

PRODUCT DATA SHEET

Sikadur[®]-21 Lo-Mod LV

Low-modulus, low-viscosity, epoxy resin binder

PRODUCT 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.

USES

Sikadur[®]-21 Lo-Mod LV may only be used by experienced professionals.

Use as a binder for epoxy mortar for patching and overlays.

CHARACTERISTICS / 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

PRODUCT INFORMATION

Packaging	4 gal. (15 L) 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
Color	Clear, amber
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.
Viscosity	Approximately 1,000 cps.

TECHNICAL INFORMATION

Compressive Strength

	40 °F (4 °C)	Mortar 1:6 73 °F (23 °C)	90 °F (32 °C)	Neat 73 °F (23 °C)
4 hour	-	-	500 psi (3.4 MPa)	-
8 hour	-	400 psi (2.7 MPa)	2,200 psi (15.1 MPa)	-
16 hour	20 psi (0.13 MPa)	2,100 psi (14.4 MPa)	4,600 psi (31.7 MPa)	116 psi (0.80 MPa)
1 day	40 psi (0.27 MPa)	2,600 psi (17.9 MPa)	4,700 psi (32.4 MPa)	1,900 psi (13.1 MPa)
3 day	1,400 psi (9.6 MPa)	4,900 psi (33.7 MPa)	5,500 psi (37.9 MPa)	6,700 psi (46.2 MPa)
7 day	3,500 psi (24.1 MPa)	5,400 psi (37.2 MPa)	6,200 psi (42.7 MPa)	9,000 psi (62.1 MPa)
14 day	4,500 psi (31.0 MPa)	6,000 psi (41.3 MPa)	6,200 psi (42.7 MPa)	9,100 psi (62.7 MPa)
28 day	4,600 ps (31.7 MPa)	6,100 psi (42.0 MPa)	6,200 psi (42.7 MPa)	9,200 psi (63.4 MPa)

Material cured and tested at the temperatures indicated.
(ASTM C-579) (73 °F (23 °C) 50 % R.H.)

Modulus of Elasticity in Compression

	Mortar 1:6	Neat	(ASTM C-579) 73 °F (23 °C) 50 % R.H.
28 day	7.6 x 10 ⁵ psi (5,240 MPa)	2.58 x 10 ⁵ psi (1,779 MPa)	

Flexural Strength

	Mortar 1:6	Neat	(ASTM D-790) 73 °F (23 °C) 50 % R.H.
14 day	2,300 psi (15.8 MPa)	9,600 psi (66.2 MPa)	

Modulus of Elasticity in Flexure

	Mortar 1:6	Neat	(ASTM D-790) 73 °F (23 °C) 50 % R.H.
14 day	1.2 x 10 ⁶ psi (8,274 MPa)	2.98 x 10 ⁵ psi (2,055 MPa)	

Tensile Strength

	Mortar 1:6	Neat	(ASTM D-638) 73 °F (23 °C) 50 % R.H.
14 day	1,300 psi (8.9 MPa)	5,800 psi (40.0 MPa)	

Tensile Modulus of Elasticity

	Mortar 1:6	Neat	(ASTM D-638) 73 °F (23 °C) 50 % R.H.
14 day	6.6 x 10 ⁵ psi (4,551 MPa)	1.43 x 10 ⁵ psi (986 MPa)	

Elongation at Break

	Mortar 1:6	Neat	(ASTM D-638) 73 °F (23 °C) 50 % R.H.
14 day	0.2 %	5.5 %	

Shear Strength

	Mortar 1:6	Neat	(ASTM D-732) 73 °F (23 °C) 50 % R.H.
14 day	2,000 psi (13.7 MPa)	5,670 psi (39 MPa)	

Slant Shear Strength

2 days	(dry cure)	1,100 psi (7.5 MPa)	Hardened concrete to hardened concrete (ASTM C-882)
14 days	(moist cure)	1,600 psi (11 MPa)	

Abrasion Resistance	14 day	Mortar 1:6	(Taber Abrader)
	Weight loss, 1,000 cycles (H-22 wheel; 1,000 gm. weight)	4.1 gm	73 °F (23 °C) 50 % R.H.
Water Absorption	7 day (24 hr immersion)	0.26 %	(ASTM D-570)
			73 °F (23 °C) 50 % R.H.



APPLICATION INFORMATION

Mixing Ratio	Component A:Component B = 1:1 by volume
Coverage	Prime Coat - approximately 200-250 ft ² /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 in ³ .
Pot Life	Approximately 25 minutes. (200 gram mass)
Cure Time	Tack-Free Time: Approximately 3 hours; at 90 °F (32 °C) Approximately 2 hours
Applied Product Ready for Use	Traffic Time: 4–5 hours

APPLICATION INSTRUCTIONS

SUBSTRATE 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 METHOD / TOOLS

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 D⁴²⁶³).
- 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.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

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

LEGAL DISCLAIMER

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

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