

Product Data Sheet

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Identification no.

Sika® Duoflex® NS

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Two-Component, Non Sag, Polysulfide Sealant

Construction

Description Sika® Duoflex® NS is a two-component, non-sag, premium-quality polysulfide sealant, specifically designed for vertical and overhead surfaces.

Where to Use Sika® Duoflex is suitable for either exterior or interior use to seal both static and dynamic joints:

- Joints in precast concrete.
- Joints in glass and metal curtain wall construction.
- Expansion and control joints in concrete and masonry walls.
- Joints in metal siding.
- Perimeters of aluminum window frames and metal panels.
- Joints located in gas stations /refueling environments.

Advantages

- Tough, elastic, rubber-like seal.
- Remains flexible with expansion and contraction of building component without adhesive or cohesive failure, based on good joint design.
- Stays resilient within a wide temperature range.
- Excellent resistance to water, oils, grease, most solvents, mild acids and alkalis.
- Tenacious adhesion to concrete, metal, wood, glass, stone, ceramic and masonry surfaces in any combination, typically without the need for priming with Sika Duoflex 5050 Primer.
- Effective under constant immersion or saturated conditions, when suitably primed.
- USDA acceptance (NS grade only).

Coverage Coverage based on linear feet of sealant per gallon:

| Width in (mm) | Depth | | | | | |
|------------------|----------|----------|-----------|--------|-----------|----------|
| | 0.25 (6) | 0.5 (13) | 0.75 (19) | 1 (25) | 1.25 (32) | 1.5 (38) |
| 0.25 (6) | 81.4 | | | | | |
| 0.5 (13) | 40.7 | 20.3 | | | | |
| 0.75 (19) | 27.2 | 13.5 | 9.2 | | | |
| 1 (25) | 20.3 | 10.2 | 6.9 | 5.2 | | |
| 1.25 (32) | 16.4 | 8.2 | 5.6 | 3.9 | 3.3 | |
| 1.5 (38) | 13.5 | 6.9 | 4.6 | 3.3 | 2.6 | 2.3 |

Packaging 1.5 gallon (5.7 liter) unit

Chemical Resistance (see Sika Duoflex chemical resistance chart)

Typical Data (Material and curing conditions @ 73°F 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.

| | |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Self Life | 1 year in original, unopened packaging. |
| Storage Conditions | Store dry between 40 and 95°F (4 and 35°C). |
| Product Conditioning | Condition material to 40 to 100°F before application. Pre-conditioning units to approximately 70°F (21°C) is necessary when working at the far ends of the application range. |
| Color | Bronze |
| UV Color Stability | Very good |
| Properties at 73°F (23°C) and 50% R.H. | |
| Pot Life | 1 hr |
| Tack Free | 6 hrs |
| Full Cure | 7 days |
| Testing Standards | ASTM C920, Class 25 |
| Application Temperature | 40 to 100°F (4 to 38°C), ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement. |
| Service Range | -40 to 170°F (-40 to 77°C) |
| Movement Capabilities | ± 25% |
| Elongation at Break ASTM D412 | 500% - 550% |
| Shore A Hardness ASTM D2240 | 25 - 30 |

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| | |
|-----------------------------------------------------------------------|----------------------------------------------|
| Abrasion and Puncture Resistance Tensile Strength ASTM D412 | Excellent 150 - 200 psi (1.03 - 1.38 MPa) |
|-----------------------------------------------------------------------|----------------------------------------------|

How to Use

Surface Preparation

All joint surfaces must be clean, sound, dry and frost-free. Joint walls must be free of oils, grease, paints, coatings, sealers, curing compound residues, and any other foreign matter that might prevent adhesion. Ideally this should be accomplished by mechanical means (e.g. sandblasting, abrasive grinding, etc.). Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.

Joint Design : Proper joint design for moving joints is 2:1 width to depth ratio, with a recommended 1/4" (6 mm) minimum and 1/2" (13 mm) maximum depth of sealant. For non-moving joints, the width to depth ratio can vary.

Priming: For maximum adhesion, including in submerged or immersed applications, the use of Sika® Duoflex Primer is necessary. Consult your Sika Technical Service Representative if unsure if primer is necessary. A uniform glossy sheen after priming indicates adequate primer. Some surfaces, such as porous concrete, may require two coats. Primer must be tack-free before applying sealant. Sealant must be applied same day as primer. Primed areas left overnight should be re-primed.

Mixing

Pour entire contents of Component B into pail of Component A and mix using a low speed drill (100-300 rpm) and Sika mixing paddle. Mix for 3-5 minutes to achieve uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing. Mixed material must be used within the pot life parameters given. Do not attempt to thin or use material that has started to harden. The individual components are formulated, manufactured and shipped to be used together.

When mixed in cold weather (<50 degF), do not force the mixing paddle to the bottom of the pail. After adding Component B in Component A, mix the top 1/2 to 3/4 of the pail in the first minute of mixing. After scraping down the sides of the pail, mix again for another minute. The paddle should reach the bottom of the pail between the first and second minute of mixing. Scrap down the sides of the pail a second time and then mix for an additional 2-3 minutes until sealant is well blended.

Application

Recommended application temperatures 40 to 100°F (4 to 38°C). Pre-conditioning units to approximately 70°F (21°C) is necessary when working at the far ends of the application range. Move pre-conditioned units to work areas just prior to application. Apply sealant only to clean, sound, dry, and frost-free substrates. Sika® Duoflex NS should be applied into joints when joint slot is at mid-point of its designed expansion and contraction. To place, load directly into bulk gun or use a follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Dry tool as required.

Limitations

- Do not use the B component from NS with the A component for SL and vice versa.
 - The ultimate performance of Sika Duoflex NS depends on good joint design and proper application
 - Primary and secondary immersion applications; Sika® Duoflex® Primer must be used
 - Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant.
 - When overcoating: an on-site test is recommended to determine actual compatibility.
- Not suitable for:
- Joint movement more than 25%.
 - Structural glazing applications.
 - Improperly prepared or contaminated surfaces.
 - Joints involving adhesion to painted surfaces.
- (Consult your Sika Technical Service Representative).

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Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537

