



**PRODUCT DATA SHEET**

Edition 05.2021/v1  
CSC Master Format™ 03 64 23  
EPOXY INJECTION GROUTING

# Sikadur®-35 Hi-Mod LV

## HIGH-MODULUS, LOW-VISCOSITY, HIGH-STRENGTH, EPOXY GROUTING/SEALING/BINDING ADHESIVE

<b>Description</b>	Sikadur®-35 Hi-Mod LV is a two-component, solvent-free, moisture-insensitive, low-viscosity, high-strength, multipurpose, epoxy resin adhesive.
<b>Where to Use</b>	<ul style="list-style-type: none"> <li>Pressure injection of cracks in structural concrete, masonry, wood, etc.</li> <li>Grouting bolts, dowels, pins, etc.</li> <li>Gravity feed of cracks in horizontal concrete and masonry</li> <li>Epoxy resin binder for epoxy mortar patching and overlay of interior, horizontal surfaces</li> <li>Seal interior slabs and exterior above grade slabs from water, chlorides, and mild chemical attack and to improve wearability</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>Low viscosity</li> <li>Convenient easy mix ratio A:B = 2:1 by volume</li> <li>High strength, structural adhesive for “can’t dry” surfaces</li> <li>Deep penetration and tenacious crack bonding in structural concrete</li> <li>High early-strength developing adhesive</li> <li>Excellent chemical resistance</li> <li>Meets ASTM C881, Type I, II, IV and V, Grade 1, Class B and C</li> <li>NSF-ANSI 61 potable water contact-approved formula available by special order only</li> <li>Product qualified by The Road Authority (TRA) and approved by the Ontario Ministry of Transportation (MTO)</li> <li>Approved by the Ministère des Transports du Québec (MTQ)</li> <li>Approved by Alberta Transportation (AT)</li> <li>Product recognized by the British Columbia Ministry of Transportation(BC MoT)</li> </ul>

<b>Technical Data</b>						
<b>Packaging</b>	9 L (2.38 US gal.) unit - [Component A : 6 L (1.59 US gal.) and Component B : 3 L (0.79 US gal.)] 450 mL (15.2 US fl. oz) Pre-Pack cartridge, 12/case					
<b>Colour</b>	Clear, amber					
<b>Yield</b>	1 L = 1 m <sup>2</sup> of epoxy adhesive, 1 mm thick. 1 L of adhesive when mixed with 5 L by loose volume of oven-dried quartz sand yields approx. 3.5 L of epoxy mortar. (1 US gal. = 231 in <sup>3</sup> . 1 US gal. of adhesive when mixed with 5 US gal. by loose volume of oven-dried quartz sand yields approx. 808 in <sup>3</sup> of epoxy mortar.)					
<b>Shelf Life</b>	2 years in original, unopened packaging. Store dry between 5 and 32 °C (41 and 89 °F). Condition product between 18 and 29 °C (65 and 84 °F) before using.					
<b>Mix Ratio</b>	A:B = 2:1 by volume					
<b>Properties at 23 °C (73 °F) and 50 % R.H.</b>						
<b>Viscosity</b>	450 - 550 cps					
<b>Pot Life</b>	5 °C (41 °F)		20 °C (60 °F)			
Sample size 200 mL	220 min		32 min			
<b>Tack Free Time</b>	4 °C (39 °F)*		23 °C (73 °F)*		32 °C (89 °F)*	
3-5 mil Neat	14 - 16 h		3 - 3 h 30 min		1 h 30 min - 2 h	
<b>Compressive Strength ASTM D695, MPa (psi)</b>						
	<b>Neat</b>		<b>Mortar (1:5)</b>			
	<b>4 °C (39 °F)*</b>	<b>23 °C (73 °F)*</b>	<b>32 °C (89 °F)*</b>	<b>4 °C (39 °F)*</b>	<b>23 °C (73 °F)*</b>	<b>32 °C (89 °F)*</b>
4 hrs	-	-	-	-	-	6 (870)
8 hrs	-	-	22 (3190)	-	3 (435)	28 (4061)
16 hrs	-	25 (3626)	43 (6236)	-	33 (4786)	39 (5656)
1 day	-	47 (6816)	63 (9137)	-	34 (4931)	47 (6816)
3 days	25 (3626)	67 (9717)	72 (10 442)	42 (6091)	47 (6816)	48 (6961)
7 days	55 (7977)	74 (10 732)	72 (10 442)	43 (6236)	54 (7832)	61 (8847)
14 days	71 (10 297)	77 (11 167)	72 (10 442)	47 (6816)	59 (8557)	61 (8847)
28 days	86 (12 473)	81 (11 748)	72 (10 442)	48 (6961)	61 (8847)	61 (8847)
* Product cured and tested at the temperatures indicated						
<b>Modulus of Elasticity</b>						
<b>ASTM D695</b>	<b>Neat</b>		<b>Mortar</b>			
28 days	2.41 GPa (3.5 x 10 <sup>5</sup> psi)		5.59 GPa (8.1 x 10 <sup>5</sup> psi)			
<b>Tensile Properties ASTM D638</b>						
14 days	Tensile strength		Tensile strength			
	58 MPa (8412 psi)		5.8 MPa (841 psi)			
	Elongation at break		Elongation at break			
	4.2 %		0.3 %			
	Modulus of elasticity		Modulus of elasticity			
	2.8 GPa (4.0 x 10 <sup>5</sup> psi)		5.24 GPa (7.6 x 10 <sup>5</sup> psi)			

<b>Flexural Properties ASTM D790</b>			
14 days	Modulus of rupture	96 MPa (13 923 psi)	15 MPa (2175 psi)
	Tangent modulus of elasticity in bending	2.5 GPa (3.6 x 10 <sup>5</sup> psi)	6.5 GPa (9.4 x 10 <sup>5</sup> psi)
<b>Shear Strength ASTM D732</b>			
14 days		35 MPa (5076 psi)	16 MPa (2320 psi)
<b>Deflection Temperature ASTM D648</b>			
14 days, Fiber stress loading =			
1.8 MPa (264 psi)		53 °C (127 °F)	54 °C (129 °F)
<b>Bond Strength ASTM C882</b>			
(Hardened concrete to hardened concrete)			
2 days	Dry cure		19 MPa (2755 psi)
14 days	Moist cure		19 MPa (2755 psi)
<b>Water Absorption ASTM D570</b>			
7 days	2 h boil		1.1 %
<b>VOC Content</b>			
			≤ 10 g/L

*Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.*

## 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.

**Concrete:** Sandblast or use other approved mechanical means to provide an open roughened texture.

**Steel:** Sandblast to 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 three (3) minutes with paddle on low-speed drill (300 - 450 rpm) 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 quartz sand to 1 part of pre-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 V-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 any Sika AnchorFix® products. When the epoxy adhesive seal has cured, inject Sikadur®-35 Hi-Mod LV with slow, steady pressure.

**To anchor bolts, dowels and pins:** Annular space around bolt should not exceed 3 mm (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 then finish with finishing trowel. Sikadur®-35 Hi-Mod LV mortar is for interior use only.

**Clean Up** Uncured material can be removed with Sika® Epoxy Cleaner. Cured product can only be removed mechanically.

**Limitations**

- Minimum application temperature: 4 °C (39 °F).
- Do not thin with solvents.
- Use oven-dried sand only.
- Maximum epoxy mortar thickness: 38 mm (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.
- Porous substrates must be tested for vapour transmission prior to mortar application or slab sealing.
- Not for injection of cracks under hydrostatic pressure.
- Do not inject cracks greater than 6 mm (1/4 in).

**Health and Safety  
Information**

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

**KEEP OUT OF REACH OF CHILDREN  
FOR INDUSTRIAL USE ONLY**

The Information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelflife. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: [www.sika.ca](http://www.sika.ca)

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