Sikadur® Epoxy Broadcast Overlay System

Description
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.

Where to Use
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.

<table>
<thead>
<tr>
<th>Property</th>
<th>Broadcast 1:2.25</th>
<th>40°F* (4°C)</th>
<th>73°F* (23°C)</th>
<th>90°F* (32°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelf Life</td>
<td>2 years in original, unopened containers.</td>
<td>2,200 psi (15.2 MPa)</td>
<td>70 (0.48)</td>
<td>3,500 (24.1)</td>
</tr>
<tr>
<td>Storage Conditions</td>
<td>Store dry at 40°-95°F (4-35°C). Condition material to 65°-85°F (18-29°C) before using.</td>
<td>1,850 (12.8)</td>
<td>3,150 (21.7)</td>
<td>4,600 (31.7)</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, light amber.</td>
<td>1,700 (11.7)</td>
<td>6,900 (47.6)</td>
<td>5,000 (34.5)</td>
</tr>
<tr>
<td>Mixing Ratio</td>
<td>Component ‘A’: Component ‘B’ 1:1 by volume.</td>
<td>6,700 (46.2)</td>
<td>7,500 (51.7)</td>
<td>5,400 (37.2)</td>
</tr>
<tr>
<td>Viscosity (Mixed)</td>
<td>Approximately 2,500 cps.</td>
<td>8,400 (58.0)</td>
<td>7,800 (53.8)</td>
<td>5,900 (40.7)</td>
</tr>
<tr>
<td>Pot Life</td>
<td>Approximately 30 minutes (200 gram mass)</td>
<td>8,450 (58.3)</td>
<td>7,850 (54.1)</td>
<td>6,300 (43.4)</td>
</tr>
<tr>
<td>Tensile Properties (ASTM D-638)</td>
<td>14 day Tensile Strength 2,200 psi (15.2 MPa)</td>
<td>1 day</td>
<td>8 hour</td>
<td>16 hour</td>
</tr>
<tr>
<td>Elasticity</td>
<td>1.1%</td>
<td>60 (0.4)</td>
<td>1,700 (11.7)</td>
<td>6,700 (46.2)</td>
</tr>
<tr>
<td>Flexural Properties (ASTM D-790)</td>
<td>14 day Flexural Strength (Modulus of Rupture) 4,300 psi (29.7 MPa)</td>
<td>1 day</td>
<td>8 hour</td>
<td>16 hour</td>
</tr>
<tr>
<td>Tangent Modulus of Elasticity in Bending</td>
<td>9.0 x 10^5 psi (6,205 MPa)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shear Strength (ASTM D-732)</td>
<td>14 day</td>
<td>3,300 psi (22.7 MPa)</td>
<td>1,100 psi (7.5 MPa)</td>
<td>1,600 psi (11 MPa)</td>
</tr>
<tr>
<td>Bond Strength (ASTM C-882): Hardened Concrete to Hardened Concrete</td>
<td>2 day (dry cure) Bond Strength 1,100 psi (7.5 MPa)</td>
<td>1 day</td>
<td>8 hour</td>
<td>16 hour</td>
</tr>
<tr>
<td>14 day (moist cure) Bond Strength 1,600 psi (11 MPa)</td>
<td>1 day</td>
<td>8 hour</td>
<td>16 hour</td>
<td>1 day</td>
</tr>
<tr>
<td>Abrasion (Taber Abrader) (H-22 wheel; 1,000 gm weight)</td>
<td>3,300 psi (22.7 MPa)</td>
<td>1,100 psi (7.5 MPa)</td>
<td>1,600 psi (11 MPa)</td>
<td></td>
</tr>
<tr>
<td>14 day Weight loss, 1,000 cycles</td>
<td>1,61 gm</td>
<td></td>
<td></td>
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<tr>
<td>Compressive Properties (ASTM D-695)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Compressive Strength, psi</td>
<td></td>
<td></td>
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<tr>
<td>Broadcast (1:2.25)</td>
<td>1.25 x 10^5 psi (862 MPa)</td>
<td>28 day</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Material cured and tested at the temperatures indicated.
Advantages
- System is moisture-tolerant before, during, and after cure.
- Excellent adhesive properties to most substrates.
- Convenient, easy mix ratio A:B = 1:1 by volume.
- Superior, long-term abrasion resistance and durability even at elevated temperatures.
- Easy care, skid-resistant overlay for bridge decks, parking structures, ramps, loading docks, industrial floors, etc.

Coverage
Broadcast aggregate: 2 lb./sq. ft. to excess. Seal coat: approximately 150-200 sq. ft./gal.

Packaging
Sikadur 22 Lo-Mod 4-gal. units.

How to Use
Surface Preparation
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.
Preparation Work: Concrete - Sandblast or use other approved mechanical means.
Steel - Should be cleaned and prepared thoroughly by blast cleaning.

Mixing
Pre-mix each component. 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.

Application
Primings: 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.
Cracks: Static (non-moving) cracks ≤1/8 in., gravity feed with an appropriate sealer/healer material. Dynamic cracks ≥1/8 in. should be treated as joints and sealed with an appropriate joint sealer.
Broadcast: 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.

When applying multiple courses: 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.

Limitations
- 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.
- For on grade, split-slab and unvented metal pan decks, please consult Sika Technical Service regarding moisture limitations.
- Minimum substrate and ambient temperature 40°F (4°C).
- Do not store materials outdoors exposed to sunlight for prolonged periods.
- Use properly graded, oven dried aggregates only.
- Do not apply over wet, glistening surface.
- Material is a vapor barrier after cure.
- Minimum age of concrete prior to application is 21-28 days, depending on curing and drying conditions.
- Do not apply to exterior, on-grade substrates, unvented metal pan decks, split/sandwich slabs, or buried membrane conditions.
- Use oven-dried aggregate only.
- Do not thin with solvents.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.
- Any repairs required to achieve a level surface must be performed prior to application (consult a

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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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