FORTA
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TCF 25

Two component polyurethane injection Foam and Resin

Product description

TCF 25 is a two component, solvent free Polyurethane injection resin specifically Designed for rapid water stopping and ground Stabilization.

Fields of application

- Control of high volume water ingress
- Stabilization of fractured rock, sands and Gravels and land-fill materials
- Void filling (do observe maximum amounts to Be injected in dry ground)
- Repair of concrete structures

Features and benefits

- Fast reacting material where structural Strength or rigidity is required
- TCF 25 always reacts with and Without water. This is a significant safety Advantage as the material is always will be Cured
- When in contact with water, the product forms Rigid foam. Without the presence of water, the Product also reacts and forms a stiff, rubberlike Material
- Fast reaction with water, and reaction Completed within a short period of time
- Modification of the reaction can be achieved Using a separately supplied accelerator and Thixotropic agent to Component A

Packaging

TCF 25 is available in the following Packaging: 20L

Technical data

Quantity	Test method	Characteristic
0.02 W/m.k	ASTM-518	Transfer coefficient - thermal transfer
1@2cm 2@4cm	ASTM C-518	thermal resistance
10Mpa max	ASTM D-1621	pushing resistance
36 kg/m2	ASTM -1622	Density
>90%	ASTM D2856	The closed cells
0.4 mpa	ASTM D-1623	Tensile strength
0.8perms@1 0.4perms@2	ASTM E-96	Moisture permeability
At least an inch	Class 2	Vapor Retarder
<10%	ASTM D -2126	Dimensional stability
<0.02 l/s.m	ASTM E-283	Air pass rate
Play Flame - No Play Smoke: very low	ASTM E-84 4 Inches	Bench surface ignition
BS476 Pt 7-89	E	Fire class

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Safety precautions
Refer to the Material Safety Data Sheet for safety measures.
Avoid contact with skin and eyes by using the required personal protective equipment, such as overalls, gloves and eye goggles
If contact with skin occurs, wash thoroughly using soap and water. If contact with eyes occurs, rinse thoroughly with an eyebath filled with botanic solution and seek medical advice.
The cured products are harmless.
Uncured products should be prevented from entering local drainage system and water courses.
Spillage must be collected using absorbent Materials such as sawdust and sand, and dispose Of in accordance with local regulations.

Application procedure
1 - Be sure to mix it completely before use (by shaking the container).
2 - The consumption amount of component A is 25-30% by weight of component B, for example, 250 grams of component A should be used for every 1 kg of component B.
3 - Be sure to close the container after use.
4 - If component A is used more than 30%, the quality of the resulting foam will be low and you will have shrinkage. In case of non-observance of the mentioned points, no claim regarding the lack of quality will be accepted by the seller.

Special Requirements
Please Note: The foaming reaction time is Significantly dependent on the temperature of the PU resin, the rock and the ground water.

Cleaning of injection equipment
For short breaks in injection, pump only Component A through the in-line static mixer Nozzle. After finishing the injection and storage of The equipment pump, clean engine or hydraulic oil Through pump and injection lines. For cleaning, the use of a flushing agent for Polyurethane resin should be used.

Storage
If stored in dry conditions, in unopened, tightly Closed original containers and within a Temperature range of +5ºC and +35ºC, the Components of TCF 25 have a shelf Life of MAX 12 months.

Ground improvement
Large single volumes of resin in the ground will Generate a significant amount of heat due to the Exothermic reaction between the two components. Particularly during void filling and ground Improvement injections one should always Determine maximum amounts to be injected in Order to avoid too large single volumes close to The tunnel which can cause overheating of the Reacting resin, with a potential risk of smoke Development and/or melting and boiling of the Resin.
For these types of injections one should always Apply the resin in a foaming mode (with 2% water Pre-mixed to component A)
The following general recommendation is given:
Drill-hole lengths 9 m or more: Max. 400 kg / hole
Drill-hole length 4 – 9 m: Max. 250 kg / hole
If need for larger amounts of resin to resolve the Issue, one can re-drill and re-inject 24 hours later.
For drill-hole lengths shorter than 4 m one should Always avoid any single concentrations or Volumes of resin larger than 150 kg resin. Should Backflow occur, the injection must be terminated (Or pumping speed significantly reduced) until the Backflow is blocked.