

PRODUCT DATA SHEET

Sikadur[®]-31 Hi-Mod Gel LPL

HIGH-MODULUS, HIGH-STRENGTH, STRUCTURAL, EXTENDED POT LIFE, EPOXY PASTE ADHESIVE

PRODUCT DESCRIPTION

Sikadur[®]-31 Hi-Mod Gel LPL is a 2-component, 100 % solids, moisture-insensitive, high-modulus, high-strength, structural epoxy paste adhesive. It conforms to the current ASTM C-881, Types I and IV, Grade-3, Class-C and AASHTO M-235 specifications.

USES

Sikadur[®]-31 Hi-Mod Gel LPL may only be used by experienced professionals.

- Structural bonding of concrete, masonry, metals, wood, etc. to a maximum glue line of 1/8 in. (3mm)
- Seals cracks and around injection ports prior to pressure-injection grouting
- Interior, vertical, and overhead repair of concrete as an epoxy mortar binder
- As a pick-proof sealant around windows, doors, lock-ups etc. inside correctional facilities

CHARACTERISTICS / ADVANTAGES

- Extended pot life
- Moisture-tolerant before, during, and after cure
- High-modulus, high-strength, structural paste adhesive
- Excellent adhesion to concrete, masonry, metals, wood, and most structural materials
- Paste consistency ideal for vertical and overhead applications
- Fast-setting and strength-producing adhesive
- Convenient easy mix ratio A:B = 2:1 by volume

PRODUCT INFORMATION

Packaging	3 gal. (11 L) units
Color	Concrete gray
Shelf Life	24 months 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.
Consistency	Non-sag paste

TECHNICAL INFORMATION

Compressive Strength	36 hours	6,400 psi (41.4 MPa)	(ASTM D-695)	
	2 day	7,000 psi (41.4 MPa)	73 °F (23 °C)	
	3 day	9,000 psi (48.3 MPa)	50 % R.H.	
Slant Shear Strength	Bond Strength	Hardened Concrete to Hardened Concrete	(ASTM C-882)	
		2 days	2,000 psi (20.7 MPa)	73 °F (23 °C)
		14 day (moist cure)	2,300 psi (20.0 MPa)	50 % R.H.
Heat Deflection Temperature	124 °F (51 °C) (7 days [fiber stress loading = 264 psi (1.8 MPa)])		(ASTM D-648)	

APPLICATION INFORMATION

Mixing Ratio	Component 'A' : Component 'B' = 2:1 by volume
Coverage	1 gal. yields 231 cu. in. of epoxy paste adhesive and grout. 1 gal. mixed with 1 gal. by loose volume of oven-dried aggregate yields approximately 346 cu. in. of epoxy mortar.
Pot Life	Approximately 120 minutes at 73 °F (23 °C) (gal., L volume) Approximately 60 minutes at at 90 °F (32 °C) (gal., L volume)
Cure Time	Tack-Free Time: 6–8 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, foreign particles, disintegrated materials and any other contaminants.

Preparation Work: Concrete - Sandblast or use other approved mechanical methods.

Steel - Blast clean or use other equivalent mechanical means to achieve a white metal finish.

MIXING

Pre-mix each component. 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 uniform in color. Mix only that quantity that can be used within its pot life.

To prepare an epoxy mortar: Slowly add up to 1 part by loose volume of an oven-dried aggregate to 1 part of the mixed Sikadur®-31 Hi-Mod Gel LPL and mix until uniform in consistency.

APPLICATION METHOD / TOOLS

As a structural adhesive - Apply the neat mixed Sikadur®-31 Hi-Mod Gel LPL, to the mating or nonmating prepared substrates. Work into the substrate for positive adhesion. Secure the bonded unit firmly into place

until the adhesion has cured. Glue line should not exceed 1/8 in. (3 mm).

To seal cracks for injection grouting - Place the neat mixed material over the cracks to be pressure injected and around each injection port. Allow sufficient time to set before pressure injecting.

For interior vertical and overhead patching - Place the prepared mortar in void, working the material into the prepared substrate, filling the cavity. Strike off level. Lifts should not exceed 1 in. (25 mm).

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®-31 Hi-Mod Gel LPL.

LIMITATIONS

- Minimum substrate and ambient temperature 40 °F (4 °C).
- Do not thin. Addition of solvents will prevent proper cure.
- Use oven-dried aggregate only.
- Maximum epoxy mortar thickness is 1 in. (25 mm) per lift.
- Epoxy mortar is for interior use only. Material is a vapor barrier after cure.
- Minimum age of concrete must be 21–28 days, depending upon curing and drying conditions, for mortar applications.
- Porous substrates must be tested for moisture-vapor

- transmission prior to mortar applications.
- Not for sealing cracks under hydrostatic pressure at the time of application.
 - 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.

LOCAL 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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