

# Sikadur® 22, Lo-Mod

Low-modulus, medium-viscosity,  
epoxy resin binder

Construction

<b>Description</b>	Sikadur® 22, Lo-Mod is a 2-component, 100% solids, moisture-tolerant, epoxy resin binder. It conforms to the current ASTM C-881, Type III, Grade-2, Class-C and AASHTO M-235 specifications.
<b>Where to Use</b>	Use neat as the binder resin for a skid-resistant broadcast overlay. Use also as the binder resin for epoxy mortar and concrete for patching and overlays.
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ Tolerant to moisture both before and after cure.</li> <li>■ Convenient easy mix ratio A:B = 1:1 by volume.</li> <li>■ Excellent strength development.</li> <li>■ Leveling viscosity for easy, efficient application of a broadcast overlay.</li> <li>■ Material is USDA-certifiable.</li> </ul>
<b>Coverage</b>	1 gal. yields 231 in <sup>3</sup> <b>Mortar Binder</b> - 1 gal. of mixed Sikadur® 22 Lo-Mod with the addition of 5 gal. by loose volume of an oven dried sand, yields approximately 808 in <sup>3</sup> of epoxy mortar.
<b>Packaging</b>	4 gallon units / 110 gallon unit / 660 gallon totes. <b>Note: Part A of the Sikadur 22 Lo-Mod, Sikadur 22 Lo-Mod FS and Sikadur 21 Lo-Mod LV is a universal component of these three products.</b>

### 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). Condition material to 65°-85°F (18°-29°C) before using.		
<b>Color</b>	Clear to light amber.		
<b>Mixing Ratio</b>	Component 'A':Component 'B' = 1:1 by volume.		
<b>Viscosity</b>	Approximately 2,000 cps.		
<b>Pot Life</b>	Approximately 30 minutes (200 gram mass).		
<b>Tack-Free Time</b>	<b>40°F (4°C)</b>	<b>73°F (23°C)</b>	<b>90°F (32°C)</b>
	24 hours	5 hours	2.5 hours
<b>Traffic Time</b>	6-8 hours		
<b>Tensile Properties (ASTM D-638)</b>	<b>Mortar 1:3</b>	<b>Neat</b>	
14 day Tensile Strength	2,200 psi (15.2 MPa)	5,700 psi (39.3 MPa)	
Elongation at Break	-	>30 %	
Modulus of Elasticity (Neat tested @ 0.5 in/min.)	4.78 x 10 <sup>5</sup> psi (3,240 MPa)	1.9 x 10 <sup>5</sup> psi (1,310 MPa)	
<b>Tensile Strength (ASTM C307)</b>	<b>Mortar 1:3</b>	<b>Neat</b>	
14 day	1400 psi (9.7MPa)	2800 psi (19.3 MPa)	
<b>Shear Strength (ASTM D-732)</b>	<b>Mortar 1:3</b>	<b>Neat</b>	
7 day Shear Strength	3,000 psi (22.7 MPa)	5,700 psi (37.2 MPa)	
<b>Water Absorption (ASTM D-570)</b>		<b>Neat</b>	
7 day (24 hour immersion)		0.26 %	
<b>Direct Tensile (ASTM C-1503; ACI 503):</b>	<b>Mortar 1:3</b>	<b>Neat</b>	
7 day	510 psi concrete fail	570 psi concrete fail	
<b>Abrasion (Taber Abrader)</b>	<b>Mortar 1:3</b>	<b>Neat</b>	
14 day Weight loss, 1,000 cycles (H-22 wheel; 1,000 gm weight)	1.8 gm	.030 gm	



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## Compressive Properties (ASTM D-695) Mortar 1:3

### Compressive Strength, psi (MPa)

	40°F* (4°C)	73°F * (23°C)	90°F* (32°C)	73°F* (23°C) NEAT
<b>8 hour</b>	-	1,900 (13.1)	2,800 (19.3)	-
<b>16 hour</b>	-	4,300 (29.6)	5,000 (34.5)	-
<b>1 day</b>	2,200 (15.2)	5,200 (35.9)	5,200 (35.9)	480 (3.3)
<b>3 day</b>	6,500 (44.8)	6,800 (46.9)	6,900 (40.7)	2,200 (15.2)
<b>7 day</b>	7,900 (59.5)	7,200 (49.6)	6,100 (42.1)	3,400 (23.4)
<b>14 day</b>	8,800 (60.7)	7,600 (52.4)	6,100 (42.1)	3,400 (23.4)
<b>28 day</b>	9,500 (65.5)	7,900 (54.5)	6,100 (42.1)	3,400 (23.4)

### Compressive Modulus

**28 day** 6.6 x 10<sup>4</sup> psi (455 MPa)

\* Material cured and tested at the temperatures indicated.

## 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 and any other contaminants.

**Preparation Work: Concrete** - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface (CSP 3-4 as per ICRI) by blast cleaning or equivalent mechanical means.

**Steel** - Should be cleaned and prepared thoroughly by blast cleaning to white metal finish.

**Mixing** Proportion equal parts by volume of Component 'A' and 'B' into clean pail. Mix thoroughly for 3 min. with Sika paddle on low-speed (400-600 rpm) drill until uniformly blended. Mix only that quantity that can be used within pot life.

**To prepare epoxy mortar** - Slowly add 5 parts by loose volume of oven-dried sand to 1 part of mixed Sikadur® 22 Lo-Mod until uniform in consistency.

**Application** **Broadcast Overlay** - Prime the prepared substrate with Sikadur® 22 Lo-Mod. While primer is still tacky, spread mixed Sikadur® 22 Lo-Mod with a 3/16 in. notched squeegee. When material levels, broadcast the oven-dried aggregate slowly allowing it to settle in the epoxy binder. Ultimately the broadcast aggregate should be applied to excess at a rate of 2 lbs./ft<sup>2</sup> Remove excess broadcast aggregate after epoxy has set. Priming is an optional step in the broadcast overlay applications.

**Epoxy Mortar** - Prime prepared substrate with mixed Sikadur® 22 Lo-Mod or Sikadur® 21 Lo Mod LV. While primer is still tacky, apply epoxy mortar by trowel or vibrating screed. Finish with finishing trowel. Priming is mandatory when using the 22 Lo Mod as an epoxy mortar.

## Limitations

- Minimum substrate and ambient temperature 40°F (4°C).
- Porous substrates must be tested for moisture-vapor transmission prior to application. (Ref. ASTM D-4263).
- Minimum age of concrete before application is 21-28 days depending upon curing and drying conditions.
- Do not use on exterior slab on grade.
- Maximum thickness 1/2 in. (13 mm) exterior exposed to thermal change.
- Do not dilute. Addition of solvents will prevent proper cure.
- Use oven-dried aggregates only.
- Material is a vapor barrier after cure.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

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