

GLOBALFOAM PU/NF

GENERAL INFORMATION

Two-component polyurethane injection foaming-resin, self-extinguishing, ensuring high reactivity, excellent mechanical strength and chemical stability; designed for waterproofing and consolidation of rocks, friable land and structures affected by high-pressure water, as well as to convey water in aquifers and fill voids and cavities.

Does not contain halogens and CFC.

The main **fields of application** of **GLOBALFOAM PU/NF** are as follows:

- Tunnels: waterproofing of major water infiltrations through block fissures or joints
- Dams and hydraulic works: repair/sealing of fissures (even in the presence of aquifers)
- Wells: waterproofing/sealing of joints, fissures and cracks in the event of major water losses
- Air gaps: sealing and insulation
- Sub-foundations: waterproofing
- Friable and loose land: consolidation
- Walls and masonry: waterproofing underneath aquifers
- Coal mines: consolidation, waterproofing, gas sealing

GLOBALFOAM PU/NF, since its particular composition, penetrates into the smaller fissures and seals them even against significant water infiltration.

GLOBALFOAM PU/NF always hardens, with or without water. It forms a stable, resistant, hard yet flexible foam, characterised by high chemical-mechanical stability.

The hardening/foaming reaction takes place very quickly. Nevertheless, for specific applications, or low application temperatures (below + 15°C), it can be accelerated by adding to the A component small quantities (0,5-1 % in weight) of a specific catalyst (K2 Accelerant).

Since its peculiar characteristics (low viscosity, elevated expansion rate, high mechanical properties, and high reactivity even in presence of high pressure water), **GLOBALFOAM PU/NF** can replace both Globalfoam SP and Globalfoam WR in many cases.

Globalfoam PU/NF is not pollutant for environment.

TECHNICAL PROPERTIES

(at +25°C and 60% R.H.)

Chemical nature - component A	: polyether and additives.
Chemical nature - component B	: diphenylmethane 4,4 diisocyanate, essentially polymeric, plus silicone additives
Density - Component A	: 1.080 ± 0.03 (g/cm ³)
Density - Component B	: 1.240 ± 0.05 (g/cm ³)
Viscosity - Component A	: 200 - 300 mPas (Brookfield viscosity)
Viscosity - Component B	: 160 - 240 mPas (Brookfield viscosity)
Colour - Component A	: straw yellow - amber
Colour - Component B	: brown
Mixing ratio (A+B)	: 100 + 100 parts in volume 100 + 115 parts weight (A+B)
Reaction start	: less than 10 seconds
Foaming end (complete curing)	: 3-5 minutes
Expansion factor	: 15-25
Injection temperature range	: +15°C / +30°C
Shelf life	: 1 year, in original sealed packaging stored in a cool, dry place at temperatures between +5 °C and +30°C.
Service temperature	: -40°C/+ 80°C

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APPLICATION METHOD

The two components of **GLOBALFOAM PU/NF** must be mixed together using a pump for two-component resins with a static helix mixer. The mixing ratio is 1:1 by volume. After mixing, **GLOBALFOAM PU/NF** is injected continuously through the fissure. While the two components are mixed, viscosity increases substantially to avoid separation or wash-out of the injected material by pressurised water.

Make sure that the diameter of the holes drilled next to the fissure to be sealed is suitable for the dimensions of the injectors used. We recommend the use of expansion injectors with non-return (check) valves (packers).

For application below 15°C, we suggest the use of 0.5-1% of catalyst K2 (accelerator), while for application below 0°C, store product and pump in container at least at 15°C for 24 hours, and use special heated mantle covered piping to inject the resin.

In contact with water the product starts to react and foams up. The continuous ingress of resin displaces the existing water and the resin forms a water-tight shell.

CLEANING

Injection equipment must be washed with mineral oil free of water and impurities after every application.

STORAGE DURATION

1 year, in original sealed packaging stored in a cool, dry place at temperatures between +5 °C and +30°C.

Note: if during transportation the product gets frozen, we recommend storing it for at least 12 hours at 15 °C before using.

Don't use direct heating methods (i.e flame), but store in conditioned container or warehouse.

In winter time, we suggest transportation inside insulated containers.

PACKING

20kg+23kg drums



NOTE. Component A and component B must be shaken well before use in order to re-homogenise any settled additives.

Component B suffers high humidity condition (isocyanate based), therefore we suggest opening the can immediately before the application and in case of humid environment, please use the whole content.

The information given to users is based on our best experience. However, because of the many possible applications, which are outside of our knowledge and control, we cannot accept liability for loss or damage resulting from reliance upon such information.

Service temperature: it's the "working temperature" of the product; that is to say, the temperature to which can resist the product once it has been applied.