BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex® NP 1

(formerly MSeal NP 1)

ONE-COMPONENT, ACOUSTIC/SOUND DAMPING, ELASTOMERIC, GUN-GRADE POLYURETHANE SEALANT

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.

USES

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

Substrates

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

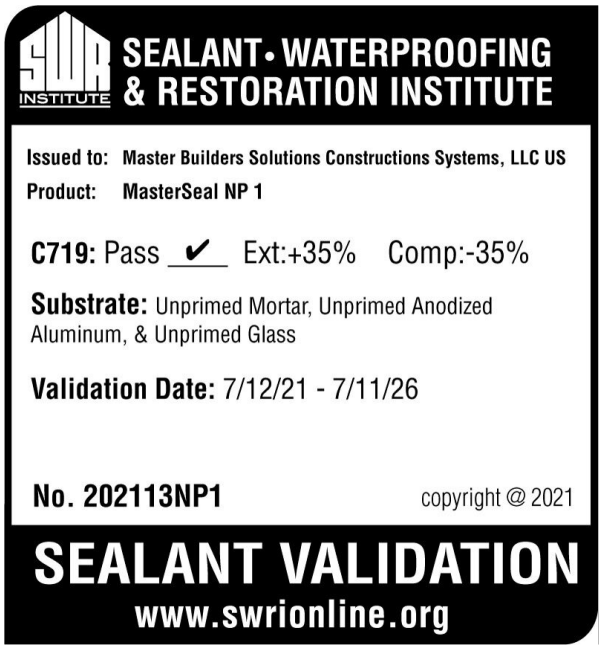
CHARACTERISTICS / ADVANTAGES

- 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
- Meets VOC requirements in all 50 states
- 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 / STANDARDS

- 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
- CFI accepted
- Underwriters Laboratories Inc.® classified (fire resistance only)
- ISO 11600-F-25LM • STC (sound transmission class)

* Refer to substrates in Uses



PRODUCT INFORMATION

Chemical Base	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
Shelf Life	Cartridges and ProPaks: 1 year 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.
Colour	White, Off-White, Limestone, Stone, Tan, Aluminum Gray, Medium Bronze, Special Bronze, Redwood Tan, Black, and Gray. For color availability in bulk packaging, call Customer Service.

TECHNICAL INFORMATION

Shore A Hardness	At standard conditions	25 – 30	ASTM C 661
	After heat aging (max Shore A: 50)	25	
Elongation at break	800%		ASTM D 412
Movement Capability	±35 %		ASTM C 719
Adhesion in Peel	30*		ASTM C 794
	Passes*		ASTM C 794 (after UV radiation through glass)
	*Primed for water immersion dictated by ASTM C 920. Concrete and aluminum primed with Sikaflex® Primer-173.		
Tear Strength	50 pli		ASTM D 1004
Shrinkage	None		
Sound Insulation	44 (dB)		ASTM E 90
Service Temperature	-40 to 180°F (-40 to 82°C)		

Thermal Resistance	Weight loss, after heat aging, %	3	ASTM C 792
	Cracking and chalking, after heat aging	None	
????	Passes 10 weeks with movement cycling		ASTM C 1247
Resistance to Weathering	Passes No surface cracking		ASTM C 793 ASTM G 26
Colour Stability	Passes		ASTM C 510

APPLICATION INFORMATION

Yield

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
3	-	-	12

Meters Per Liter

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
75	-	-	0.7

Sagging	Rheological,(sag in vertical displacement) at 120 °F (49 °C)	No sag	ASTM C 639
Pot Life	Extrudability, 3 seconds	Passes	ASTM C 603
Tack Free Time	Passes		ASTM C 679

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

TABLE 1
Joint Width and Sealant Depth

JOINT WIDTH, IN (MM)	SEALANT DEPTH, AT MID-POINT, IN (MM)
¼–½ (6–13)	¼ (6)
½–¾ (13–19)	¼–3⁄8 (6–10)
¾–1 (19–25)	3⁄8–½ (10–13)
1–1½ (25–38)	½ (13)

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.

APPLICATION

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 ½ the width of the joint. The sealant joint depth (measured at the center) should always fall between the maximum depth of ½" and the minimum depth of ¼". Refer to Table 1.
3. In deep joints, the sealant depth must be controlled by closed cell backer rod or soft 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 1⁄8" (3 mm) larger in diameter than the width of the joint to allow for compression. Soft backer rod should be approximately 25% larger in diameter than the joint width. The sealant does not adhere to it, and no separate bond breaker is required. Do not prime or puncture the backer rod.

Priming

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 Sikaflex Primer-173 or Sikaflex Primer-176, and consult Technical Service for additional information.
2. For immersion applications, Sikaflex Primer-173 must be used.
3. For green concrete applications, Sikaflex Primer-173 must be used.
4. Apply primer full strength with a brush or clean cloth. A light, uniform coating is sufficient for most surfaces. Porous surfaces require more primer; however, do not over-apply.
5. Allow primer to dry before applying Sikaflex® NP 1. Depending on temperature and humidity, primer will be tack-free in 15–120 minutes. Priming and sealing must be done on the same day.

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 written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

SIKA HONGKONG LTD.
Rm.1507-12, Blk A, New Trade Plaza,
6 On Ping Street, Shatin, N.T., H.K.
Phone: +852 26868108
Fax: +852 26453671
Mail: marketing@hk.sika.com
Website: www.sika.com.hk