



TechnoPur® Grout Gelflex 2K

Hydrophilic low viscous, water-reactive, extended reaction time and Elastic gel-forming two-component polyurethane injection grout system.

Description:

TechnoPur® Grout Gelflex 2K is a solvent and phthalate-free two-component MDI-based hydrophilic polyurethane injection system designed with a mixing ratio of 1:1 by volume with extended gel time forming an elastomeric gel. The special characteristics of "permanently elastic" of TechnoPur® Grout Gelflex 2K allow a permanent crack and joint sealing even in case of movement of the crack and The special characteristics of "extended gel time forming" of TechnoPur® Grout Gelflex 2K allow the reaction time between 20–25 minutes independent from the amount of water present in the structure.

TechnoPur® Grout Gelflex 2K comprised of an "A" component (base resin) and a "B" component (Hardener) can be injected using a pneumatic 2 component injection high-pressure pump that should be capable of reaching pressures up to 200 bar and also can be injected using a single component injection high-pressure pump that should be capable of reaching pressures up to 200 bar by premixing of both components of TechnoPur® Grout Gelflex 2K i.e. components A: components B in one bucket within 30 minutes @25°C.

Application Includes:

- Crack injection to seal leaks, particularly structures subject to movement or vibration.
- Preventative or remedial water proofing of structures.
- To be used in injection hoses.
- Seal off wet, moist and water containing structures
- Consolidation of loose or unstable soil.
- Curtain grouting -A liquid but solidifying gel membrane applied to the positive side of a concrete structure from the negative side.
- Soil binding for slough control and sidewall support.

Features:

- Fast and permanently elastic waterproofing for cracks and joints.
- Waterproofing of active leakages.
- Structural repair.
- High resistance to structural movement.
- Deeper penetration to fine cracks due to exceptional low viscosity.
- The cured material remains flexible.
- Good adhesion to the substrate.
- Can withstand high hydrostatic pressures.
- Suitable for applications where fluctuating groundwater levels are encountered.

Directions for use

Surface preparation

Clean area of concrete so cracks are identifiable. It is recommended to use packers especially when injecting against running water. Other techniques may be used, but are application specific. Drill holes to suit the specific dimensions of the packers and should be spaced at between 150 to 500mm intervals depending upon the crack width, depth and pressure of water. Angle should be at approximately 45° and bisect the crack in the center of the concrete where possible. If rebar is struck, stop drilling and move drilling point to adjacent area. Where possible stagger the injection points either side of the crack. Insert packers and ensure they are tight to the concrete. If necessary they may be sealed with TechnoSeal® EPA 1500(HS) and TechFin® FastPlug as well.

Sealing cracks by injection positioning the injectors.

Make off-set holes on the sides of the cracks. The size of the holes should fit the diameter of the injectors that will be used. Expansion injectors with a non-return valve can be easily fixed by self-tapping completely to the walls of the hole.

If there is no water ingress, normal copper, steel or PVC tubes with a diameter of approximately 10 mm can be used. Detailed information and guidance of pump and packer selection for specific requirements are available from *STIPL.

Typical Properties

Product identity (+20°C and 60% R.H.)		
TechnoPur® Grout Gelflex 2K	component A	component B
Colour:	Clear	Dark brown
Consistency:	liquid	liquid
Viscosity	30 -60 mPa.s	1.120 - 1.140 (B-comp) mPa.s
Specific gravity	1.040-1.060 Kg/m3	1.120 - 1.140 Kg/m3
Mixture characteristics	Component A : component B = 1 : 1 (p.b.v.)	
Colour	Brown	
Mixed viscosity	40 - 60 mPa.s	
Specific gravity	1.080 -1.100 kg/m3	
Gel time	70-90 minutes	
Pot life	60-80 minutes	
Tensile strength	1.5 -2.5 MPa	
Elongation at break	30 - 50 %	
Shore Hardness	50 -70 A	

*All technical data stated herein is based on tests carried out under laboratory conditions.

Packaging

TechnoPur® Grout Gelflex 2K is supplied in 20 kg & 40 Kg dual packs. Packaging size may vary subject to local regulations and requirements.

Shelf Life & Storage

12 months from the date of manufacturing when stored in unopened, original sealed and dry condition at a temperature range from +10°C to 30°C.

Health and Safety instructions

Some people are sensitive to resins so gloves and a barrier cream should be used when handling TechnoPur® Grout Gelflex 2K. If contact with the resin occurs, it must be removed, before it hardens, with a resin removing cream. Follow by washing with soap and water.

Do not use solvent. The use of goggles is recommended but should accidental eye contamination occur, wash thoroughly with plenty of water and seek medical treatment immediately.

Ensure adequate ventilation in volume and pattern in working area and do not smoke during use. Consider property in proximity of the application area to prevent loss or damage. Protect your jobsite from unauthorized persons. Store all materials and equipment safely and out of reach of children and animals.

Observe container labels, SDS, applicable laws and regulations and all instructions before using the product and equipment.

Product only for professional use.

Additional Information: Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

*Separate datasheet are available on these products.

DISCLAIMER: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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Please note that this datasheet supersedes all previous versions.

Preparing the product and injecting

Water flow in water bearing cracks, joints and voids are first stopped through the injection of TechnoPur®InjectoSeal 1K-M The two components that make up TechnoPur® Grout Gelflex 2K must be mixed together by a special pump for two-component resins. In order to carry out injection, TechnoPur® Grout Gelflex 2K part A and TechnoPur® Grout Gelflex 2K part B in the ratio 1:1 by volume, must be separately conveyed through the pump and into the nozzle previously placed on the injector and mixed by a static helicoidal /static in-line mixer placed within the nozzle. After mixing, TechnoPur® Grout Gelflex 2K must be injected continuously through the crack.

The ready mixed material should be installed within 60 minutes using a pneumatic 2 component injection high-pressure pump that should be capable of reaching pressures up to 200 bar and also can be injected using a single component injection high-pressure pump that should be capable of reaching pressures up to 200 bar.

For areas where the ambient temperature is very low, the reaction can be hastened up by adding a special catalyst to get very short gel time (couple of minutes) In that case, a two component mixing machine should be used.

Note: components A and B must be mixed thoroughly before use in order to blend in any additives that may have settled. Component A may become more viscous if stored at low temperatures. TechnoPur® Grout Gelflex 2K should be applied by experienced grouting expert /crews. *STIPL provides detailed method statements on all its products for use in various applications and must be referred to prior to starting the work.

Finishing

Once the injection process has finished, remove injection packers and fill with TechnoSeal® EPA (HS) or TechFin® FastPlug or other appropriate TechFin® material. Scrape off any foam residue from the cracks and dispose of appropriately.

Cleaning

The pump and line of Components must be thoroughly cleaned with TechnoPur® Eco Cleaner and preserved with Flushing oil through pumping it through the pump. Curing process might take place with residual product left in the pump and injection line with the air humidity.

Consumption

Consumption has to be estimated by the operator as it depending on the width and depth of the crack as well as the on the amount of water to be stopped.

Limitations

Temperature significantly affects viscosity. Protect material from excessive heating and cooling prior to grouting to avoid affecting viscosity. Do not reseal containers of contaminated materials as it can create pressure. Clean up spills with adequate ventilation and appropriate personal.

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