

# DANOINJECT PUFC



## Hydrophobic Polyurethane Injection Foam Seal Grout with Catalyst

### DESCRIPTION

**DANOINJECT PUFC** is a solvent free, 100% solid polyurethane based versatile water activated, water cut-off and foam seal quick setting injection grout based on PU-MDI chemistry, which is used in conjunction with a catalyst. **DANOINJECT PUFC CAT.**

When the mix material is injected in to the voids, honeycombs, cracks, gaps, joints, etc., it gets hydro activated in presence of moisture / water to a dense foam while expanding its volume up to 26 times.

Since, water is not a component of foam structure, the cured foam material essentially not get effected by water or dryness nor it undergoes shrinkage or swelling, thus maintaining its expanded volume.

Depending upon the injection pressure and amount of catalyst added, the grout reacts to form very dense closed semi-rigid material to open cell semi-flexible foam. For excellent waterproofing performance, closed cell dense foam formation is desired.

The reaction speed, expansion volume and density depend upon the dosage of catalyst. The higher the dosage, the faster will be the reaction and expansion rate producing foam of low density.

Injection grouting with **DANOINJECT PUFC** is an effective means of cutting-off gushing water of high pressure and stopping water seepage. It is recommended to use **DANOINJECT PUR 2K** for more satisfying and permanent sealing.

**DANOINJECT PUFC** can be effectively used as non-Shrink, high strength soil stabilization grout, provided the moisture content of soil is sufficient to ensure complete reaction.

### ADVANTAGES

- Quick and controlled reaction time.
- Good chemical resistance.
- Reacts suitably with saline and potable water.
- Environmentally safe.
- Deep penetration & sealing effect.
- Good adhesion to surfaces.
- Suitable for back grouting (negative side application)
- Reacts quickly to stop high water flow.
- Inert after curing - does not shrink or swell.

### USES

**DANOINJECT PUFC** is use as hydrophobic injection grout for infiltrating and gushing water in areas such as:

- Tunnels and subways
- Dams and other water retaining structures such as water tanks, water reservoirs etc.
- Basements, elevator pit, and other sub-structures.
- Soil stabilization.
- Pipe joints and pipe intrusions.
- Joints in concrete, brick & limestone construction.
- Repair of defective concrete trough filling and sealing action in cracks, honeycombs etc.
- Sewers, manholes, utility boxes etc.
- Shaft constructions

### PROPERTIES\*

Properties	Value
Colour	Dark Brown
Density, g/ml @ 25°C	1.14 ± 0.05
Viscosity, CP @ 25°C	≈80
Mix Ratio by Weight	20:1 (Resin: Catalyst)
Tensile Shear Strength @ 25°C	≈ 5 MPa
Maximum Volumetric Expansion @ 25°C	26 times (2600 %)
Corrosiveness	Non-Corrosive
Induction Time @ 25°C	10 to 20 seconds
Gel Time @ 25°C	≈ 50 seconds

\*Properties may vary based on the catalyst dosage and presence of moisture / water during reaction.

## APPLICATION

Depending upon the project requirement and site conditions, **DANOINJECT PUFC** is injected using a high-pressure grouting injection pump.

As per the project requirement and site conditions, drill and position the holes of required diameter and injection packers

If the area of application is totally dry, then pre-injection of water may be necessary.

Before using the injection grout pump, ensure that all PUFs of injection grout pump are dry.

Prevent contact of mixed grout with moisture / water prior to injecting to prevent pre-mature reaction.

Inject the grout in to the holes at required pressure in intervals to arrive at a point as to conclude whether further grout injection is required or not.

Immediately after completing the injection process, secondary injection can be carried out through same injection ports using **DANOINJECT PUR 2K** for more satisfying and permanent sealing.

After thorough injection and sealing and curing process, remove the injection packers and seal the holes using plugging or repair mortar.

## CLEANING

Immediately after application, use suitable aromatic solvent for cleaning application tools.

## SUPPLY

**DANOINJECT PUFC** is supplied in 21 Kg, pack size, comprising of **DANOINJECT PUFC**, 20 Kg. and **DANOINJECT PUFC CAT** 1 Kg. It has a shelf life of 12 months when stored under the covered shed in dry and sealed condition.

## STORAGE

**DANOINJECT PUFC** is both temperature and moisture sensitive. Store under the covered shed in dry condition with temperatures between 10°C to 40°C and protect from extremes of temperature, heat, direct sunlight, humidity and children.

Storage above 40°C and high humidity>50% would result in reduced shelf life and performance.

## SAFETY PRECAUTIONS

Normal safety gadgets like goggles, gloves should be used while handling the material. Avoid prolonged contact with the skin, eyes, mouth, and food items.

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