

Sikadur® 23, Lo-Mod Gel

Low-modulus, paste-consistency, epoxy resin binder

Description	Sikadur® 23, Lo-Mod Gel, is a 2-component, 100% solids, moisture-tolerant, low-modulus, non-sag paste-consistency, epoxy resin binder. It conforms to the current ASTM C-881 and AASHTO M-235 specifications.
Where to Use	<ul style="list-style-type: none"> ■ Use as a binder for epoxy mortar repairs. ■ As a pick-proof sealant around windows, doors, lock-ups, etc., inside correctional facilities, schools and institutions.
Advantages	<ul style="list-style-type: none"> ■ Non-sag consistency. ■ Convenient easy to mix ratio A:B = 1:1 by volume. ■ Moisture-tolerant epoxy adhesive binder.
Coverage	1 gal. of mixed Sikadur® 23, Lo-Mod Gel, when mixed with 1 part by loose volume of oven-dried aggregate, yields approximately 346 cu. in. of epoxy mortar.
Packaging	4-gal. units

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°-75°F (18°-24°C) before using.				
Color	Concrete gray.				
Mixing Ratio	Component 'A':Component 'B' = 1:1 by volume.				
Consistency	Non-sag paste.				
Pot Life	Approximately 45 minutes. (200 gram mass)				
Tensile Properties Mortar 1:1 (ASTM D-638)				Neat	
14 day Tensile Strength		2,400 psi (16.5 MPa)		2,000 psi (13.8 MPa)	
Elongation at Break		1.0 %		6.3%	
Modulus of Elasticity		6.1 x 10 ⁵ psi (4,206 MPa)		3.23 x 10 ⁵ psi (2,227 MPa)	
Flexural Properties Mortar 1:1 (ASTM D-790)					
14 day Flexural Strength (Modulus of Rupture)		3,900 psi (26.9 MPa)		4,800 psi (33 MPa)	
Tangent Modulus of Elasticity in Bending		6.8 x 10 ⁵ psi (4,688 MPa)		4.71 x 10 ⁵ psi (3,247 MPa)	
Shear Strength Mortar 1:1 (ASTM D-732)					
14 day Shear Strength		3,300 psi (22.7 MPa)		3,000 psi (21 MPa)	
Water Absorption Neat (ASTM D-570)					
7 day (2 hour Boil)		0.4%			
Deflection Temperature Mortar 1:1 (ASTM D-648)					
14 day [fiber stress loading = 66 psi (0.46 MPa)]		102°F (39°F)			
Bond Strength (ASTM C-882): Hardened concrete to hardened concrete					
2 day (dry cure) Bond Strength		2,600 psi (17.9 MPa)			
14 day (moist cure) Bond Strength		1,700 psi (11.7 MPa)			
Compressive Properties Mortar 1:1, (ASTM D-695)					
Compressive Strength, psi (MPa)				Neat	
	40°F* (4°C)	73°F* (23°C)	90°F* (32°C)	73°F* (23°C)	90°F* (32°C)
8 hour	-	-	3,500 (24.1)	-	-
16 hour	-	3,300 (22.7)	5,600 (38.6)	120 (0.83)	960 (6.6)

Construction



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1 day	-	4,500 (31.0)	5,700 (39.3)	1,300 (9.0)	1,600 (11.0)
3 day	100 (.69)	5,600 (38.6)	5,800 (40.0)	2,900 (20.0)	1,800 (12.4)
7 day	2,200 (15.2)	6,500 (44.8)	5,800 (40.0)	4,600 (31.7)	3,600 (24.8)
14 day	7,300 (50.3)	7,100 (48.9)	5,900 (40.7)	5,000 (34.5)	3,800 (26.2)
28 day	7,400 (51.0)	7,200 (49.6)	6,000 (41.4)	5,150 (35.5)	3,900 (26.9)
Compressive Modulus	28 days	4.0x10 ⁵ psi (2,758 MPa)		1.28x10 ⁵ psi (883 MPa)	

* 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, foreign particles, disintegrated materials.

Concrete - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blastcleaning or equivalent mechanical means.

Steel - Should be cleaned and prepared thoroughly by blastcleaning other equivalent mechanical means to a shiny metal finish.

Mixing

Pre-mix each component. Proportion equal quantities by volume of Component 'A' and Component 'B' into a clean pail. Mix thoroughly for 3 minutes with a Sika paddle on a low-speed (400-600 rpm) drill until uniform in color. Slowly add up to 1 part by loose volume of an oven-dried aggregate to 1 part of mixed Sikadur® 23, Lo-Mod Gel, and mix until uniform in consistency. Mix only that quantity that can be used within its pot life.

Application

As a mortar - Apply the Sikadur® 23, Lo-Mod Gel mortar using a trowel. Work material into surface. Fill void from deepest to shallowest area. Strike off level.

As a pick-proof sealant - Use automated or manual method. Apply an appropriate size bead of material around the area being sealed. Seal with neat Sikadur® 23, Lo-Mod Gel.

Limitations

- Do not thin, solvents will prevent proper cure.
- Use only oven-dried aggregate.
- Minimum substrate and ambient temperature 40°F (4°C).
- Porous substrates must be tested for moisture-vapor transmission prior to application.
- Material is a vapor barrier after cure.
- Minimum age of concrete before application is 21-28 days, depending on curing and drying conditions.
- Thickness in excess of 1/2 in. (13 mm) is not recommended in areas exposed to thermal change.
- Maximum thickness of 1.5 in./lift (38 mm/lift) for interior applications.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

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