

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

Product identifier: Pur Fill 2-Part Kit B Component

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

Distributor:

Todol Products Inc.

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

P.O. Box 398
25 Washington Avenue
Natick, MA, U.S.A., 01760

U.S. Transportation Emergency : CHEMTREC 1-800-424-9300 (24 hrs.)

International Transportation Emergency: CHEMTREC 1-703-527-3887

SECTION 2 — HAZARDS IDENTIFICATION

Hazard Overview

LUNG, SKIN, EYE IRRITANT. Vapor may be harmful if inhaled. Vapor reduces oxygen available for breathing and may cause lung injury and/or respiratory sensation. May irritate nose and throat. In extreme cases may cause central nervous system effects, cardiac arrhythmia and/or cause liver damage. May cause irritation and tearing of eyes. Pressurized container, storage temperature not to exceed 120°F (49°C).

Lungs: Gas reduces oxygen available for breathing, causing asphyxiation in high concentrations. Existing medical conditions such as asthma and pulmonary diseases may be aggravated by prolonged exposure. Vapors may cause drowsiness and dizziness. Excessive exposure may result in these symptoms: salivation, sweating, headache, nausea, muscle twitching, nervous system effects including uncoordination, diarrhea, abdominal cramps, tremor, nose, throat and/or lung irritation, respiratory tract burns, cardiac arrhythmia and chest discomfort.

Skin: Contact may cause allergic skin reaction, redness and skin sensation. Severe exposure may cause burning or frostbite.

Eyes: May cause eye irritation tearing and blurred vision. .

The contents are contained 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.

Contains Tris (1-chloro-2-propyl) phosphate, Tertiary amine, 1,1,1,2-Tetrafluoroethane, and Diethylene glycol.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Ingredient</u>	<u>CAS #</u>	<u>% (weight)</u>
Non-hazardous Polyol Blend	N/A	30 to 60
Tris (1-chloro-2-propyl) phosphate	13674-84-5	15 to 45
1,1,1,2 – Tetrafluoroethane (non-flammable gas, HFC, Fluorinated hydrocarbon, 134a)	811-97-2	10 to 30
Tertiary Amine	3030-47-5	1 to 5
Diethylene glycol	111-46-6	1 to 5
Surfactants	Trade Secret	1 to 5

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 15 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.

SECTION 5 — FIRE FIGHTING MEASURES

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.

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.

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 sawdust or vermiculite) and shovel up cured foam and place into suitable, labeled containers for later disposal. Let container loosely covered to stand of several days before disposing in accordance with all applicable federal, state, local regulations. Wash spill area with soap and water. Avoid uncontrolled reactions with isocyanates.

Special spill response procedures: If a spill/release in excess of EPA reportable quantity 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 10 times 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).

Skin protection and other protective equipment: Avoid contact with skin. Use clothing that protects against dermal exposure. Use chemically resistant gloves (Nitrile, Butyl rubber, polyethylene PVC vinyl, neoprene gloves are effective). Glove selection should take into account potential body reactions to certain materials and manufacturer’s instructions for use. 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.

WEEL Exposure Guidelines		
1,1,1,2 - Tetrafluoroethane	1,000 ppm	4,240mg/m3
Diethylene glycol		10 mg/m3

(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: Light yellow to amber liquid which foams to creamy color when dispelled.
Odor: There is a slightly odor of fluorocarbon and amine.
Boiling Point: 1,1,1,2 – Tetrafluoroethane (Non-flammable compressed gas, HFC, Fluorinated Hydrocarbon, 134a) boils at -15°F (-26° C). Other components boil at temperatures greater than 200°F (93.3°C)
Flash Point: 1,1,1,2 – Tetrafluoroethane (HFC, 134a); none. Other components not determined.
Specific Gravity: Approximately 1.2 (H₂O=1) at 25°C.
Solubility: Water: Partly soluble, does not react.
Flammability: Non-flammable propellant
Flammability Limits: Not available
Vapor Pressure: Contents under pressure have vapor pressure greater than 50psig/345 kPa.
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 temperature, Odor Threshold, Evaporation Rate.

SECTION 10 — REACTIVITY AND STABILITY DATA

Stability and reactivity: Stable under the recommended storage and handling conditions. 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. 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.
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)

Acute toxicity for Tris (1-chloro-2-propyl) phosphate: Ingestion: LD50: 2,800 mg/kg, rat, male/female
Skin: LD50: > 5,000 mg/kg, rat
Inhalation: LC50: > 4.6 mg/l, rat

Acute toxicity for Diethylene glycol: Ingestion: LD50: 12,565 mg/kg, rat
Skin: LD50: > 1,000 mg/kg, rabbit

Acute toxicity for Tertiary Amine: Ingestion: LD50: 1,630 mg/kg, rat
Skin: LD50: >280 mg/kg, rabbit
Inhalation: LC50: > 290 ppm, rat, 6h

Acute toxicity for 1,1,1,2-Tetrafluoroethane: Ingestion: LD50> 500,000 ppm, rat, 4h

Chronic toxicity/carcinogenicity: Components did not cause cancer in lab animals
Genetic Toxicity In vitro: In vitro studies were negative
Developmental Toxicity: Diethylene glycol has caused toxicity to the fetus and some birth defects at high doses in animals

Repeated Dose Toxicity:

Tris (1-chloro-2-propyl) phosphate: Weak organophosphosphate-type cholinesterase inhibitor in excessive exposure. Refer to Section 3 - Health Hazards.
Diethylene glycol (minor component): Reported to cause effects on human organs: gastro tract, kidney.
1,1,1,2-Tetrafluoroethane: NOEL 40,000 ppm, rat

Tertiary Amine: 12ppm, rat, 2 week inhalation, observed corneal opacities.
48ppm, rat, 2 week inhalation, cloudy corneas, skin and respiratory irritation.

Mixture: Components have been reported to cause effects on liver, central nervous system and bladder.

SECTION 12 — ECOLOGICAL INFORMATION

Ecological Data for Tris (1-chloro-2-propyl) phosphate:

Acute Toxicity to Fish: LC50: 84 mg/l, bluegill, 96 hour exposure
Acute Toxicity to Aquatic Invertebrates: EC50: 63 mg/l, water flea, 48h
Toxicity to Microorganisms: EC50: 784 mg/l, activated sludge, 3 h

Ecological Data for Diethylene glycol: Material is practically non toxic on the acute basis.

Acute Toxicity to Fish: LC50: >1,000mg/l, rainbow trout, 96h
Acute Toxicity to Aquatic Invertebrates: EC50: >48,900mg/l, water flea, 48h

Ecological Data for Tertiary Amine: Acute Toxicity to Fish: LC50: 220 mg/l *Leuciscus idus* (golden orfe) 96h

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

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 Gas Label)
DOT

Air: N/A

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

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

Chemical contents do not require reporting according to SARA Title III. Applicability must be determined by end user.

WHMIS Classification: A, D2B

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

Chemical Name:	Diethylene glycol
CAS Number:	111-46-6
Percentage	1 - 5

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
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NFPA:

Health hazard:	2	Flammability	1	Reactivity	1
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Legend: ACGIH: American Conference of Governmental Industrial Hygienists

DOT: Department of Transportation

IARC: International Agency for Research on Cancer

N/A: not applicable

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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