in its purchased form, this product will not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

The following chemical are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME /CAS NUMBER	CONCENTRATION	STATE CODE
Alkenyl Modified Oxyalkylene Polymer 57913-80-1	**	PA3, NJ4
Polyether Polyol 9003-11-6	**	PA3, NJ4
Diethyltoluenediamine 68479-98-1	Upper Bound 20%	PA3, NJ4
**Polyols (Total Concentration)	Less than 85%	PA3, NJ4
Acrylonitrile (monomer) 107-13-1	Trace-ppm	CA1, MA
Isopropyl Alcohol 67-63-0	Trace-ppm	MA
Styrene (monomer) 100-42-5	Trace-ppm	MA
MA	Massachusetts Hazardous Substance List	
NJ4	New Jersey Other - included in 5 predominant ingredients > 1%	
PA3	Pennsylvania Non-Hazardous present at 3% or greater.	

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