



Product Data Sheet

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TRAFFIC COATINGS

Sikalastic®-391 N

TWO-COMPONENT AND ELASTOMERIC POLYURETHANE-BASED WEAR COURSE

Description	Sikalastic®-391 N is a 100 % solids, polyurethane binder used to protect Sikalastic®-390 Membrane and to provide durable anti-skid surface properties by broadcasting oven-dried, quartz sand into the binder.
Where to Use	<ul style="list-style-type: none"> ▪ Suitable wear course over Sikalastic®-390 Membrane ▪ Multi-storey parking decks and ramps ▪ Interior foot bridges and walkways ▪ Interior stadium and arena surfaces
Advantages	<ul style="list-style-type: none"> ▪ New and improved formula forming a hard, yet flexible film bringing an improved aggregate retention and better durability ▪ Easy to apply for an economical application ▪ Higher abrasion resistance for an improved service life ▪ Solvent-free helping to maintain a safer working environment and reducing the amount of emitted odour ▪ Easy to clean and maintain helping to keep a nice finish over the service life of the wear course ▪ Pre-measured packaging facilitating mixing process and reducing risk of using wrong mixing ratio ▪ Compliant with CAN/CSA-S413-14 (ASTM C957) for Parking Structures ▪ Conformity with LEED® v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations

Technical Data

Packaging	17.5 L (4.62 US gal.) unit		
Colour	RAL 7046 Telegrey 2, RAL 7012 Basalt Grey, RAL 7015 Slate Grey and RAL 9017 Traffic Black. Special colours available on request.		
Yield	Reg: 1.6 - 2.2 m ² /L (65 - 90 ft ² /US gal.) at 18 - 25 mil w.f.t. per coat Typically one (1) coat is required in parking stalls, two (2) coats in all other areas. <i>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.</i>		
Shelf Life	1 year in original, unopened packaging under proper storage conditions. Store dry between 5 - 32 °C (41 - 90 °F). Condition product to temperatures between 18 and 30 °C (65 and 86 °F) before use.		
Mix Ratio	A : B = 2.5 : 1 by volume		
Properties at 23 °C (73 °F) and 50 % R.H.			
Solids Content	100 %		
Pot Life, 250 g (8.8 oz)	35 - 40 minutes		
Drying Times ASTM D1640	10 °C (50 °F)	23 °C (73 °F)	30 °C (86 °F)
Recoat time	16 hours	8 hours	5 hours
Walk on time	24 hours	16 hours	8 hours
Light traffic	48 hours	24 hours	16 hours
Full cure	10 days	7 days	5 days
<i>Drying times will vary according to air and substrate temperature and humidity.</i>			
Tensile Strength ASTM D412	29 MPa (4206 psi)		
Elongation at Break ASTM D412	105 %		
Abrasive Resistance ASTM D4060			
Taber Abraser, CS-17 Wheel/ 1000 g (2.2 lb)/1000 cycles	0.05 g of loss		
Pull-Off Strength ASTM D4541 (Tested on Sikalastic®-390 Membrane)	4.1 MPa (595 psi)		
Shore Hardness ASTM D2240			
Shore A	> 90		
Shore D	65		

Water Absorption ASTM D570	0.13 % (24 hours immersion)
Rapidly Renewable Material Content	61 % by weight (67 % by volume)
VOC Content	14 g/L
Chemical Resistance	Consult Sika Canada

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.

HOW TO USE

Surface Preparation

Apply onto cured Sikalastic®-390 Membrane within the acceptable recoat time of 6 to 24 hours at 23 °C (73 °F). If recoat time is not respected, then mechanical abrasion followed by the application of Sikalastic® Recoat Primer (see the Product Data Sheet for instruction) before the application of Sikalastic®-391 N.

Mixing

Pre-mix each component of Sikalastic®-391 N separately. Empty component B in the correct mix ratio into the component A container. Mix the combined components for at least five (5) minutes, using a low-speed drill (300 - 450 rpm) to minimize entrapping air. Use an *Exomixer*® type mixing paddle (recommended model) suited to the volume of the mixing container. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once, to ensure complete mixing. When completely mixed, Sikalastic®-391 N should be uniform in colour and consistency. Mix only that quantity which can be used within its pot life.

Application

Prior to application, measure and confirm substrate moisture content, ambient relative humidity, ambient and surface temperature and dew point. During installation, confirm and record above values at least once every three (3) hours, or more frequently whenever conditions change (e.g. ambient temperature rise/fall, relative humidity increase/decrease, etc.). Sikalastic®-391 N wear course may be applied in different build configurations to reflect the traffic patterns in specific zones of the parking garage.

Light Duty/Parking Stalls Option (partial broadcast):

Apply Sikalastic®-391 N onto cured Sikalastic®-390 Membrane (within recoat window) at a rate of 2.0 - 2.2 m²/L (18 - 20 mil) using a notched squeegee. Allow the material to self-level for 5 to 10 minutes then broadcast clean, round or semi-angular, oven-dried, #24 mesh quartz sand at 0.6 - 1.0 kg/m² (12 - 20 lb/100 ft²). Backroll to encapsulate aggregate and to ensure uniform finish. Allow sufficient cure time for the park deck coating before opening up to traffic.

Medium Duty/Drive Aisles Option (partial broadcast):

Apply Sikalastic®-391 N intermediate coat onto cured Sikalastic®-390 Membrane (within recoat window) at a rate of 2.0 - 2.2 m²/L (18 - 20 mil) using a notched squeegee. Allow the material to self-level for 5 to 10 minutes then broadcast clean, round or semi-angular, oven-dried, #24 mesh quartz sand at 0.75 - 1.0 kg/m² (15 - 20 lb/100 ft²). Backroll to encapsulate aggregate and to ensure uniform finish and allow to cure.

Apply Sikalastic®-391 N onto cured intermediate coat (within recoat window) at a rate of 2.0 - 2.6 m²/L (15 - 20 mil) using a notched squeegee. Allow the material to self-level for 5 to 10 minutes then broadcast clean, round or semi-angular, oven-dried, #24 mesh quartz sand at 0.7 - 1.0 kg/m² (14 - 20 lb/100 ft²). Backroll to encapsulate aggregate and to ensure uniform finish and allow sufficient cure time for the park deck coating before opening it up to traffic.

Heavy Duty/Turn Lanes, Ramps, Entries, Exits and Ticket Booths Option (broadcast to full saturation):

Apply Sikalastic®-391 N intermediate coat onto cured Sikalastic®-390 Membrane (within recoat window) at a rate of 1.3 - 1.6 m²/L (25 - 30 mil) using a notched squeegee. Allow the material to self-level for 5 to 10 minutes then broadcast clean, round or semi-angular, oven-dried, #24 mesh quartz sand at 1.75 - 2.5 kg/m² (35 - 50 lb/100 ft²). Once fully saturated, the coating will not accept any additional sand and the surface will be covered. Allow to the coating to cure before removing excess sand.

Remove excess sand from the cured intermediate layer and apply Sikalastic®-391 N at a rate of 1.3 - 2.2 m²/L (leaving approximately 15 - 25 mil w.f.t.) using a flat squeegee and backroll to level. Broadcast clean, round or semi-angular, oven-dried, #24 mesh quartz sand at rate of 0.15 - 0.3 kg/m² (3 - 6 lb/100 ft²) and lightly backroll to encapsulate aggregate and to ensure uniform finish. Allow sufficient cure time for the park deck coating before opening up to traffic.

NOTE: All coverage rates are approximate and may vary depending on substrate texture, particle shape and size and the quantity of the aggregate being used. Intermediate layers broadcast to full saturation will increase the following coating consumption significantly. User is advised that a 3 x 3 m (10 x 10 ft) mock up using actual materials to be used during project installation should be done to validate coverages, textures, slip resistance and suitability for expected traffic volumes.

Clean Up

Clean all tools and equipment immediately with Sika® Urethane Cleaner and Thinner. Once cured, product can only be removed mechanically.

Limitations

- Sikalastic®-391 N is not recommended for exterior applications. Use Sikalastic®-394 for exterior applications.
- Thickness and re-coat window are critical; system will not work if installed differently.
- Minimum / maximum ambient and substrate temperature during application and cure: 10 °C / 32 °C (50 °F / 90 °F). Monitoring of ambient and substrate temperature should always be done when applying polyurethane coatings. Note that low temperatures and low humidity will slow down the cure, and high temperatures and high humidity will accelerate it. For applications outside of this temperature range, contact Sika Canada.
- Substrate temperature must be at least 3 °C (5.5 °F) above measured dew point temperature.
- Maximum relative humidity during application and cure: 85 %.
- Substrate must be dry prior to application. Do not apply to frosted, wet or damp surfaces. Allow sufficient time for substrate to dry to avoid potential for bonding problems.
- Do not apply to porous surfaces where moisture vapour transmission (out-gassing) will occur during application. Refer to ASTM D4263 for a visual indication of vapour drive.
- Protect from dampness, condensation and water contact during the initial 24 hours cure period.
- Do not store materials outdoors or exposed to sunlight for prolonged periods.
- Do not hand-mix or thin with solvents: mechanical mix only.
- Ensure proper ventilation.
- Direct-fired gas or kerosene heaters increase the carbon dioxide content in the air and also produce significant amounts of water vapour. Properly exhaust heaters to the exterior of the building to prevent damage to the work (such as but not limited to amine blush, whitening, debonding, etc.).
- Do not apply to unvented metal pan decks.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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, within their shelflife. 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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