



Sikadur[®] 35, Hi-Mod LV

High-modulus, low-viscosity, high-strength epoxy grouting/sealing/binder adhesive

DESCRIPTION

Sikadur 35, Hi-Mod LV, is a 2-component, 100% solids, moisture-tolerant, low-viscosity, high-strength, multi-purpose, epoxy resin adhesive. It conforms to the current ASTM C-881 and AASHTO M-235 specifications.

WHERE TO USE

- ▲ Pressure-injection of cracks in structural concrete, masonry, wood, etc.
- ▲ Grouting bolts, dowels, pins, etc.
- ▲ Gravity-feed of cracks in horizontal concrete and masonry.
- ▲ Epoxy resin binder for epoxy mortar patching and overlay of interior, horizontal surfaces.
- ▲ Seal interior slabs and exterior above-grade slabs from water, chlorides, and mild chemical attack, and to improve wearability.

ADVANTAGES

- ▲ Super low viscosity.
- ▲ Convenient easy mix ratio A:B = 2:1 by volume.
- ▲ Unique, high-strength, structural adhesive for 'can't dry' surfaces.
- ▲ Deep penetrating and tenacious bonding of cracks in structural concrete.
- ▲ High-early-strength developing adhesive.
- ▲ Excellent chemical resistance for flooring systems.

COVERAGE

1 gal. yields 231 cu. in. of adhesive and grout. 1 gal. of adhesive, when mixed with 5 gal. by loose volume of oven-dried aggregate, yields approximately 808.5 cu. in. of epoxy mortar.

PACKAGING

3-gal. units; 12-fl-oz. units, 12/case.

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 and disintegrated materials.

Preparation Work:

Concrete - Blast clean, shot blast or use other approved mechanical means to provide an open roughened texture.

Steel - Should be cleaned and prepared thoroughly by blast cleaning.

MIXING

Proportion 1 part Component 'B' to 2 parts Component 'A' by volume into a clean pail. Mix thoroughly for 3 minutes with Sika Paddle on low-speed (400- 600 rpm) drill until uniformly blended.

TYPICAL DATA FOR SIKADUR 35, HI-MOD LV (Material and curing conditions @ 73F (23C) and 50% R.H.)						
SHELF LIFE	2 years in original, unopened containers.					
STORAGE CONDITIONS	Store dry at 40-95F (4-35C). Condition material to 65-75F (18-24C) before using.					
COLOR	Clear, amber.					
MIXING RATIO	Component A : Component B=2:1 by volume.					
VISCOSITY	Approximately 375 cps.					
POT LIFE	Approximately 25 minutes. (60 gram mass)					
TACK FREE TIME						
(3-5 mils) Neat	40F (4C)	73F (23C)	90F (32C)			
	14-16 hrs	3-3.5 hrs	1.5-2 hrs			
TENSILE PROPERTIES (ASTM D-638)	Neat		Mortar			
7 day Tensile Strength	8,900 psi (61 MPa)		14 day	840 psi(5.8 MPa)		
Elongation at Break	5.4%			0.3%		
14 day Modulus of Elasticity	4.1 X 10 ⁵ psi (2,800 MPa)			7.6 X 10 ⁵ psi(5,200 MPa)		
FLEXURAL PROPERTIES (ASTM D-790)	Neat		Mortar			
14 day Flexural Strength	14,000 psi (97 MPa)		2,200 psi (15 MPa)			
(Modulus of Rupture)						
Tangent Modulus of Elasticity in Bending	3.7 x 10 ⁵ psi (2,600 MPa)		9.5 X 10 ⁵ psi (6,500 MPa)			
SHEAR STRENGTH (ASTM D-732)	Neat		Mortar			
14 day Shear Strength	5,100 psi (35 MPa)		2,300 psi (16 MPa)			
DEFLECTION TEMPERATURE (ASTM D-648)	Neat		Mortar			
7 day Deflection Temperature (fiber stress loading = 264 psi)	124F (51C)		129F (54C)			
BOND STRENGTH (ASTM C-882): Hardened concrete to hardened concrete						
2 day (moist cure) Bond Strength	2,400 psi (17 MPa)					
14 day (moist cure) Bond Strength	2,200 psi (15 MPa)					
2 day (dry cure) Bond Strength	2,800 psi (19 MPa)					
WATER ABSORPTION (ASTM D-570)						
24 hour Total Water Absorption, (2 hour boil)	0.90 %					
COMPRESSIVE PROPERTIES (ASTM D-695)						
COMPRESSIVE STRENGTH, PSI	Neat		Mortar (1:5)			
	40F (4C)	73F (23C)	90F (32C)	40F	73F	90F
4 hour	-	-	-	-	-	800
8 hour	-	180	3,200	-	-	4,100
16 hour	-	4,800	6,300	-	400	5,700
1 day	-	7,900	9,100	120	5,000	6,900
3 day	3,600	10,700	10,500	6,200	6,800	7,000
7 day	8,000	11,400	10,500	6,300	7,900	8,800
14 day	10,300	12,000	10,500	6,800	8,500	8,800
28 day	12,400	13,000	10,500	7,000	8,600	8,800
MODULUS OF ELASTICITY, PSI	Neat		Mortar			
7 day	21.5 X 10 ⁴ (1,500 MPa)		28 day	8.1 X 10 ⁵ (5,600 MPa)		

Mix only that quantity that can be used within its pot life.

To prepare an epoxy mortar, slowly add 4-5 parts by loose volume of an oven-dried aggregate to 1 part of the mixed Sikadur 35, Hi-Mod LV, and mix until uniform in consistency.

APPLICATION

To gravity feed cracks - Pour neat Sikadur 35, Hi-Mod LV, into vee-notched crack. Continue placement until completely filled. Seal underside of slab prior to filling if cracks reflect through.

To pressure-inject cracks - Use automated injection equipment or manual method. Set appropriate injection ports based on system used. Seal ports and crack with Sikadur 31, Hi-Mod Gel, or Sikadur 33. When the epoxy adhesive seal has cured, inject Sikadur 35, Hi-Mod LV, with steady pressure. Consult Technical Service for additional information.

To anchor bolts, dowels, and pins - Annular space around bolt should not exceed 1/8-in.; depth of embedment is typically 10-15 times the bolt diameter. Grout with neat Sikadur 35, Hi-Mod LV.

To seal slabs - Spread neat Sikadur 35, Hi-Mod LV, over slab. Allow penetration. Remove excess to prevent surface film. Seal interior slabs and above-grade exterior slabs only.

For an epoxy mortar - Prime prepared surface with neat Sikadur 35, Hi-Mod LV. Place prepared epoxy mortar before primer becomes tack-free. Place the epoxy mortar using trowels. Compact and level with vibrating screed or trowels. Finish with finishing trowel. Sikadur 35, Hi-Mod LV, mortar is for interior use only.

LIMITATIONS

- ▲ Minimum substrate and ambient temperature 40F (4C).
- ▲ Do not thin with solvents. Consult Technical Service.
- ▲ Use oven-dried aggregate only.
- ▲ Maximum epoxy mortar thickness is 1-1/2 in. per lift.
- ▲ Epoxy mortar is for interior use only.
- ▲ Do not seal exterior slabs on grade.
- ▲ Minimum age of concrete must be 21-28 days, depending on curing and drying conditions, for mortar and to seal slabs.
- ▲ Porous substrates must be tested for moisture-vapor transmission prior to application.
- ▲ Not for injection of cracks under hydrostatic pressure at the time of application.
- ▲ Do not inject cracks greater than 1/4-in. Consult Technical Service.

CAUTION

Component 'A' - Irritant; Sensitizer - 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/MSHA approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

Component 'B' - Corrosive; Sensitizer - Contains amines. Contact with eyes or skin may cause severe burns. Can cause skin and/or respiratory sensitization after pro-

longed 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/MSHA approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

FIRST AID

In case of skin contact, wash immediately and thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician immediately. For respiratory problems, remove person to fresh air. Wash clothing before re-use.

CLEAN UP

Ventilate area. Confine spill. Collect with absorbent material. 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.

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**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 its products to be free from manufacturing defects and to meet Sika's current published properties when applied in accordance with Sika directions and tested in accordance with ASTM and Sika Standards. User determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product and excludes labor or the cost of labor. Any claim for breach of this warranty must be brought within one year of the date of purchase.

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