

Advanced  
Construction  
Technologies



## Seal Leaks

### SPETEC PUR GT380

Hydrophilic Polyurethane Gel Injection Resin

#### Product Identifier

##### *Product Name*

SPETEC PUR GT380

*SPETEC PUR GT380 is a single component, low viscosity, flexible hydrophilic polyurethane gel injection resin.*

##### *Supplier Details*

Alchatek  
4508 Bibb Blvd  
Tucker, GA 30084  
T: (404) 618-0438

##### *Emergency Phone Numbers*

Call CHEMTREC  
Day or Night

1-800-424-9300  
+1 703-527-3887

#### Description

SPETEC PUR GT380 is a single component, low viscosity, flexible hydrophilic polyurethane gel injection resin.

#### Uses

- Shut off water leaks in concrete, brickwork and sewers where movement and settlement may occur.
- Water cut-off of water leaks in foundations such as diaphragm walls, piling sheets and secant piles.
- Sealing water-carrying cracks and joints in tunnel segments.
- Curtain grouting behind tunnel, concrete, brickwork, sewer walls, and sheet piling.
- Automatic sewer injections with packer systems.
- Soil stabilization.
- Injection of water cut-off membranes and liners in tunnels.
- Sealing seawall joints.
- Saturating dry oakum to create a flexible gasket for sealing pipe penetrations, joints and larger defects in concrete structures.

#### Advantages

- 1 Component hydrophilic polyurethane resin, additional mechanical water shut-off through expansion after curing.
- Can be injected as 1 component or 2 component in combination with water.
- Depending on the amount of water added, a rubbery foam (200 to 500%) or stable polyurethane gel (500 to 700%) is formed.
- Cured polyurethane is highly flexible, ideally suited for structures where a high degree of settlement and movement can occur.
- Cured polyurethane is harmless for the environment and resistant to biological attacks.

# SPETEC PUR GT380

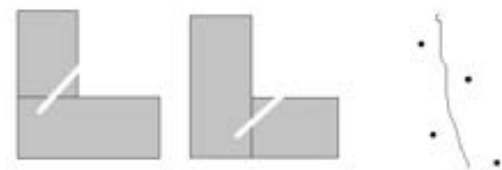
HYDROPHILIC POLYURETHANE GEL  
INJECTION RESIN

## Application

Note: the following are a few typical application descriptions. In case of other jobsite parameters, please contact our technical department.

### PRELIMINARY ANALYSIS

For leaking joints, identify if the cold joint runs vertically or horizontally. Injection holes have to be angle drilled into the joint. For leaking cracks, drill the injection holes in a zig-zag pattern around the crack to make sure that the injection hole intersects the crack.



### PREPARATION OF THE SUBSTRATE

Drill at 45° angle into the crack or joint. Ideally the injection hole should intersect the joint or crack half way through the thickness of the wall or slab. Blow the dust out of the injection hole with a probe that reaches the back of the hole. Fix a packer of the right diameter into the injection hole.

### PREPARATION OF THE PRODUCT

Read the technical and safety data sheets prior to commencement of the injection works.

### PREPARATION OF THE EQUIPMENT

Depending on the application, injection can be carried out using a hand pump, pneumatic pump or electric pump. Use separate pumps for injection of water and polyurethane resin. Check that the pump is working properly. Prior to injection, the resin pump must be flushed with appropriate pump flush and be completely free of water to prevent pump blockage.

### APPLICATION

- Start the injection at the first packer; for vertical joints or cracks this is usually the lowest packer.
- Do not over pressurize while injecting; the correct injection pressure is the pressure that allows resin to flow into the crack or joint. Avoid injecting at pressures of more than 1500psi (100bar).
- If unreacted resin comes out of the joint or crack, stop the injection and move on to the next packer.
- After the last injection of resin into the packer, shoot a little bit of water into the packer in order to make sure that the last injected resin will react as well.
- Only catalyze the resin you will use within the next few hours.
- Always flush the pump out at the end of the day. Resin left in the pump overnight can damage the pump.

# SPETEC PUR GT380

HYDROPHILIC POLYURETHANE GEL  
INJECTION RESIN

## REQUIRED TOOLS

Drill and drill bits of appropriate diameter and length. Mechanical Packers of appropriate diameter and length. Injection pump; manual, pneumatic or electric.

## CLEANING AND MAINTENANCE

After the injection, clean the pump with AS Pump Flush. If the pump will not be used for several days, flush the AS Pump Flush out of the pump with lightweight motor oil or hydraulic fluid and leave it there until the next usage. Never rinse the pump with water. After injection, remove the packers from the concrete and fill the holes with a fast setting cement or any other appropriate filler material.

## Complimentary Products

AS Pump Flush, Mechanical Packers, Oakum, and Injection Needles. SPETEC® I.T.S KIT or SPETEC® R-I.T.S SYSTEM must be ordered separately. See Technical Data Sheets.

## ADVICE / FOCAL POINTS

Avoid injecting when temperatures are below -4°F (-20°C). In extreme cold conditions it is recommended to warm the resin. Since SPETEC PUR GT380 is water-reactive, liquid water should be present.

## Technical Data

### APPEARANCE

#### Physical Properties 77° F (25° C) - Liquid

SPETEC PUR GT380		
Viscosity	(ASTM D4878-98)	±300 Centipoise (± 0.3 Pa·s)
Flash Point	(ASTM D1310-86)	>302°F (>150°C)
Density	(ASTM D3505-96 2000)	1.07

Properties will vary depending on application conditions.

### REACTION TIMES

Temperature	Time
41°F (5°C)	35 - 85 Seconds
59°F (15°C)	30 - 70 Seconds
77°F (25°C)	25 - 60 Seconds

# SPETEC PUR GT380

HYDROPHILIC POLYURETHANE GEL  
INJECTION RESIN

## WATER : RESIN DILUTION RATIO

Temperature	1:1 Ratio Gel Time	1:5 Ratio Gel Time	1:8 Ratio Gel Time
40°F (4.44°C)	2 min, 22 sec	1 min, 52 sec	1 min, 56 sec
50°F (10°C)	1 min, 42 sec	1 min, 21 sec	1 min, 31 sec
60°F (15.56°C)	1 min, 8 sec	55 sec	1 min, 9 sec
70°F (21.11°C)	58 sec	41 sec	59 sec
77°F (25°C)	48 sec	37 sec	43 sec

### Estimating Quantities

Consumption has to be assessed on site and is influenced by the amount of water leaking, thickness of the concrete slab or wall, presence of voids in and around the concrete, etc.

### Packaging

SPETEC PUR GT380 is supplied in 5 Gallon Pails (18.9 Liter Pails)

### Storage and Shelf Life

Store between 41° - 86° F (5° - 30° C).

### Safety Precautions

Avoid contact with eyes and skin, always use personal protective equipment in compliance with local regulations. Read the relevant Safety Data Sheet before use. Safety Data Sheets are available on [Alchatek.com](http://Alchatek.com). When in doubt contact Alchatek Technical Service.