

# Sikadur® 21, Lo-Mod LV

Low-modulus, low-viscosity, epoxy resin binder

<b>Description</b>	Sikadur 21, Lo-Mod LV, is a 2-component, 100% solids, moisture-tolerant, epoxy resin binder. It conforms to the current ASTM C-881 and AASHTO M-235 specifications.
<b>Where to Use</b>	Use as a binder for epoxy mortar 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>■ Low viscosity gives you easy handling, high-yield epoxy mortar.</li> <li>■ Material is USDA-certifiable.</li> </ul>

**Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)**

<b>Shelf Life</b>	2 years in original, unopened containers.		
<b>Storage Conditions</b>	Store dry at 40°-95°F (4°-35°C). <b>Condition material to 65°-85°F (18°-29°C) before using.</b>		
<b>Color</b>	Clear, amber.		
<b>Mixing Ratio</b>	Component 'A':Component 'B' = 1:1 by volume.		
<b>Viscosity</b>	Approximately 1,000 cps.		
<b>Pot Life</b>	Approximately 25 minutes. (200 gram mass)		
<b>Tack-Free Time</b>	Approximately 3 hours; at 90°F (32°C) - Approximately 2 hours		
<b>Traffic Time</b>	4-5 hours.		
<b>Tensile Properties (ASTM D-638)</b>		<b>MORTAR 1:6</b>	<b>NEAT</b>
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 <sup>5</sup> psi (4,551 MPa)	1.43 x 10 <sup>5</sup> psi (986 MPa)
<b>Flexural Properties (ASTM D-790)</b>		<b>MORTAR 1:6</b>	<b>NEAT</b>
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 <sup>6</sup> psi (8,274 MPa)	2.98 x 10 <sup>5</sup> psi (2,055 MPa)
<b>Shear Strength (ASTM D-732)</b>		<b>MORTAR 1:6</b>	<b>NEAT</b>
14 day Shear Strength		2,000 psi (13.7 MPa)	5,670 psi (39 MPa)
<b>Water Absorption (ASTM D-570)</b>			<b>NEAT</b>
7 day (24 hr immersion)			0.26%
<b>Heat Deflection Temperature (ASTM D-648)</b>		<b>MORTAR 1:6</b>	
14 day Fiber stress loading = 66 psi (0.46 MPa)		111°F (44°C)	
<b>Bond Strength (ASTM C-882): Hardened concrete to hardened concrete</b>			
2 day (dry cure) Bond Strength		1,100 psi (7.5 MPa)	
14 day (moist cure) Bond Strength		1,600 psi (11 MPa)	
<b>Abrasion (Taber Abrader)</b>			<b>MORTAR 1:6</b>
14 day Weight loss, 1,000 cycles (H-22 wheel; 1,000 gm. weight)			4.1 gm
<b>Compressive Properties (ASTM C-579) Compressive Strength, psi (MPa)</b>			
		<b>MORTAR 1:6</b>	(ASTM D-695)
	<b>40°F*(4°C)</b>	<b>73°F*(23°C)</b>	<b>90°F* (32°C)</b>
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)
			<b>73°F (23°C) NEAT</b>
			-
			116 (0.80)
			1,900 (13.1)
			6,700 (46.2)
			9,000 (62.1)
			9,100 (62.7)
			9,200 (63.4)
<b>Compressive Modulus</b>		<b>MORTAR</b>	<b>NEAT</b>
28 day		7.6 x 10 <sup>5</sup> psi (5,240 MPa)	2.58 x 10 <sup>5</sup> psi (1,779 MPa)



\* Material cured and tested at the temperatures indicated.

<b>Coverage</b>	<b>Prime Coat</b> - approximately 200-250 sq. ft./gal. <b>Mortar Binder</b> - 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 cu. in.
<b>Packaging</b>	4 gal. units.
<b>How to Use</b>	
<b>Surface Preparation</b>	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. <b>Preparation Work:</b> <b>Concrete</b> - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blastcleaning or equivalent mechanical means. <b>Steel</b> - Should be cleaned and prepared thoroughly by blast cleaning to white metal finish.
<b>Mixing</b>	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. <b>To prepare epoxy mortar</b> - 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.
<b>Application</b>	<b>Epoxy Mortar</b> - 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. <b>Epoxy Concrete</b> - Consult Technical Service for placement and finishing of epoxy concrete.
<b>Limitations</b>	<ul style="list-style-type: none"> <li>■ Minimum substrate and ambient temperature 40°F (4°C).</li> <li>■ Porous substrates must be tested for moisture-vapor transmission prior to application. (Ref. ASTM D-4263).</li> <li>■ Minimum age of concrete before application is 21-28 days depending upon curing and drying conditions.</li> <li>■ Do not apply to exterior slab on grade.</li> <li>■ Maximum application thickness on exterior substrates exposed to thermal change is 1/2 in (13 mm).</li> <li>■ Do not dilute. Addition of solvents will prevent proper cure.</li> <li>■ Use oven-dried aggregates only.</li> <li>■ Material is a vapor barrier after cure.</li> </ul>
<b>Caution</b>	<b>Component 'A' - Irritant; Sensitizer</b> - Contains epoxy resin. Can cause skin sensitization after prolonged or repeated contact. Skin and eye irritant. High concentrations of vapor may cause respiratory irritation. Avoid skin contact. Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information. <b>Component 'B' - Corrosive; Sensitizer</b> - Contains amines. Contact with eyes or skin may cause severe burns. Skin and eye irritant. High concentrations of vapor may cause respiratory irritation. Avoid skin contact. Use only with adequate ventilation. Use of safety goggles and chemical-resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.
<b>First Aid</b>	<b>Eyes:</b> Hold eyelids apart and flush thoroughly with water for 15 minutes. <b>Skin:</b> Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. <b>Inhalation:</b> Remove person to fresh air. <b>Ingestion:</b> Do not induce vomiting. <b>In all cases, contact a physician immediately if symptoms persist.</b>
<b>Clean Up</b>	Ventilate area. Confine spill. Collect with absorbent material and transfer into suitable container. Avoid release into the environment. Dispose of in accordance with current, applicable local, state and federal regulations. Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

KEEP CONTAINER TIGHTLY CLOSED  
NOT FOR INTERNAL CONSUMPTION

KEEP OUT OF REACH OF CHILDREN  
FOR INDUSTRIAL USE ONLY

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current technical data sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

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