

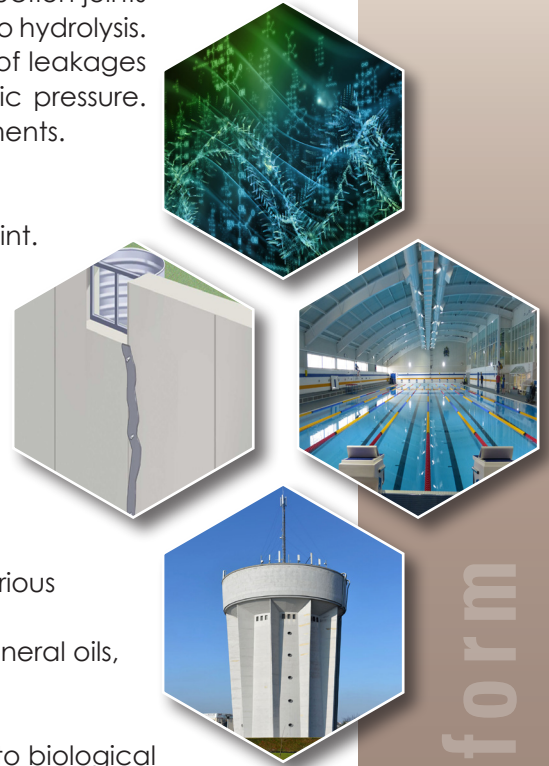
# DryTex INSTA 501

## Polyurethane Injection Foam Resin

DryTex INSTA 501 is a Polyurethane Injection resin designed for instant stopping of pressurized water. INSTA 501 polyurethane resin rapidly reacts to foam on contact with water and instantly block water flow and seals cracks and construction joints permanently and elastically. INSTA 501 is solvent free and resistant to hydrolysis. Fast reacting semi rigid PU foam used as a water stop for sealing of leakages or to stop active water leaks with a high flow or high hydrostatic pressure. Instant water stop for various structures that accompanies movements.

### Features

- Forms a permanent sealing with high strength in the crack or joint.
- Easy application an seamless
- Single injection sealing of water-bearing cracks and joints
- Highly Flexible to accommodate differential movements
- Penetrates deep in fine cracks and withstands water pressure
- Non toxic when contacted with drinking water.
- High density and elasticity foam with excellent waterproof property.
- Excellent adhesion to mineral construction materials
- Superior adhesion to dry and wet substrates .
- Compatible with concrete, steel, masonry mortar, GRC and various substrates
- It is chemically resistant against water, salts, acids and alkali, mineral oils, fungus and bacteria,
- Suitable for Ground water, sea water and petroleum products.
- Comply with NSF/ANSI 61-5 std for potable water and resistant to biological attack.



### Application Field

Injection of water bearing cracks associated with building sub structure ,reservoirs, dam , tunnel, bridge, man hole and specified constructions. Suitable for basement waterproofing and to use for filling voids and back grouting. Good for new construction and repair on existing structures.

### Technical Specification

| Properties              | Typical Value                  | Standard      |
|-------------------------|--------------------------------|---------------|
| Appearance              | Transparent Brown Liquid Resin |               |
| Application temperature | ≥ 5°C                          |               |
| Density                 | ≥ 1 g/cm <sup>3</sup>          | ASTM D3505-96 |
| Foaming                 | ≥ 1000 %                       | EN 14406      |
| Compressive strength    | ≥ 900 psi                      | ISO 604       |
| Flexural strength       | ≥ 10 Mpa                       |               |
| Fire resistance         | B2                             | DIN 4102-1    |

engineered to perform

## Application

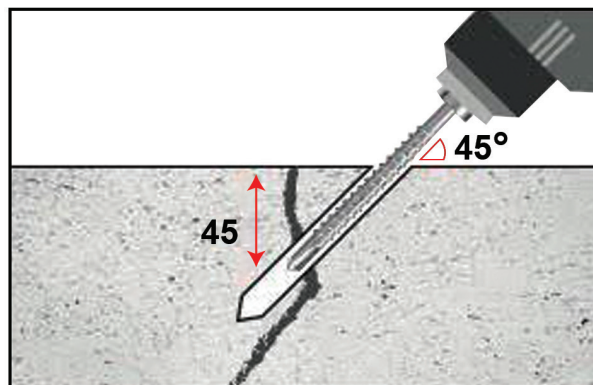
### Typical General Application Steps

#### STEP 1 – Preliminary Analysis

Analysis helps the technician to identify the exact location and the width of the crack to be injected. Sometimes the concrete surface is hidden under a surface of mineral deposits left from long-term water leakage. Items that obscure the crack should be removed, because the crack must to be seen clearly in order to layout the drilling patterns for the injection holes.

#### STEP 2 – Preparation of the substrate

For leaking joints, injection holes to be angle drilled in to 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. In order to inject resin into the crack, it is necessary to install injection ports ( packers ). The diameter of the average injection hole shall be 13mm depending on the packer used. Packers are supplied in several diameters and lengths. The angle while drilling should be approximately 45° or less to the surface and towards the crack. Drill at 45 angle in to the crack or joint. Ideally the injection hole should intersect the joint or crack half way through the thickness of the wall or slab



The depth of the drill hole intersecting the crack should be somewhere close to the middle of structure, if possible. Holes deeper than 30 cm are usually not required even if the concrete being repaired is more than 100cm thick. Holes should always be staggered from one side of the crack to the other. The recommendable number of hole is four in 100cm. This assures a higher percentage of holes intersecting the crack, even if the angle of the crack within the concrete is not perpendicular to the surface. No two cracks behave just alike. In some instances a crack will fill from just a few injection packers. The distance of the drilled holes to each other usually varies from approximately 15cm to 25cm according to the width of the crack. The wider the crack, the further apart are the drill holes.

#### STEP 3- Fixing the Packer

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 in to the injection hole Place packers in the previously drilled hole, so that the top of the rubber sleeve is below the concrete surface. If the packer can't be pushed into the hole, tap it in. Tighten the packer with a wrench as tight as necessary.

**STEP 4- Flush the crack**

In some circumstances, it can be very useful to flush the crack with water to improve the subsequent penetration of the PU resin into thicker walls. Flushing helps to detect blind holes, or lost continuity of a crack.

**STEP 5- PU Foam Resin injection**

When all preparation work is completed, make sure the injection pump is in a good working order. All equipment that comes in contact with the chemicals must be absolutely dry. Always remember that DryTex INSTA 501 is a water reactive product. Load the resin hopper and charge the pump, hose, and gun. Open the valve on the gun, and allow all remaining solvent to pass while watching for the resin to appear. Catch all surplus material and solvent in a waste container. Start slowly injecting the crack, holding the pressure line allows the operator to feel the pump pulsations.

If the crack surface exhibits immediate free flow of resin while working the first packer, pause for a few minutes. In most cases the resin will react fast enough with the water and expand rapidly. The resulting resin product will heal the crack and provide a surface seal to contain the material to follow. After approximately three to five minutes start pumping again.

If the resin continuous to flow freely out of the crack, stops pumping and apply a surface seal over the crack with rapid setting cement or place absorbent materials. Proceed pumping until the resin has traveled from a packer to the next , and is oozing out slowly on the visible side of the crack. Once you are assured that the resin has reached the next injection packer, shut- off resin flow, disconnect your pressure line and proceed to the next packer. Some cases need to be re-inject up to three times. Continue in this fashion until the crack is completely filled.

**STEP 6- Cleaning and service**

Once the injection work is completed, a good and thorough cleanup is essential. The packers can be removed within 24 hours and the holes should be patched. If desired, an electric grinder can be used to remove excess cured grout that flowed out the crack.

**Packing and Storage**

Standard 4 L & 10 L Cans /Pails . Store materials between 40°-90°F with careful handling to prevent damage to products. If conditions exceed these ranges, special consideration in storage must be taken. Do not store at high temperatures in direct sunlight. Shelf life under normal conditions in closed container will be 12 months.

**Health and Safety**

Non Hazardous ; if ingested seek medical advice.

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