

## Sikadur® 31, Hi-Mod Gel LPL

High-modulus, high-strength, structural,  
extended pot life, epoxy paste adhesive

<b>Description</b>	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.
<b>Where to Use</b>	<ul style="list-style-type: none"><li>■ Structural bonding of concrete, masonry, metals, wood, etc. to a maximum glue line of 1/8 in. (3mm).</li><li>■ Seals cracks and around injection ports prior to pressure-injection grouting.</li><li>■ Interior, vertical, and overhead repair of concrete as an epoxy mortar binder.</li><li>■ As a pick-proof sealant around windows, doors, lock-ups etc. inside correctional facilities.</li></ul>
<b>Advantages</b>	<ul style="list-style-type: none"><li>■ Extended pot life.</li><li>■ Moisture-tolerant before, during, and after cure.</li><li>■ High-modulus, high-strength, structural paste adhesive.</li><li>■ Excellent adhesion to concrete, masonry, metals, wood, and most structural materials.</li><li>■ Paste consistency ideal for vertical and overhead applications.</li><li>■ Fast-setting and strength-producing adhesive.</li><li>■ Convenient easy mix ratio A:B = 2:1 by volume.</li></ul>
<b>Coverage</b>	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.
<b>Packaging</b>	3-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.

<b>Shelf Life</b>	2 years in original, unopened containers.
<b>Storage Conditions</b>	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F (18°-24°C) before using.
<b>Color</b>	Concrete gray
<b>Mixing Ratio</b>	Component 'A' : Component 'B' = 2:1 by volume
<b>Consistency</b>	Non-sag paste
<b>Pot Life</b>	Approximately 120 minutes @ 73°F (23°C) (gallon volume) Approximately 60 minutes @ 90°F (32°C) (gallon volume)
<b>Tack-Free Time</b>	6-8 hours
<b>Bond Strength (ASTM C-882): Hardened Concrete to Hardened Concrete</b>	
<b>2 day</b>	Bond Strength 2,000 psi (20.7 MPa)
<b>14 day (moist cure)</b>	Bond Strength 2,300 psi (20.0 MPa)
<b>Heat Deflection Temperature (ASTM D-648)</b>	
<b>7 day</b>	[fiber stress loading = 264 psi (1.8 MPa)] 124°F (51°C)

<b>Compressive Properties (ASTM D-695)</b>	
<b>Compressive Strength, psi (MPa)</b>	<b>73°F (23°C)</b>
<b>36 hour</b>	6,400 (41.4)
<b>2 day</b>	7,000 (41.4)
<b>3 day</b>	9,000 (48.3)

Construction



PRIOR TO EACH USE OF ANY SIKA PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT [HTTP://USA.SIKA.COM/](http://usa.sika.com/) OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800.933.7452 NOTHING CONTAINED IN ANY SIKA MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS FOR EACH SIKA PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.

## How to Use

<b>Surface Preparation</b>	<p>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.</p> <p><b>Preparation Work:</b> Concrete - Sandblast or use other approved mechanical methods.  <b>Steel</b> - Blast clean or use other equivalent mechanical means to achieve a white metal finish.</p>
<b>Mixing</b>	<p><b>Pre-mix each component.</b> 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.</p> <p><b>To prepare an epoxy mortar:</b> 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.</p>
<b>Application</b>	<p><b>As a structural adhesive</b> - Apply the neat mixed Sikadur® 31, Hi-Mod Gel LPL, to the mating or non-mating 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).</p> <p><b>To seal cracks for injection grouting</b> - 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.</p> <p><b>For interior vertical and overhead patching</b> - 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).</p> <p><b>As a pick-proof sealant</b> - 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.</p>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>■ Minimum substrate and ambient temperature 40°F (4°C).</li> <li>■ Do not thin. Addition of solvents will prevent proper cure.</li> <li>■ Use oven-dried aggregate only.</li> <li>■ Maximum epoxy mortar thickness is 1 in. (25 mm) per lift.</li> <li>■ Epoxy mortar is for interior use only. Material is a vapor barrier after cure.</li> <li>■ Minimum age of concrete must be 21-28 days, depending upon curing and drying conditions, for mortar applications.</li> <li>■ Porous substrates must be tested for moisture-vapor transmission prior to mortar applications.</li> <li>■ Not for sealing cracks under hydrostatic pressure at the time of application.</li> <li>■ Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.</li> </ul>

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