

PRODUCT DATA SHEET

Sikaflex®-411 Hybrid Self-leveling Sealant

One component, self-leveling, hybrid sealant and crack filler.

PRODUCT DESCRIPTION

Sikaflex®-411 Hybrid Self-leveling Sealant is a premium grade, one component, self-leveling, elastomeric, hybrid sealant that bonds to a wide range of substrates including concrete and asphalt.

USES

Sikaflex®-411 Hybrid Self-leveling Sealant is ideal for sealing horizontal cracks & joints in concrete/asphalt up to 1" wide. It's engineered for use on control joints & expansion joints as well as on:

- Block/ Brick/ Stone/ Masonry
- Concrete and asphalt driveways
- Roadways
- Walkways & pavements
- Garage floors
- Patios
- Floors slabs
- Wood, aluminum, galvanized steel, steel, and glass

CHARACTERISTICS / ADVANTAGES

- Bonds to asphalt, concrete, block, brick, stone & masonry
- Excellent bond to glass, aluminum, wood, steel & galvanized steel
- Remains permanently elastic to allow for natural movement between substrates
- Excellent resistance to aging and weathering
- Fast skin time
- Low VOC
- Eco-friendly: Solvent & Isocyanate free
- UV stable
- No tooling required

PRODUCT INFORMATION

Chemical Base	Silane Terminated Polymer
Packaging	10.1 fl. oz. (300 ml), moisture resistant, caulk gun cartridges 12 cartridges per case
Color	Black
Shelf Life	12 months from date of production when stored properly in original, unopened and undamaged, sealed packaging.
Storage Conditions	Store in cool, dry, well ventilated conditions at 40 - 90 °F (4 - 32 °C). Condition cartridge material to 65 - 75 °F (18 - 24 °C) before using).

TECHNICAL INFORMATION

Shore Hardness	20 ± 5 (7 days)	(ASTM D 2240), 73 °F (23 °C), 50% R.H.
Tensile Strength	153 psi (7 days)	(ASTM D 412)
Elongation	475%	(ASTM D 412)
Movement Capability	± 25%	
Resistance to Weathering	Excellent	

APPLICATION INFORMATION

Coverage	10.1 fluid ounce (300 ml) Cartridge: Typical Yield in Linear Feet			
		1/4" depth	3/8" depth	1/2" depth
	Width			
	1/4"	24.3'		
	3/8"	16.2'	10.2'	
	1/2"	12.1'	8.1'	6.1'
	3/4"	8.1'	5.4'	4.0'
	1"			3.0'
Ambient Air Temperature	50 °F (10°C) minimum / 100 °F (38 °C) maximum			
Substrate Temperature	50 °F (10°C) minimum / 100 °F (38 °C) maximum			
Skin Time	Approx. 45 minutes at 73 °F (23 °C) and 50% Relative Humidity			

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

- When overcoating, allow a minimum 7 days of cure. A jobsite test and mockup are essential to determine actual compatibility before proceeding with coating installation. Avoid alcohol based or solvent based primers, sealers, stains, and coatings. Consult directly with the coating manufacturer before proceeding.
- Allow a minimum 7 days of cure before subjecting sealant to water immersion.
- Rigidly curing primers, paints, coatings, etc. may crack when placed over elastomeric sealants subject to expansion and/or contraction.
- The ultimate performance of Sikaflex®-411 Hybrid Self-leveling Sealant depends on good joint design and proper substrate preparation and application.
- Minimum depth of sealant in a working dynamic joint is 1/4 inch (6 mm). Maximum depth of sealant is 1/2 inch (13 mm).
- Typical minimum width of sealant in a working dynamic joint is 1/4 inch (6 mm). Typical maximum width of sealant is 1 inch (25 mm).
- Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant.
- Avoid contact with alcohols and other solvents during and after cure. Do not use water, saliva, a soapy solution, alcohol, or solvent as a finishing aid when tooling. Sikaflex®-411 Hybrid Self-leveling Sealant has a pourable, self-leveling consistency. Dry tool finish only if required, although minimal tooling should be needed.
- Since the system is moisture-cured, permit sufficient exposure to air.
- Lower temperatures and humidity levels will extend skin time and final cure time.
- Not suitable for:
 - Anticipated joint movement greater than ± 25%.
 - Joints that occur on sloped surfaces.
 - Improperly prepared surfaces or contaminated joint void surfaces.
 - Joints where adhesion to painted surfaces is needed. Paint should be mechanically removed. If not, adhesion and compatibility tests are required before proceeding.
 - Areas where adhesion to PVC substrates is required.

ENVIRONMENTAL, HEALTH AND SAFETY

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

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

1. All joint surfaces must be clean, sound, free of contaminants, dust free, dry and frost free. Interior joint contact surfaces must be free of previous joint sealing materials, oils, grease, loose tar, paints, coatings, sealers, curing compound residues, rust and any other foreign matter that might prevent good adhesion.
 - Asphalt substrates should be prepared to clean, sound, dust free, dry, and frost free conditions.
 - Concrete substrate preparation should be accomplished by mechanical means (e.g. sandblasting, abrasive grinding, etc.).
2. Mask off and protect any adjacent surfaces (e.g. edges of joint) that should not receive contact with Sikaflex®-411 Hybrid Self-leveling Sealant.
3. Closed cell backer rod or bond breaker tape must be installed at the bottom or base of a dynamically working joint prior to sealant installation to prevent three sided adhesion.
 - Closed cell backer rod diameter should be larger (i.e. typically up to 25% larger) than the actual width of the joint to provide a friction fit and adequate sealant support. Bond breaker tape, when used in lieu of closed cell backer rod, should cover the bottom or base of the joint void.
4. **Joint Design:** Proper joint design for working joints is 2:1 width to depth ratio (typical), with a recommended minimum 1/4 inch (6 mm) and maximum 1/2 inch (13 mm) depth of sealant.
 - For nonmoving joints, the width to depth ratio can vary.
 - For traffic bearing joints, the maximum recommended 1/2 inch (13 mm) depth of thickness should be considered over appropriate closed cell backer rod or bond breaker tape. **Consult with Sika Technical Services for unusual joint configurations.**

APPLICATION

Recommended application (i.e. ambient and substrate) temperatures: 50 to 100 °F (10 to 38 °C). Condition sealant cartridge to 65 to 75 °F (18 to 24 °C) before using.

1. Cut the plastic tip at an angle to the desired size and puncture the airtight seal within, at the base of the tip. **NOT FOR SLOPED SURFACES.**
 - The maximum sealant depth is 1/2 in. (13 mm) and width is 1 inch (25 mm).
 - The minimum sealant depth is 1/4 in. (6 mm) and width is 1/4 in. (6 mm).
2. Dispense sealant into the joint slot over either closed cell backer rod or bond breaker tape in one direction and allow the sealant to flow and level out as necessary.
3. Tool as required, although minimum tooling is necessary.

CLEANING OF TOOLS

Uncured Sikaflex®-411 Hybrid Self-leveling Sealant can be removed from tools and finished surfaces using an approved solvent (e.g. Acetone, MEK or Xylene). Cured Sikaflex®-411 Hybrid Self-leveling Sealant can only be removed from surfaces mechanically. For spillage, collect, absorb, and dispose of in accordance with current, applicable local, state, and federal regulations. Consult the current Safety Data Sheet for additional information.

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.

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Product Data Sheet

Sikaflex®-411 Hybrid Self-leveling Sealant
October 2024, Version 01.02
02051502000000014

Sikaflex-411HybridSelf-levelingSealant-en-US-(10-2024)-1-2.pdf

