

DANOINJECT PUF

1K Hydrophobic Polyurethane Injection Foam Seal Grout

DESCRIPTION

DANOINJECT PUF is a solvent free, 100% solid polyurethane based versatile water activated, water cut-off and foam seal injection grout based on PU-MDI chemistry, which is used in conjunction with a catalyst **DANOINJECT PUF 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 upto 27 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 depends 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 PUF** is an effective means of cutting-off gushing water of high pressure and stopping water seepage.

As **DANOINJECT PUF** is designed to stop high pressure gushing water, it is recommended to use **DANOINJECT PUR 2K** for more satisfying and permanent sealing.

DANOINJECT PUF 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 and sealing in cracks, cavities and voids.
- Good adhesion to surfaces.
- Suitable for back grouting (negative side application)
- Reacts quickly to stop high water flow.
- Inert after curing –d oes not undergo shrinkage or swelling.

USES

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

- Tunnels and metro 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, brickwork and limestone construction.
- Repair of defective concrete trough filling and sealing action in cracks, honeycombs etc.
- Sewers, manholes, utility boxes etc.
- Shaft constructions

PHYSICAL PROPERTIES*

| Properties | DANOINJECT PUF | DANOINJECT PUF CAT |
|----------------------|----------------|--------------------|
| Colour | Brown | Clear |
| Specific Gravity | 1.130 ± 0.02 | 0.930 ± 0.02 |
| Mix Ratio by Volume | 10 | 1 |
| Pot Life | ≈ 3 hours | |
| Volumetric Expansion | > 27 times | |
| Setting Time | ≈ 55 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 PUF** 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, than pre-injection of water may be necessary.

Before using the injection grout pump, ensure that all components 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 PUF is supplied in 11 Kg, pack size, comprising of **DANOINJECT PUF 10 Kg.** and **DANOINJECT PUF CAT 1 Litre.** It has a shelf life of 12 months when stored under the covered shed in dry and sealed condition.

STORAGE

DANOINJECT PUF 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, high humidity and children.

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

SAFETY PRECAUTIONS

DANOINJECT PUF is non-toxic and non-flammable in nature. However, 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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