

Sikadur® 21, Lo-Mod LV

Low-modulus, low-viscosity, epoxy resin binder

Description	Sikadur® 21, Lo-Mod LV, is a 2-component, 100% solids, moisture-tolerant, epoxy resin binder. It conforms to the current ASTM C-881 Type II, Grade 1, Class B & C and AASHTO M-235 specifications.
Where to Use	Use as a binder for epoxy mortar for patching and overlays.
Advantages	■ Tolerant to moisture both before and after cure. ■ Convenient easy mix ratio A:B = 1:1 by volume. ■ Excellent strength development. ■ Low viscosity gives you easy handling, high-yield epoxy mortar. ■ Material is USDA-certifiable for incidental food contact.
Coverage	Prime Coat - approximately 200-250 ft²/gal. Mortar Binder - 1 gal. of mixed Sikadur® 21, Lo-Mod LV with the addition of 6 parts by loose volume of an oven-dried sand, yields approximately 924 in³.
Packaging	4 gallon units. 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.

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 to 65°-85°F (18°-29°C) before using.		
Color	Clear, amber.		
Mixing Ratio	Component 'A':Component 'B' = 1:1 by volume.		
Viscosity	Approximately 1,000 cps.		
Pot Life	Approximately 25 minutes. (200 gram mass)		
Tack-Free Time	Approximately 3 hours; @ 90°F (32°C) Approximately 2 hours		
Traffic Time	4-5 hours.		
Tensile Properties (ASTM D-638)		MORTAR 1:6	NEAT
14 day Tensile Strength		1,300 psi (8.9 MPa)	5,800 psi (40.0 MPa)
Elongation at Break		0.2 %	5.5 %
Modulus of Elasticity		6.6 x 10 ⁵ psi (4,551 MPa)	1.43 x 10 ⁵ psi (986 MPa)
Flexural Properties (ASTM D-790)		MORTAR 1:6	NEAT
14 day Flexural Strength (Modulus of Rupture)		2,300 psi (15.8 MPa)	9,600 psi (66.2 MPa)
Tangent Modulus of Elasticity in Bending		1.2 x 10 ⁶ psi (8,274 MPa)	2.98 x 10 ⁵ psi (2,055 MPa)
Shear Strength (ASTM D-732)		MORTAR 1:6	NEAT
14 day Shear Strength		2,000 psi (13.7 MPa)	5,670 psi (39 MPa)
Water Absorption (ASTM D-570)			NEAT
7 day (24 hr immersion)			0.26%
Bond Strength (ASTM C-882): Hardened concrete to hardened concrete			
2 day (dry cure) Bond Strength		1,100 psi (7.5 MPa)	
14 day (moist cure) Bond Strength		1,600 psi (11 MPa)	
Abrasion (Taber Abrader)			MORTAR 1:6
14 day Weight loss, 1,000 cycles (H-22 wheel; 1,000 gm. weight)			4.1 gm
Compressive Properties (ASTM C-579) Compressive Strength, psi (MPa)			
	Mortar 1:6	(ASTM D-695)	
	40°F*(4°C)	73°F*(23°C)	90°F* (32°C)
4 hour	-	-	500 (3.4)
8 hour	-	400 (2.7)	2,200 (15.1)
16 hour	20 (0.13)	2,100 (14.4)	4,600 (31.7)
1 day	40 (0.27)	2,600 (17.9)	4,700 (32.4)
3 day	1,400 (9.6)	4,900 (33.7)	5,500 (37.9)
7 day	3,500 (24.1)	5,400 (37.2)	6,200 (42.7)
14 day	4,500 (31.0)	6,000 (41.3)	6,200 (42.7)
28 day	4,600 (31.7)	6,100 (42.0)	6,200 (42.7)
			73°F (23°C) NEAT
			-
			116 (0.80)
			1,900 (13.1)
			6,700 (46.2)
			9,000 (62.1)
			9,100 (62.7)
			9,200 (63.4)



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Compressive Modulus

28 day

MORTAR

7.6 x 10⁵ psi (5,240 MPa)

NEAT

2.58 x 10⁵ psi (1,779 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 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 6 parts by loose volume of oven-dried sand aggregate to 1 part of mixed Sikadur® 21, Lo-Mod LV. Mix until uniform in consistency.

Application

Epoxy Mortar - Prime prepared surface with mixed Sikadur® 21, Lo-Mod LV. Apply epoxy mortar by trowel or vibrating screed while primer is still tacky. Finish with finishing trowel.

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 apply to exterior slab on grade.
- Maximum application thickness on exterior substrates exposed to thermal change is 1/2 in (13 mm).
- 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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Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537



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