

PRODUCT DATA SHEET

Sikalastic®-270 NPR

Polyurethane base coat for Sikalastic® Traffic 2500, 2530, 2575 and 2850 deck coating systems

PRODUCT DESCRIPTION

Sikalastic®-270 NPR is a two-component, polyurethane base coat for use in Sikalastic® Traffic 2500, 2530, 2575 and 2850 deck coating systems. Sikalastic®-270 NPR is a base coat with outstanding mechanical properties, including excellent elongation without the use of primer.

WHERE TO USE

- Stadiums
- Balconies
- Parking garages
- Commercial construction
- Building and restoration
- Plywood decks/balconies
- Plaza decks

CHARACTERISTICS / ADVANTAGES

- Primerless base coat can provide a simpler application process, along with material and labour cost savings
- Two-component base coat reduces overcoating times
- Seamless waterproof membrane helps protect concrete from freeze/thaw damage
- Can be used with or without a primer

PRODUCT INFORMATION

Packaging	18 L (4.76 US gal) pail
Colour	Part A: Light grey Part B: Clear / Amber A+B mixed: Light grey
Shelf Life	12 months in original, unopened containers
Storage Conditions	Store dry, at temperatures between 5 °C and 32 °C (41 °F and 89 °F).
Solid content by volume	100 % (ASTM D2697)
CSC MasterFormat®	07 18 00 (09 66 23.16) TRAFFIC COATINGS

TECHNICAL INFORMATION

Shore A Hardness	80 +/- 5	
Abrasion Resistance	6 mg loss	(ASTM D4060) Taber Abraser, CS-17 Wheel: 1000 g (2.2 lb)/1000 cycles
Tensile Strength	9 MPa (1305 lb/po ²)	(ASTM D638) Type IV
Elongation at Break	≥ 430 %	(ASTM D638) Type IV
Pull-Off Strength	2.4 MPa (345 psi)	(ASTMD 4541)
Tear Strength	8.03 KN/m (210 lb/linear in)	(ASTM D624) Die C
Crack Bridging Ability	Passes: 1.6 mm (1/16 in) @ -26 °C	(ASTM C957)
Chemical Resistance	Contact Sika Canada	
Permeability to Water Vapour	Water Vapour Transmission Water Vapour Permeability Water Vapour Permeance	0.028 g/hr/m ² (0.04 grain/hr/ft ²) 0.0013 ng/Pa/s/m ² (0.09 perm in) 0.026 ng/Pa/s/m ² (4.65 x 10-5 perms) (ASTM E96) Procedure B
Water Absorption	0.26 %	(ASTM D570)
Chloride Ion Diffusion Resistance	Negligible as per the "WHITING" table	(AASHTO T-277)

APPLICATION INFORMATION

Mixing Ratio	A : B = 2 : 1 per volume	
Consumption	1.2 - 1.6 m ² /L (50 - 65 ft ² /US gal) at 25 - 30 mil w.f.t.	
	Typically one (1) coat is required, though on higher absorbency substrates additional coats maybe required.	
	Note: Actual coverage rates and material consumption will depend upon porosity and profile of the substrate. Test areas are recommended to establish correct coverage rates.	
Product Temperature	Condition the product at temperatures between 18 °C and 30 °C (65 °F and 86 °F) before use.	
Ambient Air Temperature	Minimum	4 °C (40 °F)
	Maximum	32 °C (90 °F)
Relative Air Humidity	Maximum 85 % (during application and curing)	
Dew Point	Substrate must be at least 3 °C (5 °F) above the Dew Point to reduce the risk of condensation, which may lead to adhesion failure or "blushing" on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature.	
Substrate Temperature	Minimum	4 °C (40 °F)
	Maximum	32 °C (90 °F)
	Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapour drive at the time	

of application. Refer to ASTM D4263, may be used for a visual indication of vapour drive.

Substrate Moisture Content	Moisture content of concrete substrate must be $\leq 4\%$ by mass (pbw – part by weight) as measured with a Tramex® CME / CMExpert type concrete moisture meter on mechanically prepared surface according to this product data sheet (preparation to ICRI / CSP 3 - 4). Do not apply to concrete substrate with moisture levels exceeding 4% mass (pbw – part by weight) as measured with Tramex® CME / CMExpert type concrete moisture meter. If moisture content of concrete substrate exceeds 4% by mass (pbw – part by weight), don't applied the product. Under these conditions, contact Sika Canada Inc. When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be $\leq 85\%$. If values exceed 85% according to ASTM F2170, contact Sika Canada Inc. ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME / CMExpert type concrete moisture meter as described above.	
Pot Life	20 minutes	
Curing Time	Complete curing	7 days
	Low temperatures and low humidity will slow the curing, while high temperatures and high humidity will accelerate it.	
Waiting Time / Overcoating	between 6 and 24 hours	(ASTM D1640)

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

- Any repairs required to achieve a level surface must be performed prior to application (contact a Sika representative for guidance regarding the various Sika® repair solutions available). Surface irregularities may reflect through the cured system.
- Do not apply to a porous or damp surface where moisture vapour transmission will occur during application and cure.
- Substrate must be dry prior to application. Do not apply to a frosted, wet, or damp surface. Do not proceed if rain is imminent within 8–12 hours of application. Allow sufficient time for the substrate to dry after rain or inclement weather as there is the potential for bonding problems.
- When applying over existing coatings, compatibility and adhesion testing is recommended.
- On grade, lightweight concrete, asphalt pavement, and applications where chained or studded tires may be used should not be coated with Sikalastic® traffic systems.
- Unvented metal pan decks or decks containing

between-slab membranes require further technical evaluation and priming with a moisture-blocking primer (contact Sika for recommendations).

- Waterproofing applications under overburden, including concrete pavement, asphalt pavement, and tile in a cementitious setting bed, require further technical evaluation (contact Sika for recommendations).
- Do not subject to continuous immersion or pounding water.
- Sikalastic®-270 NPR is not UV stable and must be top coated or protected by a separate wearing course.
- Sikalastic®-270 NPR must be kept clean and recoated within 24 hours. If this window is exceeded, contact Sika for recommendations.
- Mockups to verify application methods and substrate conditions as well as desired skid resistance and aesthetics are highly recommended.
- Cracks or ruptures which develop in the structure after the waterproofing traffic system has been installed will not be bridged by the waterproofing traffic system and need to be repaired according to the recommended standard crack treatment details in this technical data sheet.
- Direct-fired gas or kerosene heaters produce by products that can have adverse effects on the curing resin. To avoid this occurrence, heaters must be exhausted to exterior of the building to avoid defects such as amine blush, whitening, loss of adhesion or other surface deficiencies. Beware of air flow and changes in air flow.

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

SURFACE PREPARATION

Surface Preparation

The concrete surface must be clean and sound. Remove any dust, laitance, grease, oil, dirt, curing agents, impregnations, wax, foreign matter, coatings and bond inhibiting material from the surface by appropriate mechanical means, in order to achieve a profile equivalent to ICRI / CSP 3-4. The compressive strength of the concrete substrate should be at least 25 MPa (3625 psi) at 28 days and at least 1.5 MPa (218 psi) in tension at the time of application of the selected Sikalastic® system. Surface defects should be repaired with an appropriate Sika® repair material before beginning installation. Contact Sika Canada for advice and product recommendations. Abrasive shot blasting must occur after concrete repair has taken place. For balconies and other pedestrian areas with limited space or access for shot-blasting, alternative mechanical methods can be used to achieve the recommended surface profil. Acid-etching is not permitted.

Detailing

For cracks less than 1.5 mm (1/16 in) in width:

Apply a 25 mil detail coat of Sikalastic®-270 NPR extending 50 mm (2 in) on either side and centered over the crack.

For cracks 1,5 mm (1/16 in) in width or greater and less than 25 mm (1 in) width:

Must be routed to at least 6 mm x 6 mm (¼ in by ¼ in), and sealed with an appropriate Sikaflex® sealant, installed per sealant Product Data Sheet, and coated with a 25 mil detail coat of Sikalastic®-270 NPR, extending 50 mm (2 in) on either side and centered over the crack. Non-moving cracks can be filled with compatible rigid repair materials.

Note: Cracks may indicate a structural issue and should be addressed by a structural engineer or appropriate design professional.

For joints greater than 25 mm (1 in) in width:

These joints should be treated as expansion joints and

brought up through the system and/or use Emseal Expansion Joint. For additional questions please contact Sika Canada Technical Services.

Fabric Reinforcement:

An optional 75 mm or 150 mm (3 in or 6 in) wide Sikalastic® Flexitape Heavy fabric strip may be embedded within the base coat. Flexitape width shall be chosen such that a minimum of 25 mm (1 in) tape is embedded on either side of the crack/joint. Apply additional coating as required to fully embed the Flexitape in the coating.

Panelized Joints:

Panelized joints that are restrained across the joint and without differential movement may be sealed and the deck coating, including detail coat, applied over the joint.

Note: Movement within panelized joints may cause deterioration of the aggregated wear coat, in which case the joints should be treated as expansion joints and brought up through the Sikalastic® Traffic System and sealed with Sikaflex® sealant. For additional questions, contact Sika Canada Technical Services.

MIXING

Precondition both A and B components to a temperature of approximately 21 °C (70 °F) before mixing.

Pre-mix each component of Sikalastic®-270 NPR separately. Add entire contents of Part A into Part B. Mix components for a minimum of three (3) minutes at slow-speed (300–450 rpm), using a drill fitted with an Exomixer® type mixing paddle (recommended model) and suited to the volume of the mixing container to minimize air entrapment. Scrape down sides and bottom of mixing vessel, then mix again for two (2) more minutes. Keep the paddle submerged in the material during mixing process to avoid entrapping air into the mixture. When completely mixed, Sikalastic®-270 NPR should be uniform in colour and consistency.

Mix only the quantity of product that can be used within its pot life.

APPLICATION

Apply Sikalastic®-270 NPR using a properly notched squeegee and immediately back roll.

Refer to the applicable Sikalastic® Deck Coating system data sheet for total system and aggregate surface preparation and application. Extend base coat over entire area including previously detailed cracks and joints. Allow coating to cure a minimum of six (6) hours at +21 °C (70 °F) and 50 % R.H. before top coating.

Sikalastic®-270 NPR is applied without primer but also can be used with primer applications per system application instructions.

CLEAN UP

Uncured material can be removed from equipment and tools using Sika Cleaning Wipes or with 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

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Product Data Sheet

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