BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

Sikalastic®-350

RAPID-SETTING, EPOXY-BASED CONCRETE OVERLAY SYSTEM

PRODUCT DESCRIPTION

Sikalastic®-350 is a rapid-curing, skid-resistant, epoxy-based concrete overlay system. When mixed with aggregate it can be used as a repair mortar.

WHERE TO USE

- Parking structures
- Horizontal surfaces
- Interior and exterior
- Bridge decks
- Steel decks
- Warehouse floors
- Elevated airport runways
- Balconies
- Concrete
- Steel

CHARACTERISTICS / ADVANTAGES

- Rapid strength development helps minimize traffic disruption
- Waterproof to prevent chloride ion contamination, freeze-thaw damage and salt scaling
- 90% lighter than typical concrete overlays to limit dead load in suspended structures
- Excellent adhesion to the substrate to prevent delamination and extend surface life
- Skid resistant increasing safety for vehicles and pedestrians
- One-to-one mix ratio by volume simplifies application
- Durable surface extends service life
- No primer required for faster installation
- 100% solids

APPROVALS / CERTIFICATES

- ASTM C 881

PRODUCT INFORMATION

CSC MasterFormat®	**07 18 00 | TRAFFIC COATINGS**
Composition / Manufacturing	Sikalastic®-350 is a two-component epoxy-based binder.
Packaging	▪ 38 L (10 US gal.) kits ▪ 412 L (110 US gal.) kits ▪ 2006 L (530 US gal.) kits
Shelf Life	2 years when properly stored
Storage Conditions	Store in unopened containers at 6–27 °C (60– 80 °F) in clean, dry conditions.
Viscosity	20–25 poise (ASTM D 2393) at 24 °C (75 °F); 20–25 ASTM D 2393 #3 spindle at 20 rpm

TECHNICAL INFORMATION

Shore D Hardness	62		(ASTM D 2240) at 7 days
Abrasion Resistance	Abrasion - Taber		
	1000 cycles - CS 17 wheel	70 mg (neat)	(ASTM D 4060)
		77 mg (with aggregate)	
Compressive Strength	24 hrs	27.6 - 31 MPa (4,000–4,500 psi)	(ASTM D 695)
	7 days	44.8 - 48.3 MPa (6,500–7,000 psi)	
	Mixed with Aggregate		
	3 hrs	20.7 - 24.1 MPa (3,000–3,500 psi)	(ASTM C 579)
	24 hrs	34.5 - 37.2 MPa (5,000–5,500 psi)	
Tensile Strength in Flexure	Modulus of Elasticity in Compression		
	1.21 x 10^5 psi (834 mPa)		(ASTM C 695)
Tensile Strength	45 MPa (6,525 psi)		(ASTM D 638) at 7 days
Tensile Resistance	Tensile elongation		
	>30%		(ASTM D 638) at 7 days
Adhesion in Peel	Adhesion Pull Test		
	> 3.7 MPa (536 psi) (break in concrete)		(ASTM D 7234) 24 hours (ACI 503 Appendix A)
Thermal Resistance	Thermal compatibility		
	5 cycles	Pass	(ASTM C 884) Modified: 8 hours @ 60 °C plus 16 Hours @ -21 °C
Water Absorption	0.02%		(ASTM D 570) 24 hrs
Chloride Ion Diffusion Resistance	Rapid Chloride Permeability	0	(ASTM C1202) (AASHTO T277)
	Chloride ion penetration @ 28 days	negligible	

APPLICATION INFORMATION

Mixing Ratio	1 to 1, by volume
Yield	▪ Parking Decks: 1.0 - 1.5 m^2 /L (40 - 60 ft^2 /US gal.) , depending on porosity and profile of substrate ▪ Bridge Decks: 0.5 - 1.0 m^2 /L (20 - 40 ft^2 /US gal.) , depending on porosity and profile of substrate ▪ 1.96 m^2 /L (80 ft^2 /US gal.) as a primer for epoxy binder ▪ Binder yield varies depending on mix ratio (aggregate to epoxy) and aggregate size and gradation. ▪ Mortar Mix Yield: A ratio of 3 GAL Sand + 1 GAL mixed Sikalastic®-350 = 2.8 GAL mortar mix (650 in^3)
Gel time	15–20 min (ASTM C 881) at 72 °F (22 °C); (Modified to test 70 g sample)

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

For Best Performance

- Minimum application temperature is 10 °C (50 °F) and rising. Contact Technical Service when temperatures are above 32 °C (90 °F)
- Precondition all components to 21 °C (70 °F) for 24 hours before using.
- Do not apply when rain is expected within 12 hours.
- Finished product is a vapor barrier and should not be applied to on-grade slabs subject to exterior service conditions or other structures where moisture-vapor transmission is a concern.
- Do not use neat (without aggregate).
- 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 job site.
- The Sikalastic®-350 topcoat is a rigid epoxy material and may crack due to substrate flex and movement under the membrane system. Do not install it over moving joints.

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

SUBSTRATE PREPARATION

Uncoated Metal Surfaces

Remove dust, debris and any other contaminants from vent, drain pipe and post penetrations, reglets and other metal surfaces. Clean surfaces to near white per SSPC-NACE2.

Concrete

- Concrete must be fully cured (28 days), structurally sound, clean and dry (ASTM D 4263). All concrete surfaces (new and old) must be shot blasted to remove previous coatings, laitance and all miscellaneous surface contamination and to provide profile for proper adhesion. Abrasive shot blasting must occur after concrete repair has taken place. Acid-etching is not permitted. Proper profile should be a minimum of ICRI CSP-5 (as described in ICRI document 03732.)
- Repair voids and delaminated areas with Sika branded cementicious and epoxy patching materials. For application when fast-turn repairs are required, Sikalastic®-350 can be used to repair patches up to 1.5" in depth when used in aggregate slurry mix.
- All units must be applied within the specified pot life.

MIXING

1. Thoroughly mix each separate component for 2–3 minutes.
2. Mix Part A (resin) and Part B (hardener) in the proper ratio (1:1 by volume), using a slow-speed drill (500 rpm) and paddle for 2–3 minutes.
3. Because of the quick cure rate of this product, do not mix more material than can be applied within the pot life of 15–25 minutes at 24˚C (75˚F) . Elevated temperatures decrease pot life, and reduced temperatures increase pot life.
4. The maximum recoat window for additional coats of Sikalastic®-350 is 24 hours.

APPLICATION

Broadcast-Aggregate Method

Parking Decks

1. Spread the mixed Sikalastic®-350 onto the substrate with a notched squeegee at a rate of 1.0 m^2 /L (60 ft^2 /US gal.) . Place the epoxy to permit a continuous operation by applying the second mix immediately behind the first mix.
2. Begin the aggregate broadcast immediately, but stop to maintain a wet edge. Broadcast aggregate to complete saturation (approximately 5.4 kg/m^2 (1.1 lb/ft^2). If wet spots develop, immediately broadcast additional aggregate until a dry surface is reestablished.
3. Apply the second coat in the same manner described above at a rate of 40–60 ft^2 /US gal. The maximum recoat window is 24 hours.

Bridge Decks

1. Spread the mixed Sikalastic®-350 onto the substrate with a notched squeegee at a rate of 1.0 m^2 /L (40 ft^2 /US gal.) or 2.5 gallons per 100 ft^2. Place the epoxy to permit a continuous operation by applying the second mix immediately behind the first mix.
2. Begin the aggregate broadcast immediately, but stop to maintain a wet edge. Broadcast aggregate to complete saturation (approximately 5.4 kg/m^2 (1.1 lb/ft^2). If wet spots develop, immediately broadcast additional aggregate until a dry surface is reestablished.
3. Apply the second coat in the same matter but at a rate of 0.5 m^2 /L (20 ft^2 /US gal.) or 80 mils. The maximum recoat window is 24 hours.

Epoxy Mortar

1. Mix the two components of Sikalastic®-350 using the recommended procedures under the Mixing section.
2. Slowly add up to five parts by volume of oven-dried sand to one part of mixed epoxy.
3. For larger applications, a paddle-type (mortar) mixer may be used. However, the A and B components must

first be mixed together using a slow-speed drill as outlined previously.
4. Prime the area to receive the epoxy mortar using neat resin (parts A and B mixed but with no aggregate). Some applications, e.g., paving dams, will require forming to prevent the material from slumping into the joint.
5. Place the epoxy mortar into the repair area and level with a trowel or float. Excess working of the surface will bring resin to the top, which will create a slick finish when cured. To prevent this, broadcast aggregate to refusal onto leveled surface.
6. Allow time for sufficient curing before removing forms, if applicable.
7. When using the Sikalastic®-350 as a binder in this method, the mortar should be placed at no more than 1½" maximum depth.
8. Allow a minimum cure time of 6 hrs at 21˚C (70˚F) . for Sikalastic®-350 before allowing vehicular traffic.

Aggregate

An angular-shaped silica or basalt aggregate may be used. The aggregate shall be an angular-shaped silica with Mohs scale hardness of 7 or greater or basalt with a hardness of 6 or greater. The alternate aggregate must be clean, dry (less than 0.2% moisture), and conform to the following gradation.

PERCENT, BY WEIGHT, PASSING IN INDICATED U.S. STANDARD-SIEVE SERIES

Coarse Aggregate

Sieve #	4	8	16	30
% Passing	100	30–75	0–5	0–1

CLEAN UP

Cleanup tools with xylene immediately after use.

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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