INJECT 1000

Hydro-expansive, Flexible, Injectable
Polyurethane Resin

PRODUCT DESCRIPTION

SUPERSHIELD INJECT 1000 is a semi-flexible polyurethane resin that expands to approximately ten times its initial volume. This solvent-free resin is ideal for sealing both small and large water leaks in concrete or solid masonry through injection. It is also perfect for filling and sealing small cavities, joints, and discontinuities that are subject to movement.

In contact with water, SUPERSHIELD INJECT 1000 forms a flexible polyurethane foam. Technically, it is a mono-component product which reacts spontaneously with the water present in the masonry to be sealed. The speed of reaction with just water, however, would be very slow relative to the construction site requirements. It is therefore essential to use an expansion accelerator, sold in combination with the same resin (component B). The polyurethane foam resulting from injection operations, will keep its volume stable once expanded. A good resistance to hydraulic pressure in the water flow after about 1-2 minutes from the time the reaction took place. The formation of CO_2, typical of the polyurethane reaction, will further pressurize the system, thus favoring the penetration of the resin in the cracks and cavities. In a free environment, SUPERSHIELD INJECT 1000 expands to about 10 times its initial volume.

AREAS OF APPLICATION

SUPERSHIELD INJECT 1000 is specifically designed to stop water infiltration in underground environments. It efficiently fills small cavities, cracks, fissures, and addresses both static and dynamic joints within concrete and solid masonry structures. It is suitable for use on various substrates including concrete, bricks, tuff, mixed masonry, stone masonry, and rock walls.

TECHNICAL DATA

General Characteristics	
PROPERTY	**VALUE**
Color	Brown
Specific Gravity	1.08 Kg/l
Temperature of Use	+8/ +35°C
Viscosity Resin	130 mPas
Pot life	<5 min

APPLICATION GUIDELINES

Application

Pour 100 g of component B for every kilogram of component A into a bucket. Mix thoroughly using a hand tool—avoid using a mixer drill as the resin may react with environmental humidity. To minimize material waste, prepare only the necessary amount for immediate use, typically no more than 2-3 kg at a time. The mixture can be injected using a manual or electric monocomponent resin pump, with pressures ranging from 40 to 200 bar. Adjusting the quantity of component B, the accelerator, can modify the reaction speed. Note that using more than the recommended 10% catalyst will decrease the reaction time. Regularly clean the pump and equipment if breaks exceed 15 minutes or after each use, utilizing SUPERSHIELD Pump Cleaner and rinsing with a quarter litre of the cleaner afterwards.

HEALTH AND SAFETY

To ensure safety, avoid direct contact with skin and eyes. Always wear safety glasses, gloves, and protective clothing. In the event of contact with eyes, rinse immediately with water and seek medical advice. If resin contacts skin, rinse thoroughly with water. Manage spills by absorbing them with sand and disposing according to local regulations. Be aware that the resin reacts with water and air moisture, generating CO_2 gas which can pressurize opened containers. For detailed safety information, consult the safety data sheet.

STORAGE

Protect the INJECT 1000 from freezing and store it in its original packaging in a cool, dry environment away from frost and direct sunlight. Inadequate storage may result in a loss of rheological performance. Opened containers should be used immediately to prevent quality degradation. Additionally, ensure the product is protected from humidity and stored at temperatures ranging between +10°C and +30°C. SUPERSHIELD INJECT 1000 has a shelf life of 12 months if stored as recommended.

PACKAGING

SUPERSHIELD INJECT 1000: 25 Kg Container
SUPERSHIELD INJECT 1000 CAT (Catalyst): 2.5 ltr

WARRANTY

Supershield warrants that its products will be free from material defects and will comply with the specifications provided in their respective technical data sheets. If any product is proven to be defective, Supershield's liability will be limited to the replacement of the product. Supershield will not be liable for any incidental or consequential damages. No other warranties, express or implied, shall apply, including warranties of merchantability or fitness for a particular purpose. It is the user's responsibility to determine the suitability of the product for their intended use and to assume all risks and liabilities associated with its application. Supershield reserves the right to alter the properties of its products without prior notice.