

PRODUCT DATA SHEET

Sikadur[®]-35 Hi-Mod LV

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

PRODUCT DESCRIPTION

Sikadur[®]-35 Hi-Mod LV is a 2-component, 100 % solids, moisture-tolerant, low-viscosity, high-strength, multipurpose, epoxy resin adhesive. It conforms to the current ASTM C-881, Types I, II, and IV, Grade-1, Class C* and AASHTO M-235 specifications.

*except for gel time

USES

Sikadur[®]-35 Hi-Mod LV may only be used by experienced professionals.

- Pressure-injection of cracks in structural concrete, masonry, wood, 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; also improves wearability.

CHARACTERISTICS / 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 in flooring systems.

PRODUCT INFORMATION

| | |
|---------------------------|---|
| Packaging | 3 gal. (11 L) units; 1 gal. (3.8 L) units; 12 fl. oz. (355 ml) units, 12/case |
| 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 65–75 °F (18–24 °C) before using. |
| Viscosity | Approx. 375 cps. |

TECHNICAL INFORMATION

Compressive Strength

Neat

| | 40 °F (4 °C) | 73 °F (23 °C) | 90 °F (32 °C) |
|----------|-----------------------|-----------------------|-----------------------|
| 4 hours | - | - | - |
| 8 hours | - | 180 psi (1.2 MPa) | 3,200 psi (22.1 MPa) |
| 16 hours | - | 4,500 psi (31.1 MPa) | 6,300 psi (43.5 MPa) |
| 1 day | - | 6,000 psi (41.4 MPa) | 9,100 psi (62.8 MPa) |
| 3 days | 4,000 psi (27.6 MPa) | 10,700 psi (73.8 MPa) | 10,500 psi (72.5 MPa) |
| 7 days | 6,800 psi (46.9 MPa) | 11,000 psi (75.9 MPa) | 10,500 psi (72.5 MPa) |
| 14 days | 10,300 psi (71.1 MPa) | 12,000 psi (82.8 MPa) | 10,500 psi (72.5 MPa) |
| 28 days | 12,400 psi (85.6 MPa) | 13,000 psi (89.7 MPa) | 10,500 psi (72.5 MPa) |

(ASTM D-695)
50 % R.H.

Epoxy Mortar (1: 5)

| | 40 °F (4 °C) | 73 °F (23 °C) | 90 °F (32 °C) |
|----------|----------------------|----------------------|----------------------|
| 4 hours | - | - | 800 psi (5.5 MPa) |
| 8 hours | - | - | 4,100 psi (28.3 MPa) |
| 16 hours | - | 400 psi (2.8 MPa) | 5,700 psi (39.3 MPa) |
| 1 day | 120 psi (0.8 MPa) | 5,000 psi (34.5 MPa) | 6,900 psi (47.6 MPa) |
| 3 days | 6,200 psi (42.8 MPa) | 6,800 psi (46.9 MPa) | 7,000 psi (48.3 MPa) |
| 7 days | 6,300 psi (43.5 MPa) | 7,900 psi (54.5 MPa) | 8,800 psi (60.7 MPa) |
| 14 days | 6,800 psi (46.9 MPa) | 8,500 psi (58.7 MPa) | 8,800 psi (60.7 MPa) |
| 28 days | 7,000 psi (48.3 MPa) | 8,600 psi (59.3 MPa) | 8,800 psi (60.7 MPa) |

(ASTM D-695)
50 % R.H.

Modulus of Elasticity in Compression

| | Neat | Mortar |
|---------|---------------------------------------|---------------------------------------|
| 7 days | 3.2 x 10 ⁵ psi (2,200 MPa) | - |
| 28 days | - | 8.1 x 10 ⁵ psi (5,600 MPa) |

(ASTM D-695)
73 °F (23 °C)
50 % R.H.

Flexural Strength

| | Neat | Mortar |
|--------|-----------------------|----------------------|
| 14 day | 14,000 psi (96,6 MPa) | 2,200 psi (15,2 MPa) |

(ASTM D-790)
73 °F (23 °C)
50 % R.H.

Modulus of Elasticity in Flexure

| | Neat | Mortar |
|---------|---------------------------------------|-----------------------------------|
| 14 days | 3.7 x 10 ⁵ psi (2,600 MPa) | 9.5 X 10 ⁵ (6,500 MPa) |

(ASTM D-790)
73 °F (23 °C)
50 % R.H.

| | | | | |
|--------------------------------------|---------|---|---|---|
| Tensile Strength | | Neat | Mortar | (ASTM D-638) 73 °F (23 °C) 50 % R.H. |
| | 7 days | 8,900 psi (61.4 MPa) | 840 psi (5.8 MPa) | |
| Tensile Modulus of Elasticity | | Neat | Mortar | (ASTM D-638) 73 °F (23 °C) 50 % R.H. |
| | 14 days | 4.1 X 10 ⁵ psi (2800 MPa) | 7.6 X 10 ⁵ psi (5200 MPa) | |
| Elongation at Break | | Neat | Mortar | (ASTM D-638) 73 °F (23 °C) 50 % R.H. |
| | 7 day | 5.4 % | 0.3 % | |
| Tensile Adhesion Strength | 2 days | (moist cure) | 4,000 psi (27.6 MPa) | (ASTM C-882): Hardened concrete to hardened concrete 73 °F (23 °C) 50 % R.H. |
| | 14 days | (moist cure) | 2,900 psi (20.0 MPa) | |
| | 2 days | (dry cure) | 2,800 psi (19.3 MPa) | |
| Shear Strength | | Neat | Mortar | (ASTM D-732) 73 °F (23 °C) 50 % R.H. |
| | 14 days | 5,100 psi (35,2 MPa) | 2,300 psi (15.9 MPa) | |
| Heat deflection temperature | | Neat | Mortar | (ASTM D-648) [fiber stress loading = 264 psi (1.8 MPa)] |
| | 7 day | 124 °F (51 °C) | 129 °F (54 °C) | |
| Water Absorption | 7 days | 0.27 % | | (ASTM D-570) 73 °F (23 °C) 50 % R.H. |

APPLICATION INFORMATION

| | | | | |
|---------------------|--|---------------------|----------------------|----------------------|
| Mixing Ratio | Component "A": Component "B" = 2:1 by volume. | | | |
| Coverage | 1 gal. yields 231 in ³ of adhesive and grout. 1 gal. of adhesive, when mixed with 5 gal. by loose volume of oven-dried aggregate, yields approximately 808.5 in ³ of epoxy mortar. | | | |
| Pot Life | Approx. 25 minutes (mass of 60 grams) | | | |
| Cure Time | Tack-Free Time | 40 °F (4 °C) | 73 °F (23 °C) | 95 °F (35 °C) |
| | (3-5 mils) Neat | 14–16 hours | 3–3.5 hours | 1.5–2 hours |

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.

LIMITATIONS

- Minimum substrate and ambient temperature 40°F (4°C).
- Do not thin with solvents. Consult Technical Service at 800-933-7452.
- Use oven-dried aggregate only.
- Maximum epoxy mortar thickness is 1.5 in. (38 mm) 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. (6 mm) Consult Technical Service.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

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.

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, foreign particles and disintegrated materials.

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. 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 METHOD / TOOLS

To gravity feed cracks - Blow vee-notched crack clean with oil-free compressed air. 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 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.

OTHER RESTRICTIONS

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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Product Data Sheet

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