MAPEI

CE
EN 1504-5

Foamjet F

Ultra rapid setting two-component polyurethane resin with fluid consistency, to be injected, for consolidating and waterproofing of structures subject to water ingress

WHERE TO USE
- Consolidating rock subject to water ingress.
- Consolidating water saturated ground.
- Waterproofing concrete structures and cracked walls subject to water ingress, also under pressure.
- Repair of concrete structures or cracked walls also in the presence of water ingress or saturated with humidity.

Some application examples
- Waterproofing tunnels subject to water ingress through possible cracks or in fissures between keystones.
- Waterproofing shafts or hydraulic structures that manifest water leakage through working joints or cracks.
- Repairing cracks in dams, channels and bulkheads when permanently immersed in water.
- Sealing cracks in floorings or slabs that are damp or saturated with water.

TECHNICAL CHARACTERISTICS
Foamjet F is a two-component polyurethane expanding resin, self-extinguishing for injections.

Foamjet F component A and component B must be mixed in the ratio 1:1 by volume, by using an adequate pump: the two components reaction leads to a great resistance polyurethane foam.

Thanks to its high fluidity, **Foamjet F** can penetrate through cracks of only some one hundred microns wide and seals the cracks even if they are subject to water infiltrations.

At the end of the setting time, between 3 and 5 minutes, depending on the temperature, **Foamjet F** becomes completely waterproof and ensures an adequate consolidation to the treated structure.

In certain conditions, when the product needs to react more quickly than normal after mixing components A and B, add 0,5-1% of **Foamjet AKS** to component A, depending on the conditions in the area where the work is being carried out.

Foamjet F is CFC-free.

RECOMMENDATIONS
Although **Foamjet F** is also suitable for structural consolidation of cracked concrete not subject to water infiltration or high humidity during injection of the product, it is recommended, when rapid hardening is not required, to substitute **Foamjet F** with **Epojet** fluid epoxy resin.

Foamjet F

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	component A	**component B**
Colour:	light yellow	dark brown
Consistency:	liquid	liquid
Density (at +25°C) (UNI EN 2811-1) (g/cm^3):	1.080 ± 0.02	1.240 ± 0.03
Viscosity (at +23°C) (UNI EN 3219) (mPa·s):	330 ± 65	250 ± 50
APPLICATION DATA		
Mix ratio:	component A : component B = 1 : 1 (by volume)	
Foaming factor:	app. 20 times the initial volume	
Beginning of reaction:	< 10”	
Time required to harden:	3-5 minutes, depending on ambient conditions	

Component A and component B must be shaken well before use in order to re-homogenies any settled admixtures.

Component B suffers high humidity condition (isocyonate based), therefore we suggest to open before the application and in case of humid environment, please use the whole content.

Component A may suffer from significant increase in viscosity if stored at low temperatures.

Temperature influences the hardening time of **Foamjet F**; temperatures lower than +15°C lengthen setting time. It is therefore recommended to seek information from our Technical Services Department before injection takes place in structures that are subject to high pressure water ingress.

DIRECTIONS FOR USE

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 and can be fixed with **Adesilex PG1**.

Preparing the product and injecting

The two components that make up **Foamjet F** must be mixed together with a special pump for two-component resins.

In order to carry out injection, **Foamjet F** component A and **Foamjet F** component 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 with a worm screw placed within the nozzle.

After mixing, **Foamjet F** must be injected continuously through the crack.

Foamjet F always hardens, with or without water. While the components are mixed, **Foamjet F** increases in volume and becomes a polyurethane foam that seals the cracks, hence blocking infiltrations.

Consolidating ground and rock

The product is prepared with the same pump for two-component resins used for injecting in the cracks.

During injection while **Foamjet F** increases in volume; the following resin that is pumped into the ground and the rock, pushes the porous material in the most internal layer.

Following this phenomenon, a polyurethane waterproof layer of different thickness is formed, which permanently consolidates the injected material.

Cleaning
Clean injection equipment (pump and tubes) with mineral oil free of water and impurities after use.

CONSUMPTION
If the reaction is effected in free expansion, 1 litre of product produces 20 litre of foam. If the reaction is effected in a confined space, consumption depends on the degree of confinement.

PACKAGING
43 kg units:
– component A = 20 kg;
– component B = 23 kg.

STORAGE
Foamjet F can be stored for maximum 1 years in covered and dry place in original sealed containers and at temperatures between +10°C and +30°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION
Foamjet F component A is not considered hazardous according to current norms and guidelines regarding the classification of mixtures.
Foamjet F component B is irritant for the eyes, the skin and the respiratory tract; furthermore, it may cause sensitization if it comes in contact with the skin of subjects sensitive to isocyanates and it may cause irreversible damage if used for lengthy periods.
The product does not give off harmful fumes at room temperature and under normal application conditions. The products may become hazardous and cause sensitization if inhaled at temperatures above +60°C. In the event of sickness seek medical attention.
During use wear protective clothing, gloves and goggles, a safety mask to protect the respiratory system and to work only in well ventilated areas. If the product comes in contact with the eyes or skin wash immediately with plenty of water and seek medical attention.
When the material reacts it generates a high amount of heat. We recommend applying the product as soon as possible after mixing components A and B and to never leave the container unattended until it is completely empty.
For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT ONLY FOR PROFESSIONAL USE.

WARNING
Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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All relevant references for the product are available upon request and from www.mapei.com

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