

KÖSTER

KB-Pur[®] 2 IN 1

Technical guideline / Article number **6.145**

Issued: Sept. 23, 2011

- Industry classification "KB-PUR" registered at the German patent office, 395 06 701

Water reactive elastic PU-injection resin for single and two stage injection of dry and water bearing cracks and joints

Features

When KÖSTER KB-Pur[®] 2 IN 1 resin comes into contact with water, it reacts to form a highly elastic foam. When KÖSTER KB-Pur[®] 2 IN 1 resin is injected under dry conditions, it reacts to form a solid body elastic resin. KÖSTER KB-Pur[®] 2 IN 1 remains permanently elastic after reacting. It is therefore able to follow crack movements and seal cracks permanently with an elastic polyurethane solid resin without necessitating follow-up injections. KÖSTER KB-Pur[®] 2 IN 1 is a fast reacting foam for the short term sealing of leaks as well as a elastic solid resin for the permanent sealing of cracks. KÖSTER KB-Pur[®] 2 IN 1 unites two resins in one product. KÖSTER KB-Pur[®] 2 IN 1 is free of solvents and it is resistant to hydrolysis. KÖSTER KB-Pur[®] 2 IN 1 does not react aggressively when coming into contact with steel or iron, so that a corrosion protection is achieved.

Advantages

- only one product is needed on the jobsite- provides for easier calculation of required resin quantities
- applicator no longer needs to verify if a crack is wet or dry
- re-injection is done through the same packers as initial injection
- comparably long pot life compared to other injection resins
- polyurethanes won't turn brittle over time like epoxies

Technical data

Mixing viscosity at 25°C (ISO 2555)	approx. 250 mPa.s
Volume increase at water contact:	max. 1:20
Density of the mixture at 20°C (DIN 53479)	approx. 1.1 kg / l
Spec. gravity of the cured foam	approx. 0.05-0.1 g / cm ³
Starting time at water contact:	approx. 50 sec.
Expansion time:	approx. 180 sec.
Non-sticky after	approx. 6 min.
Pot life (20°C, 1 kg of mixture) (DIN EN 1504-5)	45 min.
Reaction time without water contact (at 20 °C)	approx. 24 hrs.
Mixing ratio (by weight)	1 : 1 (A : B)
Mixing ratio (by volume)	1.21 : 1 (A : B)

Field of application

The material can be applied for single-staged sealing of dry cracks in concrete and masonry utilizing a pressurised injection system without necessitating follow-up injections. It can also be used for two-staged sealing of water bearing cracks. It can be used to inject dry and water bearing construction joints and for filling dry or wet voids.

Mixing

The A and the B component are recommended to be mixed at 20°C in the given mixing ratio using a slowly rotating electrical mixer preferably equipped with a KÖSTER Resin Stirrer. The material must be mixed until it is streak free and homogeneous in appearance and consistency.

Application

The ready mixed material must be used within the given pot life. The mixture can be applied using conventional single component injection pumps such as the electrical KÖSTER 1C Injection Pump. Prior to the injection, the cracks can be sealed using KÖSTER KB-Fix 5., Holes are drilled on alternating sides along the course of the crack at an interval of approx. 10 – 15 cm. Injection packers are inserted into the holes and (when possible) injected from bottom to top. The diameter of the drill holes depends on the injection packers chosen. In case of dry cracks, KÖSTER KB-Pur[®] 2 IN 1 is applied with a single-step injection. In case of water bearing cracks, the injection is carried out in two stages:

1st stage: Injection of KÖSTER KB-Pur[®] 2 IN 1 until the resin is discharged as foam from the adjoining drill hole or respectively the surface of the crack.

2nd stage: Follow-up injection with KÖSTER KB-Pur[®] 2 IN 1 within 10 to 15 minutes of the initial injection with KÖSTER KB-Pur[®] 2 IN 1. The follow-up injection has to be carried out within the pot life of the initially injected material. (When filling large, wet voids always inject in two stages. Waiting time between the first and second injection is at least 1 hour.)

Consumption

Approx. 0.1 kg / l void (foam)

Approx. 1.1 kg / l void (solid resin)

Cleaning of tools

Clean tools immediately after use with KÖSTER KB-Pur® Cleaner.

Packaging

25 kg, 5 kg and 1 kg combi-packages

Storage

Store the material at temperatures between + 10° and + 30 °C. In originally sealed packages, the material can be stored for 6 months.

Safety precautions

Wear protective gloves and goggles when processing the material.

When carrying out injection work, make sure to protect the surrounding work area from injection resin that may be discharged from the wall, packers, drill holes, etc. Do not stand directly behind the packers during injection.

Technical guidelines cited

KÖSTER KB-FIX 5	Art. No.	5.01
KÖSTER KB-Pur® Cleaner	Art. No.	9.10
KÖSTER 1C Injection Pump	Art.-No.	12.072
KÖSTER Resin Stirrer	Art. No.	12.088

The information contained in this technical data sheet is based on the results of our research and on our practical experience in the field. All given test data are average values which have been obtained under defined conditions. The proper and thereby effective and successful application of our products is not subject to our control. The installer is responsible for the correct application under consideration of the specific conditions of the construction site and for the final results of the construction process. This may require adjustments to the recommendations given here for standard cases. Specifications made by our employees or representatives which exceed the specifications contained in this technical guideline require written confirmation. The valid standards for testing and installation, technical guidelines, and acknowledged rules of technology have to be adhered to at all times. The warranty can and is therefore only applied to the quality of our products within the scope of our terms and conditions, not however, for their effective and successful application. This guideline has been technically revised; all previous versions are invalid.