

# PRODUCT DATA SHEET

## SikaFix® HH LV

LOW VISCOSITY, EXPANDING, POLYURETHANE CHEMICAL GROUT

### PRODUCT DESCRIPTION

SikaFix® HH LV is a hydrophobic polyurethane that, when used alone or with SikaFix® Accelerator, is designed to form flexible gaskets or plug joints and cracks in concrete from water infiltration.

### USES

- Sealing leaks through concrete cracks and joints.
- Defective concrete (cracked and honeycombed).
- Limestone (tunnels, dams).
- Pipe intrusions.
- Wastewater tanks.
- Sewers, manholes, utility boxes, etc.

### 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 in volume depending upon the amount of SikaFix® Accelerator used.
- Low viscosity permits injection into narrow hair line cracks.
- Excellent elongation creates tight seal in moving cracks.
- Tenacious adhesion to wet and dry surfaces.
- Contains no volatile solvents.
- ANSI Standard 61 potable water compliant
- Non-corrosive

### PRODUCT INFORMATION

<b>Packaging</b>	5 gal plastic pail; 1 pint plastic container.	
<b>Color</b>	<b>SikaFix® HH LV (uncured)</b> Amber	<b>SikaFix HH LV Accelerator</b> Transparent liquid
<b>Shelf Life</b>	1 year in original, unopened container.	
<b>Storage Conditions</b>	Store in a dry area between 40–90 °F (4–32 °C) using original re-sealable containers. Low temperatures will affect viscosity. To minimize this effect, store the product at room temperature for a minimum period of 24 hours prior to use. Material must be preconditioned to between 60–90 °F (16–32 °C) before use. If site temperatures are extremely low, heat bands or heated water baths may be used on the pails, before and during use to maintain the products temperature. Immerse only the lower 2/3 of the pails. Avoid splashing water into open containers. Do not use if ambient temperature is below 40 °F (4 °C).	

<b>Density</b>	<b>Uncured</b>	<b>Cured</b>	<b>SikaFix HH LV Accelerator</b>	(ASTM D-1622)
	1.15 @ 74 °F (23 °C)	4 lbs/ft <sup>3</sup>	.95 @ 74 °F (23 °C)	
<b>Flash Point</b>	<b>Uncured</b>	<b>SikaFix HH LV Accelerator</b>		(ASTM D-93)
	>200 °F	216 °F		(ASTM D-3278-96)
<b>Viscosity</b>	<b>Uncured</b>	<b>SikaFix HH LV Accelerator</b>		(ASTM D-1638)
	500 cps @ 74 °F	25 cps @ 74 °F (23 °C)		

## TECHNICAL INFORMATION

<b>Tensile Strength</b>	29 psi	(ASTM D-638)
<b>Elongation at Break</b>	44 %	(ASTM D-638)
<b>Lap Shear Strength</b>	17 psi	(ASTM C-273)
<b>Expansion</b>	Shrinkage: <1 % Absorption: <1%	

## APPLICATION INFORMATION

<b>Ambient Air Temperature</b>	180 °F (82 °C) maximum
<b>Substrate Temperature</b>	180 °F (82 °C) maximum

<b>Cure Time</b>	<b>Temperature</b>	<b>Gel Time (Accelerator dosage %)</b>
	50 °F (10 °C)	
68 °F (20 °C)		1m 50s (2.5 %) 6m 15s (0 %)
77 °F (25 °C)		1m 15s (2.5 %) 5m 10s (0 %)
86 °F (30 °C)		1m 05s (2.5 %) 4m 0s (0 %)

Based on a 2.5 % SikaFix® Accelerator dosage, corresponding with the recommended 5 gallon: 1 pint ratio of SikaFix® HH LV to SikaFix® Accelerator, and a 0 % dosage, corresponding with no SikaFix® Accelerator added. SikaFix® Accelerator must be agitated by shaking the container prior to use.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

When the crack is contaminated at 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 (Sika-Set® Plug, Sikadur® 31 Hi Mod Gel, or open cell polyurethane foam saturated with SikaFix® HH LV). 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 LV 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 LV into a clean pail. Measure the appropriate amount of SikaFix® Accelerator and pour it into the SikaFix® HH LV 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 as 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 LV 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.

### **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 LV completely cure before removing the packers. Packer holes can be filled with Sikadur® 31 or SikaSet® Plug and troweled smooth.

### **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 LV will aggressively bond to concrete surfaces.

## **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 LV 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.

## **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.

## **LOCAL RESTRICTIONS**

See Legal Disclaimer.

## 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.

## LEGAL DISCLAIMER

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

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