



Safety Data Sheet Spetec PUR GT500

SECTION 1: Identification

Product identifier

Product name Spetec PUR GT500

Recommended use of the chemical and restrictions on use

Hydrophilic closed cell polyurethane foam injection resin

Supplier's details

Name Alchemy-Spetec
Address 4508 Bibb Blvd
Tucker GA 30084

Telephone (404) 618-0438

Emergency phone number(s)

Call CHEMTREC Day or Night
1-800-424-9300 / +1 703-527-3887

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, inhalation, Cat. 2
- Carcinogenicity, Cat. 2
- Sensitization, respiratory, Cat. 1
- Eye damage/irritation, Cat. 2A
- Skin corrosion/irritation, Cat. 2
- Sensitization, skin, Cat. 1

GHS label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

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H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H351	Suspected of causing cancer

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER or doctor.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

Component	Concentration
Diethylene glycol monoethyl ether acetate (CAS no.: 112-15-2; EC no.: 203-940-1)	20-30 % (weight)*
Toluene diisocyanate (mixed isomers) (CAS no.: 26471-62-5; EC no.: 247-722-4)	10-20 % (weight)*
Dipropylene glycol dibenzoate (CAS no.: 27138-31-4; EC no.: 248-258-5)	1-7 % (weight)*

Trade secret statement (OSHA 1910.1200(i))

*The specific chemical identities and/or actual concentrations or actual concentration ranges for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. First aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
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If inhaled	<p>If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel.</p> <p>Acute and delayed symptoms: Fatal if inhaled.</p>
In case of skin contact	<p>Remove from skin immediately with soap and plenty of water. Take off immediately all contaminated clothing while washing. Wash contaminated clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. If skin irritation or rash occurs: Get medical advice/attention.</p> <p>Acute and delayed symptoms and effects: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching. May cause an allergic skin reaction.</p>
In case of eye contact	<p>Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice.</p> <p>Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.</p>
If swallowed	<p>SEEK IMMEDIATE MEDICAL ATTENTION! DELAYED TREATMENT MAY RESULT IN FATALITY. Do Not Induce Vomiting. Rinse mouth out with water. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.</p>

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use water fog, carbon dioxide or dry chemical. Water contamination in a closed container or a confined area is to be avoided due to the exothermic CO₂ evolution upon water contamination.

Specific hazards arising from the chemical

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

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Special protective actions for fire-fighters

Do not scatter material with high pressure water streams. Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous. Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO₂ formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Where exposure level is known, wear approved respirator suitable for the level of exposure. If exposure level is unknown, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing in section 8, wear impermeable boots.

Environmental precautions

Prevent unreacted product from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up

Remove sources of ignition. Stop and contain / dam the spill. Absorb spill with inert material (vermiculite / diatomaceous earth). Shovel material into appropriate container for disposal. Do not place in sealed containers as it may still be reacting and could rupture.

SECTION 7: Handling and storage

Precautions for safe handling

Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Wash thoroughly after handling. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

Conditions for safe storage, including any incompatibilities

Keep in manufacturer's sealed nitrogen packed pail. Maintain storage temperatures between 65°F to 86°F (18°C to 30°C). Store in a dry place. Protect from atmospheric moisture. Do not store product contaminated with water to prevent potential hazardous reaction. See Section 10 for more specific information.

Specific end use(s)

See the technical data sheet on this product for further information.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 112-15-2 (EC: 203-940-1)

Diethylene glycol monoethyl ether acetate
No established limits inhalation

CAS: 26471-62-5 (EC: 247-722-4)

TOLUENE DIISOCYANATE (mixed isomers)
DOW IHG: 0.005 ppm TWA inhalation

CAS: 27138-31-4 (EC: 248-258-5)

Dipropylene glycol dibenzoate
No established limits inhalation

Appropriate engineering controls

Use only with adequate ventilation. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Local exhaust ventilation may be necessary for some operations.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses. If splash hazard, wear faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Ensure that eyewash stations and/or safety showers are close to the workstation location if working with concentrated product.

Skin protection

Wear protective gloves. Consult manufacturer specifications for further information. In cured form, the product is difficult to remove from skin and hair.

Body protection

Wear protective clothing. Clothing with full length sleeves and pants should be worn. Selection of additional items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection

Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Environmental exposure controls

Do not let uncured product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Slightly viscous liquid.
Odor	Amber, Sweet smelling liquid.
Odor threshold	No data available.
pH	No data available.
Melting point/freezing point	No data available.
Initial boiling point and boiling range	>180 °F (82°C)
Flash point	>200 °F (93.3°C)
Evaporation rate	Slower than ether.
Flammability (solid, gas)	Non-flammable
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	180 mm Hg @131°C
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	Soluble, reacts with water.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

SECTION 10: Stability and reactivity

Reactivity

Contact with moisture or temperatures above 350° F (177° C) will cause polymerization.

Chemical stability

Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions

Can occur. Exposure to elevated temperatures can cause product to decompose and generate gas. This can cause pressure build-up and/or rupturing of closed containers. Polymerization can be catalyzed by: Strong bases. Water.

Conditions to avoid

Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

Incompatible materials

Acids. Alcohols. Amines. Water. Ammonia. Bases. Metal compounds. Moist air. Strong oxidizers.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Product (calculated):

ATE (inhalation, dust/mist) of mixture: 0.39 mg/l

ATE (inhalation, gaseous) of mixture: 781.25 ppmv

Components:

Diethylene glycol monoethyl ether acetate

LD50 Oral - Rat - 11,000 mg/kg

Dipropylene glycol dibenzoate

LD50 Oral - Rat - 3,914 mg/kg

LD50 Inhalation - Rat - > 200 mg/l - 4 h

LD50 Skin - Rat - > 2,000 mg/kg

TOLUENE DIISOCYANATE (mixed isomers)

LD50 Oral - Rat - 4,130 mg/kg

LC50 Inhalation - Mouse - 0.1 mg/l - 6 h

LC50 Inhalation - Rat - 0.47 mg/l - 1 h

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Acute inhalation toxicity

At room temperature, vapors are minimal due to low volatility. However, certain operations may generate vapor or mist concentrations sufficient to cause respiratory irritation and other adverse effects. Such operations include those in which the material is heated, sprayed or otherwise mechanically dispersed such as drumming, venting or pumping. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates.

Skin corrosion/irritation

Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Serious eye damage/irritation

Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Respiratory or skin sensitization

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

No data available.

Carcinogenicity

IARC: TOLUENE DIISOCYANATE (mixed isomers), 2B

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ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: TOLUENE DIISOCYANATE (mixed isomers), Reasonably anticipated to be a human carcinogen

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

SECTION 12: Ecological information

Toxicity

No data available on product

Components:

Diethylene glycol monoethyl ether acetate

LC50 - Pimephales promelas (fathead minnow) - 110 mg/l - 96 h

EC50 - Daphnia magna (water flea) - > 100 mg/l - 48 h

Dipropylene glycol dibenzoate

LC50 - Pimephales promelas (fathead minnow) - 3.7 mg/l - 96 h

EC50 - Daphnia magna (water flea) - 19.3 mg/l - 48 h

EC50 - Pseudokirchneriella subcapitata (green algae) - 3.6 mg/l - 72 h

TOLUENE DIISOCYANATE (mixed isomers)

EC50 - Daphnia magna (water flea) - 12.5 mg/l - 48 h

NOEL - Daphnia magna (water flea) - 1.1 mg/l

LC50 - Oncorhynchus mykiss (rainbow trout) - 133 mg/l - 96 h

LC50 - Fish - 10-100 mg/l - 96 h

EC50 - Activated sludge - > 100 mg/l - 3 h

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal of the product

Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging

Dispose of as unused product.

Empty Container Precautions:

Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal. Dispose of per local, state and federal guidelines as required by your specific local. This product in its cured foam state is inert and non-toxic.

SECTION 14: Transport information

DOT (US)

Not regulated

IMDG

Not regulated

IATA

Not regulated

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Diethylene glycol monoethyl ether acetate

CAS: 112-15-2

Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate

26471-62-5

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Chemical name: Benzene, 1,3-diisocyanatomethyl-

CAS number: 26471-62-5

New Jersey Right To Know Components

Diethylene glycol monoethyl ether acetate

CAS: 112-15-2

Oxydipropyl dibenzoate

CAS-No. 27138-31-4

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Common name: TOLUENE DIISOCYANATE (mixed isomers)
CAS number: 26471-62-5

Pennsylvania Right To Know Components

Diethylene glycol monoethyl ether acetate
CAS: 112-15-2

Oxydipropyl dibenzoate
CAS-No. 27138-31-4

Chemical name: Benzene,2,4-diisocyanatomethyl-
CAS number: 26471-62-5

California Prop. 65 components

Chemical name: TOLUENE DIISOCYANATE (mixed isomers)
CAS number: 26471-62-5
10/01/1989 - Cancer

SECTION 16: Other information

Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Alchemy-Spetec be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Alchemy-Spetec has been advised of the possibility of such damages.