

Silicajet ST HP

Modular setting time two-component structural organo-mineral non expanding resin, with high mechanical characteristics, to be injected for consolidating and waterproofing of structures subject to the presence of water

DESCRIPTION

Silicajet ST HP is a two-component organo-mineral resin for injection. **Silicajet ST HP** component A and component B must be mixed in the ratio 1 : 1 by volume, by using an appropriate pump: the two component reaction leads to a high mechanical characteristics organo-mineral product. Due to its high fluidity, **Silicajet ST HP** can penetrate through very thin fissures and seals the cracks even if they are subject to the presence of water. At the end of the setting time, **Silicajet ST HP** becomes completely waterproof and ensures an adequate consolidation to the treated structure.

WHERE TO USE

- Underground structures and works.
- Consolidation of broken rock and ground.

Some application examples

- Rock bolts injection.
- Consolidating rocks subject to water ingress and saturated ground.
- Waterproofing concrete structures and cracked walls also in the presence of water.
- 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.

DIRECTION FOR USE

Sealing cracks by injection

Positioning the injectors

Make scattered holes on the sides of the cracks. The size of the holes should fit the diameter of the packers that will be used.

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

In order to carry out injection, **Silicajet ST HP** component A and **Silicajet ST HP** component B in 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.

In particular conditions where it would be necessary to achieve a faster beginning of reaction than the one obtained mixing only **Silicajet ST HP** component A and **Silicajet ST HP** component B, it is possible to add to **Silicajet ST HP** component A the accelerator **Foamjet AKS** from 0.5% to 1% by weight, depending on the environmental conditions.

Silicajet ST HP must be injected continuously through the crack.

While the components are mixed, **Silicajet ST HP** becomes an organo-mineral material with great mechanical characteristics that seals the cracks, blocking infiltrations.

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	component A	component B
Colour:	opalescent	dark brown
Consistency:	liquid	liquid
Density (at +25°C) (EN 2811-1) (g/cm ³):	1,450 ± 0.05	1,180 ± 0.05
Viscosity (at +25°C) (Brookfield LVT) (mPa·s):	450 ± 50	650 ± 50
APPLICATION DATA		
Mix ratio:	component A : component B = 1 : 1 (by volume)	
Foaming factor:	not expanding	
Beginning of reaction:	5'-6' depending on ambient condition	
Ending of reaction:	15'-20' depending on ambient condition	
Operating temperature (°C):	+15/+30	
MECHANICAL CHARACTERISTICS		
Compressive strength (N/mm ²):	≥ 50	

Consolidating ground and rock

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

During the injection, while **Silicajet ST HP** is reacting, the following resins that is pumped into the ground and the rock, pushes the porous materials in the most internal layer. Following this phenomenon, organo-mineral waterproof layer of different thickness is formed, which permanently consolidates the injected materials.

Cleaning

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

CONSUMPTION

1 l of product produces 1 l of resin.

PACKAGING

Silicajet ST HP component A = 24 kg;
Silicajet ST HP component B = 20 kg.

STORAGE

Silicajet ST HP can be stored for maximum 12 months in a covered and dry place in its original sealed containers and at temperature between +5°C and +30°C.

RECOMMENDATIONS

Although **Silicajet ST HP** 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 **Silicajet ST HP** with **Epojet** fluid epoxy resin.

In certain conditions, when the product needs to react more quickly than normal after mixing component A and B, add 0.5-1% of accelerator AKS to component A, depending on the conditions in the area where the work is being carried out.

Temperature influences the hardening time of **Silicajet ST HP**; temperature lower than +15°C improves the 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.

SAFETY INSTRUCTION FOR PREPARATION AND INSTALLATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

PRODUCT 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

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another

project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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

**Silicajet
ST HP**

