



SYN.0187

SYNTECH HAG ECO

Hydro-expansive polyurethane
resin, without solvents, injectable

✘ Customs Code

3909 5090

⚖ Dosage

0.8 - 1.2 kg /m
(Recommended: 1 kg /m)

📦 Packaging

- Can 25 kg [A]
- Plastic can 2.5 kg [B]
- Kit: 1 Can 25 kg [A] + 1 Plastic can 2.5 kg [B]

🔧 Application

- Injection
- Pump



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Family
Syntech

Type
Polyurethane hydro expansive resins and related
accessories

Product Lines
• Aqua
• Infratech

Functional Categories
• **Instantaneous stoppage of water infiltrations in buildings**
• **Waterproofing underground structures with hydro-expansive products**
• **Waterproofing control joints or construction joints**
• **Structural maintenance of dams, reservoirs, ducts and water ducts**
• **Structural maintenance of tunnels**

Components
Two-components

Appearance
Liquid + Liquid

General description

Mono-component semi-flexible, expanding (increases its initial volume of about 20 times) polyurethane resin, free from solvents, perfect for sealing small and large water leaks in the concrete or in solid masonry in general by injection. Perfect for filling large voids and loose stone foundations inside the walls.

General features

In contact with water, SYNTECH H.A.G. ECO, forms a semi-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 CO₂, typical of the polyurethane reaction, will further pressurise the system, thus favouring the penetration of the resin in the cracks and cavities. In a free environment, SYNTECH H.A.G. ECO expands to about 20 times its initial volume.

Fields of application

Stop the infiltration of water in underground spaces.
Perfect for waterproofing filling large cavities or loose stone foundations in the concrete and in solid masonry in general.

Available colours

- Brown

Basic features

🏷 Highlighted product

📊 Density:
1.15 kg/dm³

🕒 Hydroexpansive product:
+2000 %

⌚ Pot-life:
<5 min

🕒 Shelf-life:
6 months

🧪 Solvent-based product

🌡 Temperature of use:
+8 / +35 °C

👁 Use wearing protective glasses

🧤 Use wearing protective gloves

Technical specifications

Viscosity: 90 mPa

Tools cleansing

- Nitro thinner

Applicable on

- Concrete
- Bricks
- Tuff
- Mixed walls (bricks and stones)
- Stone walls
- Rock walls

Instructions for use

Pour 100 g of component B for each kilogram of component A (ideal and recommended dosage), in a bucket. Mix the two components thoroughly with a hand tool (do not use a mixer drill). Keep in mind that the resin could react even with the environmental humidity, therefore, to reduce the waste of material it is advisable to prepare a quantity of mixture strictly necessary for the intended use from time to time (2-3 kg of mixture at a time may be more than sufficient).

The mixture of SYNTECH H.A.G. ECO and its catalyst can be injected with a manual or electric pump for monocomponent resins, at pressures ranging between 40 and 200 bar.

The reaction speed can easily be adjusted based on the accelerator (component B) quantity. Adding a greater quantity of catalyst, compared to the recommended 10%, reduces the reaction time.

Always clean the pump used thoroughly at the end of the operations with Nitro thinner and the specific lubricant detergent SYNTECH H.A.G. CLEANER.

Substrate preparation

The application surfaces should be clean, free of incrustations, crumbling and non-adhering parts, dust, moss, moulds, etc. Prepare the appropriate injectors, usually "staggered" (from one side to the other of the discontinuity to be sealed). Preliminarily inject abundant water in the discontinuity until saturation (if not already present).

Storage and preservation

Protect from freezing. Store the product in its original packing, in a fresh and dry environment, avoiding frost and direct sunlight. Inadequate storage of the product may result in a loss of rheological performance. Opened containers must be used immediately. Protect from humidity. Store the product at a temperature between +10°C and +30°C.



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Warnings, Precautions and Ecology

Technical and performance data outlined in this document are the result of laboratory testing conducted in a conditioned environment, as such they can result as considerably changed from operating and application conditions. The need follows to carry out preliminary tests in actual use conditions.

The user is required to check the product's most recent Material Safety Data Sheet, reporting physical-chemical and toxicological data, risk phrases and other useful information on how to safely transport, use and dispose of the product and its packaging. It is also reminded that the product and its packaging must not be dispersed in the environment for any reason.

SYNTECH H.A.G. ECO is packaged under dry nitrogen and is very sensitive to humidity, also environmental. It is recommended that you use a very small quantity at a time and carefully close the whitewash before putting them to rest.

Ensure the secure sealing of the injectors placed in the supports. Given the high injection pressures reached by the pumps, in the case of injectors not positioned securely and correctly there is a real risk that they might come out at high speed from their seat (with the risk of injury to the operators!).

Carefully study the positioning of the injectors near the masonry discontinuities to be injected. Bad positioning, too close to the crack to be filled, can cause the breaking of the support itself under the pressure of the pump.

Take all due care during the use of the electric pumps, which can easily reach a pressure of 200 bar, and thus cause undesired breaking of concrete and masonry supports being injected.

Remove resin residues overflowing from masonry within a few hours of stopping infiltrations. Delayed removal may be more difficult.

SYNTECH HAG ECO is produced/distributed by



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