

CITY OF MASSILLON
MUNICIPAL GOVERNMENT ANNEX
CITY ADMINISTRATION BUILDING
MASSILLON, OHIO 44646
Phone: 330-830-1722 Fax: 330-830-1786

TRANSMITTAL

To: Wenger Excavating, Inc../ Jeff Date: 6/24/2014
Gaul/Gjorgi Kondev

From: Frederick P Werner

Re: 2013 Levee Infrastructure Date 6/18/2014
Improvement Project Submitted:

WE ARE SENDING YOU:

☒ ATTACHED ☐ DRAWINGS ☒ SHOP
DRAWINGS/
SUBMITTAL ☐ CONTRACTS ☐ CHANGE ORDER

Notes: SikaFix HH Hydrophilic (Wetmore Pressure Conduit) –, **APPROVED**,

Submittals have been reviewed with the following exceptions:

SUBMITTAL/ SHOP DRAWING REVIEW

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF THE GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. NOTHING HERE IN AUTHORIZES ADDITIONAL COST. THE CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; PERFORMANCE; SELECTING FABRICATION PROCESS AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS OR HER WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER.

CITY OF MASSILLON
151 LINCOLN WAY EAST
MASSILLON, OHIO 44646

BY _____
DATE _____

() APPROVED () NOT APPROVED
() APPROVED AS NOTED () REVISE/RESUBMIT

CC: File, RPR

SIGNED: _____

Product Data Sheet
Edition 5.8.2013
SikaFix HH Hydrophilic

SikaFix® HH Hydrophilic

Low viscosity, hydrophilic, expanding polyurethane chemical grout

Description	SikaFix HH Hydrophilic is a nonflammable hydrophilic polyurethane resin designed to form a flexible gasket or plug joints and cracks in concrete. In its uncured form, SikaFix HH Hydrophilic is a pale yellow liquid. When it comes in contact with water, the grout expands quickly and cures to a tough, flexible, adhesive, closed cell foam that is essentially unaffected by mildly corrosive environments.
Where to Use	■ Sealing leaks through concrete cracks and joints ■ Saturating backer rod to seal joints by the gasket method
Advantages	■ Contains no volatile solvents ■ Non-flammable ■ Free Foam expands to 25 times its liquid volume ■ High elongation creates tight seal in moving cracks
Packaging	5 gallon pail Sika Pump Flush is available in 5 gal. pails. Sold separately.

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	1 year in original, unopened container	
Storage	Store in a dry area between 40°F - 90°F (4°C - 32°C) using original re-sealable containers	
Cure Mechanism	Water	
VOC:	0 g/L	
<u>Uncured</u>		
Solids	100%	
Viscosity	650 cps @ 74°F (23°C)	ASTM D 1638
Color	Pale yellow	
Specific Gravity	1.16 @ 74°F (23°C)	
Flash Point	>200°F	
Corrosiveness	Non-corrosive	
Reaction initiation time		
1:1 with water	30 sec @ 77°F (25°C)	
<u>Cured</u>		
Density	4 lbs/ft ³	ASTM D 1622
Tensile Strength	170 psi	ASTM D 638
Elongation	400%	ASTM D 638
Shrinkage	<1%	

Values given are not to be used in a specific preparation

How to Use

Surface

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 (SikaSet Plug, Sikadur 31 Hi Mod Gel, or open cell polyurethane foam saturated with SikaFix HH Hydrophilic). 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, hand mixer or by hand. During injection the grout will follow the path of least resistance. When the material has stopped migrating, it will continue to expand against the confines of the crack/joint and compress within itself, forming a very dense, closed cell material and stopping the leak. Do not add SikaFix Accelerator.

Application

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 Hydrophilic 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.

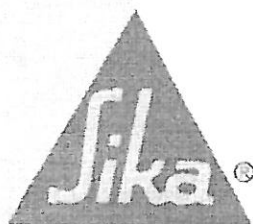
SUBMITTAL SHOP DRAWING REVIEW
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2. PERFORMANCE.
3. SELECTING FABRICATION PROCESS AND TECHNIQUES OF CONSTRUCTION.
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Tooling & Finishing	When finished with the injection process, re-inject each installed packer with a small amount of water. This will react with the resin left behind in the fill 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 Hydrophilic completely cure before removing the packers. Packer holes can be filled with Sikadur 31 or SikaSet Plug and trowelled 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 Hydrophilic will aggressively bond to concrete surfaces.
Limitations	■ Low temperatures will significantly affect viscosity and reaction time ■ Avoid splashing water into open containers, as material is water activated ■ Water used to activate SikaFix HH Hydrophilic must be in a range of pH 3-10 for optimum foam quality. ■ Material must be stored between 40°F - 90°F (4°C - 32°C) ■ Material must be preconditioned to between 60°F - 90°F (16°C - 32°C) before use ■ Ambient temperature must be between 40°F - 90°F (4°C - 32°C) for use ■ Use only in applications where exposure to moisture is constant.
Product Conditioning	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°F - 90°F (16°C - 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).
Caution	WARNING: IRRITANT, SENSITIZER. Contains MDI/polyol adduct (CAS:112898-48-3), Propylene carbonate (CAS:108-32-7), 4,4'-methylenediphenyl diisocyanate (CAS:101-68-8), methylenediphenyl diisocyanate (CAS:26447-40-5). Harmful if inhaled/swallowed. Causes skin/eye/respiratory tract irritation. May cause skin/allergic respiratory reaction after prolonged contact. Deliberate misuse by inhalation of vapors may be harmful or fatal.
First Aid	Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. Skin – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. Inhalation – Remove to fresh air. Ingestion – Do not induce vomiting. Dilute with water. Contact physician. In all cases contact a physician immediately if symptoms persist.
Handling & Storage	Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and laundry before reuse.
Clean Up	Use personal protective equipment (chemical resistant gloves/ goggles/clothing). Without direct contact, sweep up spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable local, state, and federal regulations.



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

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