

# Sikadur® Epoxy Broadcast Overlay System

<b>Description</b>	Sikadur Epoxy Broadcast Overlay System is a 2-component, moisture-tolerant, 100% solids epoxy resin binder for a traffic-bearing, skid-resistant, seamless, protective, overlay system for application by the broadcast method. The Sikadur Epoxy Broadcast Overlay System uses Sikadur 22 Lo-Mod as the binder coat. Sikadur Epoxy Broadcast overlay System can be used with and without a primer as needed. The system conforms to the current ASTM C-881 and AASHTO M-235 specifications.
<b>Where to Use</b>	Use for exterior, above grade, i.e., bridge decks, parking structures, ramps and interior applications requiring a protective, abrasion- and skid-resistant overlay with long-term durability and performance.

## Typical Data [Material and curing conditions @ 73°F (23°C) 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.

<b>Shelf Life</b>	2 years in original, unopened containers.		
<b>Storage Conditions</b>	Store dry at 40°-95°F (4-35°C). <b>Condition material to 65°-85°F (18-29°C) before using.</b>		
<b>Color</b>	Clear, light amber.		
<b>Mixing Ratio</b>	Component 'A' : Component 'B' 1:1 by volume.		
<b>Viscosity (Mixed)</b>	Approximately 2,500 cps.		
<b>Pot Life</b>	Approximately 30 minutes (200 gram mass)		
<b>Tack-Free Time</b>	40°F (4°C): 21 hrs.	73°F (23°C): 4 hrs.	90°F (32°C): 2 hrs.
<b>Open Time</b>	Light foot traffic: 4-6 hrs. Rubber-wheel traffic: 8-10 hrs.		
<b>Tensile Properties (ASTM D-638)</b>	<b>Broadcast 1:2.25</b>		
14 day Tensile Strength	2,200 psi (15.2 MPa)		
Elongation at Break	1.1%		
Modulus of Elasticity	4.7 x 10 <sup>5</sup> psi (3,240 MPa)		
<b>Flexural Properties (ASTM D-790)</b>			
14 day Flexural Strength (Modulus of Rupture)	4,300 psi (29.7 MPa)		
Tangent Modulus of Elasticity in Bending	9.0 x 10 <sup>5</sup> psi (6,205 MPa)		
<b>Shear Strength (ASTM D-732) 14 day</b>	3,300 psi (22.7 MPa)		
<b>Bond Strength (ASTM C-882): Hardened Concrete to Hardened Concrete</b>			
2 day (dry cure) Bond Strength	1,100 psi (7.5 MPa)		
14 day (moist cure) Bond Strength	1,600 psi (11 MPa)		
<b>Abrasion (Taber Abrader) (H-22 wheel; 1,000 gm weight)</b>			
14 day Weight loss, 1,000 cycles	1.61 gm		
<b>Compressive Properties (ASTM D-695)</b>			
<b>Compressive Strength, psi</b>	<b>Broadcast (1:2.25)</b>		
	<b>40°F* (4°C)</b>	<b>73°F* (23°C)</b>	<b>90°F* (32°C)</b>
8 hour	-	70 (0.48)	3,500 (24.1)
16 hour	-	1,850 (12.8)	4,400 (30.3)
1 day	60 (0.4)	3,150 (21.7)	4,600 (31.7)
3 day	1,700 (11.7)	6,900 (47.6)	5,000 (34.5)
7 day	6,700 (46.2)	7,500 (51.7)	5,400 (37.2)
14 day	8,400 (58.0)	7,800 (53.8)	5,900 (40.7)
28 day	8,450 (58.3)	7,850 (54.1)	6,300 (43.4)
<b>Compressive Modulus</b>	7 day: 1.25 x 10 <sup>5</sup> psi (862 MPa)		28 day: 1.66 x 10 <sup>5</sup> psi (1,145 MPa)

\*Material cured and tested at the temperatures indicated.

Construction



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<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ System is moisture-tolerant before, during, and after cure.</li> <li>■ Excellent adhesive properties to most substrates.</li> <li>■ Convenient, easy mix ratio A:B = 1:1 by volume.</li> <li>■ Superior, long-term abrasion resistance and durability even at elevated temperatures.</li> <li>■ Easy care, skid-resistant overlay for bridge decks, parking structures, ramps, loading docks, industrial floors, etc.</li> </ul>														
<b>Coverage</b>	<b>Prime coat:</b> approximately 200-250 sq. ft./gal. <b>Binder coat:</b> approximately 32 sq. ft./gal. (50 mils). <b>Broadcast aggregate:</b> 2 lb./sq. ft. to excess. <b>Seal coat:</b> approximately 150-200 sq. ft. /gal.														
<b>Packaging</b>	Sikadur 22 Lo-Mod 4-gal. units.														
<b>How to Use</b>															
<b>Surface Preparation</b>	<p>Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles and disintegrated materials.</p> <p><b>Preparation Work: Concrete</b> - Sandblast or use other approved mechanical means.  <b>Steel</b> - Should be cleaned and prepared thoroughly by blast cleaning.</p>														
<b>Mixing</b>	<b>Pre-mix each component.</b> Proportion equal parts by volume of Components 'A' and 'B' into a clean mixing container. Mix with a low-speed (400-600 rpm) drill and Sika paddle for 3 minutes, until uniform. Mix only that quantity that can be used within its pot life.														
<b>Application</b>	<p><b>Priming:</b> Use of primer is optional but highly recommended. Primer should be used where sealing of non-moving existing cracks is desired. Sikadur 21 Lo-Mod LV or Sikadur 22 Lo-Mod can be used as primer coats. Prime the prepared substrate with neat Sikadur 21, Lo-Mod LV or Sikadur 22, Lo-Mod using a roller or flat squeegee. Coverage should be approximately 200-250 sq. ft./gal. While the primer is still tacky, apply the binder material with a 3/16 in. notched-rubber squeegee. Allow the binder to self-level.</p> <p><b>Cracks:</b> Static (non-moving) cracks <math>\leq 1/8</math> in., gravity feed with an appropriate sealer/healer material. Dynamic cracks <math>\geq 1/8</math> in. should be treated as joints and sealed with an appropriate joint sealer.</p> <p><b>Broadcast:</b> Slowly broadcast an oven-dried sand so that the sand falls vertically into the binder (at a rate of 2 lbs./sf). Other sources of aggregate may be used but must conform to the minimum gradation standard. Continue to broadcast lightly making several passes, allowing the binder to bleed through the sand before making next pass. Cover completely with sand before binder becomes tack-free.</p> <p><b>Typical gradation:</b></p> <table border="1"> <tr> <td><b>Mesh</b></td> <td>16</td> <td>20</td> <td>30</td> <td>40</td> <td>50</td> <td>70</td> </tr> <tr> <td><b>%</b></td> <td>0-5</td> <td>35-50</td> <td>40-55</td> <td>3.0-8.0</td> <td><math>\geq 1</math></td> <td><math>\geq 75</math></td> </tr> </table> <p><b>Hardness:</b> Mohs scale, min. <math>\geq 6</math></p> <p>After broadcast system has reached sufficient cure as not to be damaged, remove excess sand (this will be dependent on material, air and substrate temperatures). After all excess sand has been removed apply a seal coat of neat Sikadur 22, Lo Mod** over the entire area. Care should be exercised to eliminate voids or bare spots. Sealer coat of Sikadur 22, Lo Mod may be applied at recommended coverage of 150-200 sq. ft./gal.) or to desired finish. Unless otherwise specified, a seal coat is optional, especially on surfaces where a reduction in skid resistance is not optimal (i.e. bridge decks, ramps).</p> <p><small>**Aliphatic urethanes or other compatible sealer coats may be used. Please contact Sika's Technical Service Department before use.</small></p> <p><b>When applying multiple courses:</b> The subsequent binder coat is applied to the preceding course after it has reached sufficient cure, so as not to be damaged and the excess broadcast aggregate has been removed. Note that the consumption and coverage rate of the additional binder coat will vary depending upon the type, size and gradation of the aggregate being used. A reduction factor of approximately 10-20% is customary.</p>	<b>Mesh</b>	16	20	30	40	50	70	<b>%</b>	0-5	35-50	40-55	3.0-8.0	$\geq 1$	$\geq 75$
<b>Mesh</b>	16	20	30	40	50	70									
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<b>Limitations</b>	<ul style="list-style-type: none"> <li>■ To avoid dew point conditions during application, relative humidity must be no more than 95% and substrate temperature must be at least 5°F (3°C) above measured dew point temperature.</li> <li>■ For on grade, split-slab and unvented metal pan deck, please consult Sika Technical Service regarding moisture limitations.</li> <li>■ Minimum substrate and ambient temperature 40°F (4°C).</li> <li>■ Do not store materials outdoors exposed to sunlight for prolonged periods.</li> <li>■ Use properly graded, oven dried aggregates only.</li> <li>■ Do not apply over wet, glistening surface.</li> <li>■ Material is a vapor barrier after cure.</li> <li>■ Minimum age of concrete prior to application is 21-28 days, depending on curing and drying conditions.</li> <li>■ Do not apply to exterior, on-grade substrates, unvented metal pan decks, split/sandwich slabs, or buried membrane conditions.</li> <li>■ Use oven-dried aggregate only.</li> <li>■ Do not thin with solvents.</li> <li>■ Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.</li> <li>■ Any repairs required to achieve a level surface must be performed prior to application (consult a</li> </ul>														



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# Construction

Sika representative for guidance on various product solutions). Surface irregularities may reflect through the cured system.

- Do not apply to a porous or damp surface where moisture vapor 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.
- Opening prior to final cure may result in loss of aggregate, or permanent staining and subsequent premature failure.
- Vehicle fluids and some high performance tires can stain the coating. Fluid spills should be removed promptly as the coating can in some cases be damaged from prolonged exposure.

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KEEP CONTAINER TIGHTLY CLOSED. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. FOR PROFESSIONAL USE ONLY.

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety related data. Read the current actual Safety Data Sheet before using the product. In case of emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet which are available online at <http://usa.sika.com/> or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.

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