BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

Sikaflex® NP 1

(formerly MSeal NP 1)

One-component, acoustic/sound damping, elastomeric, gun-grade polyurethane sealant

PRODUCT DESCRIPTION

Sikaflex® NP 1 is a one-component, high-performance, non-priming, gun-grade, elastomeric polyurethane sealant. It requires no mixing and typically requires no priming to bond to many materials, including concrete and masonry. Used as an acoustical sealant, Sikaflex® NP 1 reduces sound transmission in partition systems to support high STC values by sealing spaces around cut-outs and at perimeters of partitions. The sealant cures to a tough rubber to form a long-lasting acoustical seal.

WHERE TO USE

- Interior and exterior
- Above and below grade
- Immersed in water
- Expansion joints
- Panel walls
- Precast units
- Aluminium and wood window frames
- Roofing
- Fascia
- Parapets
- Vinyl siding
- Storefront assemblies

Substrates

- Concrete
- Masonry
- Aluminium
- Wood
- Clay & concrete roof tiles
- Stucco
- Natural stone

CHARACTERISTICS / ADVANTAGES

- One-component formula requires no mixing, helping to reduce labor costs
- Joint movement capability ±35 % provides excellent flexibility for keeping moving joints weathertight
- Easy to gun and tool, speeding up application and making neater joints
- Available in ProPaks, reducing job site waste and lowering disposal costs
- 12 standard colors to match a wide variety of common substrates
- No primer is required for most construction materials, lowering installation costs
- Weather resistant for long-lasting weathertight seals
- Wide temperature application range makes Sikaflex® NP 1 suitable for all climates
- Compatible with non-rigid coatings and can be painted
- Superior holding power for long-lasting roof tile installation
- UL listed; Passes 4–hour, 4–inch, fire and hose stream test when used with Ultra Block or mineral wool
- Suitable for water immersion with documented performance in wet areas
- Can adhere to green concrete up to 72 hours after pour
- Can be used as an acoustic sealant to increase system STC value
- Minimizes sound transfer and supports high STC ratings

APPROVALS / CERTIFICATES

- ASTM C 920, Type S, Grade NS, Class 35, Use NT, M, A, T, O* and I
- Federal Specification TT-S- 00230C, Type II, Class A
- Corps of Engineers CRD-C- 541, Type II, Class A
- Canadian Specification CAN/CGSB-19.13-M87, Classification MCG-2-25-A-N, No. 81026
- Underwriters Laboratories Inc.® classified (fire resistance only)
- ISO 11600-F-25LM • STC (sound transmission class)

* Refer to substrates in Uses

PRODUCT INFORMATION

Composition / Manufacturing	Sikaflex® NP 1 is a one-component moisture-curing polyurethane.
Packaging	▪ 300 mL (10.1 fl oz) cartridges, 30 cartridges per carton, and 12 cartridges per carton ▪ 590 mL (20 fl oz) ProPaks, 20 per carton
Colour	Aluminium Gray, Black, Gray, Limestone, Medium Bronze, Off White, Redwood Tan, Special Bronze, Stone, Tan, White. For color availability in bulk packaging, call Customer Service.
Shelf Life	Cartridges: 15 months when properly stored ProPaks: 18 months when properly stored.
Storage Conditions	Store in original, unopened containers away from heat and direct sunlight. Storing at elevated temperatures will reduce the shelf life.
CSC MasterFormat®	**07 92 13 | ELASTOMERIC JOINT SEALANTS**

TECHNICAL INFORMATION

Shore A Hardness	At standard conditions	25–30	ASTM C661
	After heat aging (max Shore A: 50)	25	
Shrinkage	None		
Tear Strength	8.76 kN/m (50 pli)		ASTM D1004
Movement Capability	±35 %		ASTM C719
Temperature Resistance	Weight loss, after heat aging	3 %	ASTM C792
	Cracking and chalking, after heat aging	None	
Resistance to Weathering	Passes No surface cracking		ASTM C793 ASTM G26
Sound Insulation	44 dB		ASTM E90
Service Temperature	-40 to 82°C (-40 to 180°F)		

Adhesion in Peel	30* Passes*	ASTM C794 ASTM C794 (after UV radiation through glass)
	*Primed for water immersion dictated by ASTM C920. Concrete and aluminium primed with the appropriate Sikaflex® Primer.	
Colour Stability	Passes	ASTM C510
Contact with Water	Passes 10 weeks with movement cycling	ASTM C1247
Elongation at break	800 %	ASTM D412

APPLICATION INFORMATION

Yield

METERS PER LITRE

Joint Width (mm)	Joint Depth (mm)		
	6	**10**	**13**
6	24.8	-	-
10	16.5	-	-
13	12.4	-	-
16	9.8	6.6	-
19	-	5.5	4.1
22	-	4.7	3.5
25	-	4.1	3.0
38	-	-	2.2
50	-	-	1.5

LINEAR FEET PER GALLON

Joint Width (inches)	Joint Depth (inches)		
	1/4	**3/8**	**1/2**
1/4	308	-	-
3/8	205	-	-
1/2	154	-	-
5/8	122	82	-
3/4	-	68	51
7/8	-	58	44
1	-	51	38
1-1/2	-	-	26
2	-	-	19

Sagging	Rheological,(sag in vertical displacement) at 49 °C (120 °F)	No sag	ASTM C639
Pot Life	Extrudability, 3 seconds	Passes	ASTM C603

Curing Time

The cure of Sikaflex® NP 1 varies with temperature and humidity. The following times assume 24°C (75°F), 50% relative humidity, and a joint 13 mm (1/2 in) width by 6 mm (1/4 in) depth.

- Skins: overnight or within 24 hours
- Full cure: approximately 1 week
- Immersion service: 21 days

Tack-free time	Passes	ASTM C679

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

LIMITATIONS

- Do not allow uncured Sikaflex® NP 1 to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured hybrid sealants.
- Sikaflex® NP 1 should not come in contact with oil-based caulking, uncured silicone sealants, polysulfides, or fillers impregnated with oil, asphalt or tar.
- Protect unopened containers from heat and direct sunlight.
- In cool or cold weather, store container at room temperature for at least 24 hours before using.
- When Sikaflex® NP 1 is to be used in areas subject to water immersion, cure for 21 days at 23°C (70°F) and 50% relative humidity. Allow longer cure times at lower temperatures and humidities.
- Do not apply over freshly treated wood; treated wood must have weathered for at least 6 months.
- Do not use in swimming pools or other submerged conditions where the sealant will be exposed to strong oxidizers. Avoid submerged conditions where water temperatures will exceed 50 °C (120 °F).
- Substrates such as copper, stainless steel, Kynar and galvanized steel typically require the use of appropiate Sika® Primer or Sikaflex® Primer. An adhesion test is recommended for any other questionable substrate.
- Sikaflex® NP 1 is an aromatic urethane, as such it may discolor over time with UV exposure. Where maintaining a true white appearance is critical, use Sikaflex CR 195 sealants.
- Sikaflex® NP 1 can be applied below freezing temperatures only if substrates are completely dry, free of moisture and clean. Contact Technical Service for more information. Lower temperatures and humidities will extend curing times.
- Pursuant to accepted industry standards and practices, using rigid paints and/or coatings over flexible sealants can result in a loss of adhesion of the applied paint and/or coating, due to the potential movement of the sealant. However, should painting and/or coating be desired it is required that the applicator of the paint and/or coating conduct on-site testing to determine compatibility and adhesion.
- Proper application is the responsibility of the user. Field visits by Sika personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.
- Not for use in glazing applications. Do not apply on glass and plastic glazing panels.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

TABLE

Joint Width and Sealant Depth

JOINT WIDTH, mm (in)	SEALANT DEPTH, AT MIDPOINT, mm (in)
6–13 (1/4–1/2)	6 (1/4)
13–19 (1/2–3/4)	6–10 (1/4–3/8)
19–25 (3/4–1)	10–13 (3/8–1/2)
25–38 (1–1 1/2)	13 (1/2)

SUBSTRATE PREPARATION

Substrates must be structurally sound, fully cured, dry, and clean. Substrates should always be free of the following: dirt, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing or curing and parting compounds, membrane materials, and sealant residue.

Concrete, Stone and Other Masonry
Clean by grinding, sandblasting or wire brushing to expose a sound surface free of contamination and laitance.

Wood
New and weathered wood must be clean, dry and sound. Scrape away loose paint to bare wood. Any coatings on wood must be tested to verify adhesion of sealant or to determine an appropriate primer.

Metal
Remove scale, rust and loose coatings from metal to expose a bright white surface. Any coatings on metal must be tested to verify adhesion of sealant or to determine an appropriate primer.

Joint Preparation
1. The product may be used in sealant joints designed in accordance with SWR Institute's Sealants - The Professional's Guide.
2. In optimal conditions, the depth of the sealant should be 1/2 the width of the joint. The sealant joint depth (measured at the center) should always fall between the maximum depth of 13 mm (1/2 in) and the minimum depth of 6 mm (1/4 in). Refer to Table.
3. In deep joints, the sealant depth must be controlled by

closed cell backer rod. Where the joint depth does not permit the use of backer rod, a bond breaker (polyethylene strip) must be used to prevent three-point bonding.
4. To maintain the recommended sealant depth, install backer rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed cell backer rod should be about 3 mm (1/8 in) larger in diameter than the width of the joint to allow for compression. The sealant does not adhere to it, and no separate bond breaker is required. Do not prime or puncture the backer rod.

Priming

1. Sikaflex® NP 1 is considered a nonpriming sealant, but special circumstances or substrates may require a primer. It is the user's responsibility to check the adhesion of the cured sealant on typical test joints at the project site before and during application. Refer to product data sheet on Sika® Primer, and consult Technical Service for additional information.
2. For immersion applications, Sikaflex® Primer-429 must be used.
3. Apply primer at full strength with a brush or clean cloth. A light, uniform coating is sufficient for most surfaces. Porous surfaces may require more primer; however, do not over-apply.
4. Allow primer to dry before applying Sikaflex® NP 1. Depending on temperature and humidity, tack free time will depend on the primer use, please consult the specific PDS. Priming and sealing must be done on the same day.

APPLICATION

1. Sikaflex® NP 1 comes ready to use. Apply using professional grade caulking gun. Do not open cartridges, ProPaks or pails until preparatory work has been completed.
2. Fill joints from the deepest point to the surface by holding an appropriately sized nozzle against the back of the joint.
3. Dry tooling is recommended. Proper tooling results in the correct bead shape, neat joints, and optimal adhesion.

CLEAN UP

Uncured material can be removed from equipment and tools using Sika Cleaning Wipes or a solvent, such as xylene. Strictly follow solvent manufacturer's warnings and instructions for use. Cured material can only be removed manually or mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

Sika Canada Inc.
Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9
1-800-933-SIKA
www.sika.ca

Other locations
Boisbriand (Quebec)
Brantford; Cambridge;
Sudbury; Toronto (Ontario)
Edmonton (Alberta)
Surrey (British Columbia)