

**SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier: Pur Fill 2-Part Kit A Component**

Low pressure Polyurethane Foam System for Professional Use Only: Component A

**Distributor:**

**Todol Products Inc.**

Phone: 508-651-3818 (8 am to 5 pm EST, Monday to Friday)

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**U.S. Transportation Emergency :**

**CHEMTREC 1-800-424-9300 (24 hrs.)**

**International Transportation Emergency:**

**CHEMTREC 1-703-527-3887**

**SECTION 2 — HAZARDS IDENTIFICATION**

**Potential Health Hazards**

LUNG, SKIN, EYE IRRITANT. Harmful if inhaled. Inhalation may cause respiratory sensitization, allergic respiratory reaction, permanent damage to lungs and/or central nervous system effects. Overexposure can cause shortness of breath, wheezing and reduced lung function. Skin contact can cause allergic reaction or sensation. May irritate eyes causing tearing and/or blurring.

- Lungs:** Harmful if inhaled. Respiratory sensation, allergic reaction may result. Overexposure to diisocyanates can lead to bronchitis, pulmonary edema (fluid in the lungs) and permanent damage. Overexposure to Tetrafluoroethane may cause lightheadedness and headache. Avoid breathing fumes by using product in a well ventilated area or using protective breathing equipment (see section 8).
- Skin** Contact may cause allergic skin reaction and/or skin sensation. Avoid physical contact by wearing Nitrile gloves and protective clothing.
- Eyes** May cause eye irritation and/or tearing. Direct contact could freeze the eye. Wear protective goggles to avoid contact with eyes.

The contents are in a pressurized container. Storage temperature should not exceed 120° F (49° C) in order to avoid excessive build up and possible release of contents. MDI will react with water to form CO<sub>2</sub> and water insoluble polyureas.

**SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Chemical Ingredient</u>	<u>CAS #</u>	<u>% (weight)</u>
1,1,1,2 – Tetrafluoroethane (non-flammable gas, HFC, Fluorinated hydrocarbon, 134a)	811-97-2	5 - 10
4,4' – Diphenylmethane Diisocyanate (MDI)	101-68-8	30 - 60
Higher Oligomers of MDI (Polymeric MDI)	9016-87-9	30 - 60

See Section 8 for guidelines for exposure. See Section 11 for Toxicological Information

#### SECTION 4 — FIRST AID MEASURES

**Inhalation:** Immediately remove person to fresh air. If breathing is difficult, oxygen may be administered by qualified personnel. Obtain medical attention immediately.

**Skin contact:** Immediately remove contaminated clothing. Wash skin with mild soap and water. Some mild solvents such as mineral spirits, paint thinner, acetone (e.g. Pur Clean) or nail polish remover may help in removing uncured foam. Follow all recommended precautions when using these types of solvents. If irritation persists, obtain medical attention. Launder clothing before reuse.

**Eye contact:** Do not wear contact lenses during use. Immediately flush eyes with running water for a minimum of 20 minutes. Obtain medical attention immediately.

**Ingestion:** If swallowed, do NOT induce vomiting; drink one to three glasses of water, to dilute material in stomach. Obtain medical attention immediately. Never give anything orally to an unconscious or convulsing person.

**Note to Physicians:** Asthmatic-like symptoms, if manifested, may develop immediately, or be delayed for up to several hours. Following severe exposure, medical follow-up should be monitored for at least 48 hours.

#### SECTION 5 — FIRE FIGHTING MEASURES

**Fire hazards/conditions of flammability:** Cured foam will burn if in contact with direct flame, but is self-extinguishing. Product may react vigorously with water at temperatures above 122°F (50°C). Closed containers are contained under pressure and will explode if exposed to excess heat or flame.

**Explosion data:** The product is equipped with a pressure relief valve which can activate in high temperatures.

**Suitable extinguishing media:** Chemical Foams, Carbon dioxide, dry chemical, Halon 1211. If foam from product has been released, use water with caution since the reaction with water can be vigorous at higher temperatures. Water as a fine spray could be used in high quantities when other extinguishing media are not available.

**Special fire-fighting procedures/equipment:** Isolate area and stay upwind. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece. Shield personnel to protect from venting, rupturing or bursting cans. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment exposed to heat and flame. Cured foam is organic and will burn in the presence of sufficient heat, oxygen and an ignition source.

**Hazardous combustion products:** Carbon monoxide, carbon dioxide, nitrogen oxides, isocyanates, hydrogen fluoride and traces of hydrogen cyanide.

#### SECTION 6 — ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Read all product instructions before using. Person protective equipment should be worn. Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

**Environmental precautions:** Ensure spilled product does not enter drains, sewers, groundwater, soil, waterways or confined spaces.

**Spill response/Cleanup:** Eliminate all sources of heat, sparks and flame. Increase ventilation in area of release to prevent the build-up of flammable atmospheres. Soak up material with absorbent (such as sand) and shovel up cured foam and place into suitable, labeled containers for later disposal. Decontaminate waste and spill area with a solution of 0.2-0.5% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium bicarbonate may be substituted for ammonium hydroxide). Use 10 parts of solution for each part of the spill and allow to react for at least 10 minutes. Let container loosely covered to stand of several days before disposing in accordance with all applicable federal, state, local regulations.

**Special spill response procedures:** If a spill/release in excess of EPA reportable quantity (5000 lbs for 101-68-8 MDI according to CERCLA RQ) is made into the environment, immediately notify the national response center (U.S.) (phone: 1-800-424-8002).

**SECTION 7 — HANDLING AND STORAGE**

**Safe handling procedures:** Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with this product. Once a person is sensitized, no further exposure to the material that caused the sensitization should be permitted. Wear protective equipment during handling in a well ventilated area or with a power air purifying respirator (PAPR). Keep away from sources of heat, direct flame or other ignition sources. Avoid moist conditions, until the product is used. Do not puncture or incinerate containers. Avoid generating high concentrations of vapors or mists. Avoid contact with eyes, skin or clothing. Wash hands before eating, drinking, smoking or use of toilet facilities. Launder contaminated clothing before reuse.

**Storage requirements:** Store out of reach and AWAY FROM CHILDREN. Store in a cool (64 - 75°F), dry, well-ventilated area away from sources of heat, ignition and sunlight. Never store the product in direct sunlight or at temperatures exceeding 120°F. Excessive heat can cause premature aging of components and a shorter shelf life. Protect unused product from freezing. Inspect containers periodically for damage or leaks. No smoking in the area. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Protect containers from physical abuse and store upright.

**Read instructions completely before using product.**

**SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**General hygiene considerations:** Do not inhale vapors and mists. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when working. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

**Respiratory protection, ventilation and engineering controls:** Use in well-ventilated areas only. Provide suitable ventilation to maintain air contaminants below exposure limits. Work practice controls should be implemented to protect worker. If atmospheric levels are expected to exceed exposure levels, use a NIOSH approved air purifying respirator. If atmospheric levels exceed 10times the TLV or PEL level for which an air-purifying respirator is qualified, use a powered air purifying respirator (PAPR). This must comply with requirements set forth in OSHA’s Respiratory Protection Standard (29 CFR 1910.134). The odor and irritant factor of this product is inadequate to warn of excessive exposure.

**Skin protection and other protective equipment:** Avoid contact with skin. Use clothing that protects against dermal exposure. Use chemically resistant gloves (i.e. Nitrile gloves). Confirmation of what type of material is most suitable for the intended application, should be obtained from glove suppliers. Additional impervious protective clothing is recommended to prevent skin contact.

**Eye/face protection:** Use chemical splash goggles with side shields. Contact lenses should not be worn. An eye wash station or portable eye wash bottle at hand is recommended.

**Permissible exposure levels:** For individual ingredient exposure levels, see Section 2.

<u>Exposure Guidelines</u>	<u>WEEL</u>	<u>OSHA</u>	<u>ACGIH</u>
4,4 – Diphenylmethane Diisocyanate (MDI)		.020 ppm ceiling .200 mg/m3 ceiling	.005 ppm TWA .051 mg/m3 TWA
1,1,1,2 - Tetrafluoroethane	1,000 ppm 4,240mg/m3	None Established	None Established

(None of the components in this product are listed by IARC, NTP, OSHA or ACGIH as a carcinogen)

## SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

**Physical Appearance:** Dark brown to amber. Liquid foams to creamy color when dispelled.

**Odor:** There is a slightly musty odor.

**Boiling Point:** 1,1,1,2 – Tetrafluoroethane (Non-flammable compressed gas, HFC, Fluorinated Hydrocarbon, 134a) boils at -15°F (-26° C). MDI boils at 406°F (208°C).

**Flash Point:** 1,1,1,2 – Tetrafluoroethane (HFC, 134a); none. MDI; 390°F (199°C).

**Specific Gravity:** Approximately 1.2 (H<sub>2</sub>O=1) at 25°C.

**Solubility:** Water: Insoluble, reacts slowly with water to liberating traces of CO<sub>2</sub>.

**Flammability:** Non-flammable propellant

**Flammability Limits:** Not available

**Vapor Pressure:** Contents under pressure have vapor pressure greater than 50psig/345 kPa. For MDI liquid less than 10mm Hg at 77°F (25°C).

**Vapor Density:** Not available

**No data available for the following properties:** PH Level, Melting/Freezing point, Partition Coefficient N-octanol/water, Auto-ignition temperature, Decomposition temp., Odor Threshold, Evaporation Rate.

## SECTION 10 — REACTIVITY AND STABILITY DATA

**Stability and reactivity:** Stable under the recommended storage and handling conditions. ). Reacts slowly with water at normal temperatures. May polymerize if heated above 120°F (49°C). For longest shelf life do not store above 90°F

**Conditions to avoid:** Heat, open flame, other sources of ignition and direct sunlight. Avoid temperatures below 40°F (5°C) and temperatures above 90°F. Avoid moisture; material reacts slowly with water, releasing CO<sub>2</sub>. High temperatures will raise the pressure which could lead to rupturing containers.

**Materials to avoid:** Alcohols, strong bases (e.g. Sodium Hydroxide, Potassium Acetate) or amines, metal compounds, ammonia, strong oxidizers, water moisture.

**Decomposition in case of fire:** Toxic decomposition by-products can include: Carbon dioxide, carbon monoxide, nitrogen oxide, isocyanates, hydrogen fluoride and traces of hydrogen cyanide.

## SECTION 11 — TOXICOLOGICAL INFORMATION

### Testing Results (industry studies)

**Sensitization to rabbit:** Slightly irritating to eyes and skin

**Repeated Dose Toxicity** (rat, male/female, 6hrs/day, 5 days per week) (2 yrs, inhalation, NOAEL .19 mg/m<sup>3</sup>) Irritation to lungs

**Chronic Toxicity/Carcinogenicity:** 6.3 mg/m<sup>3</sup> (high level of exposure for 2 years, 6 hrs/day, 5 day per week) Lung tumors observed.

**Genetic Toxicity in Vitro:** Inconclusive, salmonella typimurium

## SECTION 12 — ECOLOGICAL INFORMATION

**Ecological Data for 1,1,1,2 – Tetrafluoroethane:** Accumulation in aquatic organisms in unlikely.

**Ecological Data for MDI:** Acute Toxicity to Fish: LC50:>500 mg/l (zebra fish). 24h

Acute Toxicity to aquatic invertebrates: LC50:>500 mg/l (water flea), 24h

**Ecological Date for Polymeric MDI: Biogradation:** Short half-life expected.

**Bioaccumulation:** (Rainbow Trout) 112 day exposure, <1 BCF. Does not bioaccumulate .

Acute Toxicity to Fish: LC50:>1000 mg/l (zebra fish). 96h exposure

Acute Toxicity to aquatic invertebrates: LC50:>1000 mg/l (water flea), 24h

Toxicity to Microorganisms: LC50:>100 mg/l, activated sludge, 3h

### SECTION 13 — DISPOSAL CONSIDERATIONS

**Handling for disposal: Do not incinerate tanks.** After product is removed the tanks must be vented. Turn valves to the off position before removing hoses. Tanks may still be under pressure so wear protective clothing, safety goggles, certified respirator and gloves. With tanks inverted, slowly open tank valve pointing tank away from face and allow pressure to completely deplete. Dispose of tank in a well ventilated area. Do not puncture or incinerate empty containers.

**Methods of disposal:** Dispose in accordance with all applicable federal, state, and/or local regulations. Contact your local, state, local and/or federal environmental agency for specific rules.

**RCRA:** If this product, as supplied, becomes a waste, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. Under the RCRA, it is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

### SECTION 14 — TRANSPORTATION INFORMATION

**Shipping Information:** Containers Greater Than 1000 cu. cm. (1 liter)

Ground: UN1956 Compressed Gas n.o.s. Florinated hydrocarbon, nitrogen 2.2 (Non-flammable  
DOT Gas Label)

Air: N/A

Water: UN1956 Compressed Gas n.o.s. Florinated hydrocarbon, nitrogen 2.2 (Non-flammable  
IMDG Gas Label)

Emergency Response Guide Nos: Consumer Commodity #171. For Aerosols and Compressed Gas #126.

### SECTION 15 — REGULATORY INFORMATION

**OSHA Hazard Standard Rating:** Hazardous

**Toxic Substances Control Act(TSCA) (U.S.) and Domestic Substances List (DSL) (Canada):**  
All Ingredients are listed or exempted.

**SARA TITLE III: Section 311/312**

Acute Health Hazard, Chronic Health Hazard, Sudden Release of Pressure Hazard

**SARA TITLE III: Section 313**

Contains Diphenylmethane Diisocyanate (CAS #101-68-8) and isomers, and homologues (CAS #9016-87-9) which are subject to SARA Title III reporting . Applicability is up to end user.

**WHMIS Classification:** A, D2A (due to respiratory sensitization potential), D2B

**State Right to know Information:** (Massachusetts, Pennsylvania, New Jersey)

Chemical Name:	Diphenylmethane Diisocyanate
CAS Number:	101-68-8
Percentage	30 – 60%

**SECTION 15 — REGULATORY INFORMATION continued**

**Proposition 65** (California)

According to present information available, this product is not known to contain any detectable amounts of chemicals that are currently listed as carcinogenic or harmful to reproduction.

**SECTION 16 — OTHER INFORMATION**

**HMIS III Rating:** ( 0 - Insignificant , 1 – Slight, 2 – Moderate, 3 - High , 4 – Extreme)

Health Hazard: 2 \*                      Flammability 1                      Physical Hazard 1

**NFPA:**

Health Hazard: 2                      Flammability 1                      Reactivity 1

\* Chronic health hazard

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- Legend:** ACGIH: American Conference of Governmental Industrial Hygienists  
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
DOT: Department of Transportation  
EPA: Environmental Protection Agency  
IARC: International Agency for Research on Cancer  
N/A: not applicable N/Av: not available  
NTP: National Toxicology Program  
OSHA: Occupational Safety and Health Administration  
RCRA: Resource Conservation and Recovery Act  
SARA: Superfund Amendments & Reauthorization Act  
TSCA: Toxic Substance Control Act

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