

Sikadur® 22 Lo-Mod FS

Low-modulus, fast setting, medium-viscosity, epoxy resin binder

Description	Sikadur® 22, Lo-Mod FS is a 2-component, 100% solids, moisture-tolerant, fast setting epoxy resin binder. It conforms to the current ASTM C-881, Grade-1 and AASHTO M-235 specifications.
Where to Use	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.
Advantages	<ul style="list-style-type: none"> ■ Fast Setting for quick turn around. ■ Meets 3 hr/1000 psi requirement when mixed as an epoxy mortar. ■ Tolerant to moisture both before and after cure. ■ Convenient easy mix ratio A:B = 1:1 by volume. ■ Excellent strength development. ■ Leveling viscosity for easy, efficient application of a broadcast overlay. ■ Successfully used in HFST applications. Refer to local DOT specs. for product acceptance.
Coverage	1 gal. yields 231 in ³ Mortar Binder - 1 gal. of mixed Sikadur® 22 Lo-Mod FS with the addition of 5 gal. by loose volume of an oven dried sand, yields approximately 808 cu. in. of epoxy mortar.
Cure Mechanism	Chemical.
Packaging	4 gallon units / 110 gallon unit / 660 gallon totes. 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.

How to Use

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.

Shelf Life	2 years in original, unopened containers.
Storage Conditions	Store dry at 40°-95°F (4°-35°C).
Condition material	65°-85°F (18°-29°C) before using.
Color	Clear to light amber.
Mixing Ratio	Component 'A':Component 'B' = 1:1 by volume.
VOC:	<20 g/L
Viscosity	Approximately 2,000 cps.
Pot Life	Approximately 15-20 minutes (60 gram mass; ASTM C881).

Minimum Recoat Times for Sikadur® 22 Lo-Mod FS						
Time to Set*	Average Substrate and Material Temperature					
	60-64 °F 16-18 °C	65-69 °F 19-21 °C	70-74 °F 21-23 °C	75-79 °F 24-26 °C	80-84 °F 27-29 °C	85+ °F 29+ °C
Coat 1	4 - 4 ½ hrs	2 ½ - 3 hrs	2 - 2 ½ hrs	2 - 3 hrs	1.5 hrs	1 hrs
Coat 2	5 ½ - 6 hrs	4 ½ - 5 hrs	4 hrs	3 hrs	3 hrs	2 ½ - 3 hrs

*These set times were determined under laboratory conditions, actual set times may vary based on on-site conditions

Tensile Properties (ASTM D-638)	Mortar 1:3	Neat
7 day Tensile Strength, psi	1200	2650
Elongation at Break	40%	55%
Shear Strength (ASTM D-732)		
7 day Shear Strength, psi	2600	3430
Water Absorption (ASTM D-570)		
7 day (24 hour immersion)		<0.20%
Abrasion (Taber Abrader)		
14 day Weight loss, 1,000 cycles, grams (H-22 wheel; 1,000 gm weight for mortar/ C-17 wheel, 1,000 gm wt for neat)	2.0	0.030
Hardness (ASTM D-2240: Shore D)		72

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Rapid Chloride Permeability (AASHTO T-277)	0 coulombs		
Direct Pull Off Bond Test (ASTM C1583; ACI 503R)			
1 day	>550 psi (concrete failure)		
7 day	>570 psi (concrete failure)		
Thermal Compatibility (ASTM C884)	Pass		
Compressive Strength (ASTM C-579), psi	40°F* (4°C)	73°F* (23°C)	90°F* (32°C)
3 hour	-	1750 psi	3600 psi
8 hour	2000 psi	4400 psi	6400 psi
1 day	4500 psi	6500 psi	8000 psi
3 day	5500 psi	7500 psi	8500 psi
7 day	8500 psi	8500 psi	9000 psi
14 day	9000 psi	9000 psi	9000 psi
28 day	9000 psi	9000 psi	9000 psi
Compressive Modulus			
7 day	40,000 psi		
28 day	40,000 psi		
* Material cured and tested at the temperatures indicated.			

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 by blast cleaning or equivalent mechanical means.

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

Mixing Mixing Pre-mix each component. 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 mixed resin

Application **Broadcast Overlay** - Prime the prepared substrate with Sikadur 22 Lo-Mod FS. While primer is still tacky, spread mixed Sikadur 22 Lo-Mod FS 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./sq. ft.

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 FS. 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 FS as an epoxy mortar.

- Limitations**
- Minimum substrate and ambient temperature 40°F (4°C).
 - Minimum age of concrete before application is 21-28 days depending upon curing and drying conditions.
 - For on grade, split-slab and unvented metal pan deck, please consult Sika Technical Service regarding moisture limitations.
 - 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.
 - For HFST applications, system and application details are governed by local DOT & AASHTO specification.

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