BUILDING TRUST

PRODUCT DATA SHEET

SikaFix® HH+

Hydrophobic, expanding, polyurethane, chemical grout

PRODUCT DESCRIPTION

SikaFix® HH+ is a hydrophobic polyurethane foam grout that, when used with accelerator, is designed to stop water infiltration and fill voids outside a structure or joint and cracks in concrete structures. It may also be used in applications with high pressure flowing water.

USES

- Fill joints or cracks in concrete structures that exhibit some movement
- Fill voids such as rock fissures, crushed fault or gravel layers
- May be used in applications with high pressure water flow
- Curtain wall grouting below grade structures

CHARACTERISTICS / ADVANTAGES

- Easy to apply, one component with accelerator
- Hydrophobic, only a small amount of water is needed for reaction
- Expands up to 30 times the liquid volume
- Non-flammable
- Contains no volatile solvents
- 100% solids

PRODUCT INFORMATION

Packaging	5 gal. metal pail. SikaFix Accelerator is available in 1 pint containers and SikaFix PumpF lush is available in 5 gal. pails. Sold separately.		
Color	Amber/Tansparent Liquid		
Shelf Life	1 year in original unopened container		
Storage Conditions	Store in a dry area between 40–90 °F (4–32 °C) using original re-sealable containers		
Density	4 lbs/ft³ **Specific Gravity:** 1.13		(ASTM D-1622)
Flash Point	**Uncured (COC method)** >200 °F	**SikaFix Accelerator** 216 °F	(ASTM D-93) (ASTM D-3278-96)
Viscosity	**Uncured** 700 cps @ 74 °F (23 °C)	**SikaFix Accelerator** 25 cps @ 74 °F (23 °C)	(ASTM D-1638)

TECHNICAL INFORMATION

Tensile Strength	29 psi	(ASTM D-638)
Elongation at Break	44 %	(ASTM D-412)
Shrinkage	<1%	
Lap Shear Strength	17 psi	(ASTM C-273)
Service Temperature	180 °F (82 °C) max	
Swelling	Absorption < 1%	(ASTM D2842)

APPLICATION INFORMATION

Gel time

Temperature	Gel time in minutes/seconds
50 °F (10 °C)	3 m 15 s
68 °F (20 °C)	2 m 10 s
77 °F (25 °C)	1 m 20 s
86 °F (30 °C)	1 m 10 s

Based on 2.5 % SikaFix Accelerator dosage, corresponding with the recommended 5 gallon:1 pint ratio of SikaFix HH+ to SikaFix Accelerator. SikaFix Accelerator must be agitated by shaking the container prior to use.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LIMITATIONS

- Low temperatures will significantly affect viscosity and reaction time. If SikaFix Accelerator is allowed to freeze, it will lower performance of the product.
- Avoid splashing water into open containers, as material is water activated
- Water used to activate SikaFix HH+ must be in a range of pH 3-10 for optimum foam quality
- Material must be stored between 40–90 °F (4–32 °C)
- Material must be preconditioned to between 60–90 °F (16–32 °C) before use
- Ambient temperature must be between 40–90 °F (4–32 °C) for use
- Must be used in confined spaces
- The reaction may be affected by the presence of hydrocarbons. Pretesting is recommended.
- Special attention has to be paid to avoid breathing mist or vapors, please refer to current SDS for more information.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

VOC = 0 g/L

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

When the crack is contaminated on the outside, it will be necessary to clean the crack surface so that the crack can be exactly located. If the crack is wide or high water flows are encountered, it will be necessary to seal the surface of the crack with a surface sealing material (SikaSet Plug or open cell polyurethane foam saturated with SikaFix® HH+). The surface sealing can be done before or after drilling the injection holes, depending on the particular situation.

MIXING

Prior to installation, the material should be agitated by vigorously shaking the 5-gallon pail or by mixing with a jiffy mixer, bung mixer or by hand. Prior to using SikaFix Accelerator, the container should be shaken vigorously as the contents may settle during storage. For normal use, each 5 gallon unit of SikaFix® HH+ should be used with one pint container of SikaFix Accelerator, a dosage of 2.5 %. The grout should never be used with more than 5 % SikaFix Accelerator. Excess acceleration will cause vigorous expansion that is prone to shrinkage. Pour the desired amount of SikaFix HH+ into a clean pail. Measure

the appropriate amount of SikaFix Accelerator and pour it into the SikaFix® HH+ and mix adequately.

APPLICATION METHOD / TOOLS

Begin by drilling 5/8” diameter holes along the side of the crack at a 45 degree angle. Drill the hole to intersect the crack midway through the substrate. Install injection packers in the holes and tighten. Spacing of the injection ports depends on crack width, but normal varies from 6” to 36”. It is always necessary to flush the drilled holes with water to remove debris and drill dust from the holes and crack. This will also ensure that the crack is wet enough to react with the grout when it is introduced to the crack. Begin the injection of the grout at the lowest packer installed on a vertical crack or at the first packer flushed for a horizontal crack. During the injection, you will notice that the SikaFix® HH+ displaces water from the crack. Continue injecting until the grout appears at the adjacent packer hole. Stop pumping and reinstall the packer in the adjacent hole. Tighten the packer and move the pump hose to the second packer and begin injection. Continue the process until 3–4 packers have been grouted. Disconnect and go back to the first packer and inject all the ports for the second time if necessary. Some ports may take additional grout, which will fill up and further densify the material in the crack. Continue process until the length of the prepared crack is injected. Note: Injection pressure will vary from 200 psi to 2500 psi depending on the width of the crack, thickness of concrete and condition of concrete.

Removal

Residual resin that has foamed from the crack can be removed with a scraper as long as it is not cured to a solid on the surface. If the material has cured, remove with a wire brush or hand held grinders. SikaFix® HH+ will aggressively bond to concrete surfaces.

Tooling & Finishing

When finished with the injection process, re-inject each installed packer with a small amount of water. This will react with the resin left behind in the drill hole. After the injection, the packers or injection ports can be cut flush with the concrete surface or can be removed from the injection holes. Let SikaFix® HH+ cure completely before removing the packers. Packer holes can be filled with Sikadur 31, SikaRepair Mortar, or SikaSet Plug and troweled smooth.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA’s Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product’s shelf life. User determines suitability of product for intended use and assumes all risks. User’s and/or buyer’s sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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