

PRODUCT DATA SHEET

Sikaflex® Hybrid NS 50

Multi-purpose, non-sag, hybrid sealant and adhesive

PRODUCT DESCRIPTION

Sikaflex® Hybrid NS 50 is a multi-purpose, non-sag sealant and adhesive with fast cure times and excellent UV resistance. The benefits of its hybrid technology are enhanced adhesive and cohesive bond, no shrinkage with cure, high tensile strength and flexibility, exceptional durability, and an extended working life.

USES

- Filling:
 - Wall Joints / Control Joints / Expansion Joints / Cove Joints
- Sealing:
 - Cracks / Windows / Door Frames
- Roofing / Flashing
- Weather sealing applications
- Siding applications

CHARACTERISTICS / ADVANTAGES

- Fast curing: Skin time ≈ 60 min., waterproof ≈ 90 min.
- Horizontal, vertical, & overhead applications
- Bonds to wet surfaces, without bubbling
- Highly flexible: **± 50%** movement capability
- No odor & isocyanate free
- Weather and UV resistant, non-shrink
- Interior/Exterior use
- Freeze/Thaw resistant
- Superior adhesion to a wide range of substrates:
 - Masonry / brick / block / concrete
 - Stone / tile
 - Aluminum / galvanized metal / glass
 - EPDM & SBS - modified bitumen membranes
 - Aged asphalt
 - Engineered plastics / PVC / fiberglass / FRP / EPS foam
 - Plywood and more

APPROVALS / STANDARDS

- ASTM C920, Type S, Grade NS, Class 50, uses NT, T2, M, G, A, and O
- Federal Specification TT-S-00230-C, Type II, Class B
- Army Corps of Engineers CRD-C-541, Type II, Class B

PRODUCT INFORMATION

Chemical Base	Hybrid STP
Packaging	10.1 fl. oz. cartridge (300 ml), moisture resistant, caulk gun cartridges 12 cartridges per case
Color	Black
Shelf Life	24 months from date of production when stored properly in original, unopened and undamaged, sealed packaging.

Storage Conditions

Store in original, unopened container in a cool, dry, area. Protect unopened container from water, heat and direct sunlight. Store at 40°F to 80°F (4°C to 27°C). Elevated temperatures will reduce shelf life.

TECHNICAL INFORMATION

Shore Hardness	31	ASTM C661
Tensile Strength	230 psi (1.59 MPa)	ASTM D412
Elongation	> 600 %	ASTM D412
Shrinkage	No visible shrinkage after 14 days	
Tear Strength	55 pli	ASTM D624
Movement Capability	± 50%	
Service Temperature	-40°F to 200°F (-40°C to 93°C)	
Adhesion in peel	25 pli	ASTM C794

APPLICATION INFORMATION

Coverage	10.1 fl. oz. Cartridge: Typical Yield in Linear Feet			
	width	1/4" depth	3/8" depth	1/2" depth
	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	35°F - 100°F (2°C - 38°C)			
Skin Time	≈ 60 minutes			
Tooling Time	within 15 minutes of application			
Waiting / Recoat Times	Paintable after 90 minutes			

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

- **Do not use** in continuous immersion applications.
- **Do not apply** on frozen substrates.
- Test and evaluate all paints and coatings before applying.
- Some paints may not dry on sealant.
- High rates of moisture vapor will cause bubbling.
- When applying Sikaflex® Hybrid NS 50 to treated wood and asphalt, make sure the treated wood or asphalt has been allowed to cure for at least six (6) months prior to application.
- Applying rigid curing materials over Sikaflex® Hybrid NS 50 may lead to cracking in the rigid curing material.

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.

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® Hybrid NS 50.
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 non-moving 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

The optimal temperature range for application is between 60°F and 80°F, however applications can be done between 35°F-100°F. Lower temperature applications, 35°F to 60°F will extend the curing time, to ease the flow and placement of sealant, warm and keep the sealant at 70°F 24 hours prior to application. In the case of cold weather applications, make sure to remove dew, frost, or ice from the substrate with acetone on a clean cloth and place sealant immediately.

1. Unscrew the nozzle, cut plastic tip of cartridge, then reattach the nozzle onto the cartridge.
2. With the nozzle reattached to the cartridge, cut the end of the nozzle to match the width of the joint.
 - It is recommended to use a high-quality gun with an 18:1 thrust ratio to facilitate smoother and more efficient flow of the material.
3. Position the nozzle at the bottom of the joint or designated application area to prevent the entrapment of air during placement. Keep the nozzle immersed in the material throughout the application process. Apply the sealant with consistent pressure, ensuring a uniform and continuous bead.
 - Care should be taken to maintain a smooth application process. If tooling, or smoothing, of the sealant is necessary, it should be performed within 15 minutes of application.

CLEANING OF TOOLS

- Remove excess material using acetone and disposable paper towels or cloth rags before the material cures on placement tools and adjacent surfaces. Dispose of waste material in compliance with local regulations.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION

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 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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