

PRODUCT DATA SHEET

Sikadur®-35 Hi-Mod LV

HIGH MODULUS, HIGH STRENGTH AND LOW VISCOSITY EPOXY ADHESIVE.

DESCRIPTION

Sikadur®-35 Hi-Mod LV is a two component, 100% solids, high strength, low viscosity, multi-purpose epoxy resin based adhesive.

USES

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

- Pressure injection into cracks in structural concrete, masonry, wood, etc.
- Fitting of anchor bolts, pins, connectors, etc.
- Filling of gravity cracks in concrete and masonry.
- As a binder in epoxy mortar for patching and coating on mortars and horizontal surfaces.
- Inner plate sealant, which isolates them from attack by water, chlorides and not so strong chemicals and improves wear resistance.

CHARACTERISTICS / ADVANTAGES

- Super low viscosity (375 cps)
- Easy to mix A: B = 2: 1 by volume.
- Unique high strength structural adhesive for surfaces with low drying capacity.
- Approved for contact with drinking water.
- Powerful deep penetration adhesive for structural concrete cracks.
- Adhesive with fast development of high resistances.
- Excellent chemical resistance for floor systems.
- Approved by USDA.

APPROVALS / CERTIFICATES

Meets the requirements of ASTM C 881-90, type IV, grade 1.

Approval for contact with drinking water of the Water Quality Association according to NSF / ANSI-61.

PRODUCT INFORMATION

Packaging	Unit 11.3L (A 7.5L / B 3.8L)
Colour	Transparent Amber
Shelf life	One (1) year from its date of production
Storage conditions	Store in its original container, tightly closed in a cool place and under the roof. Transport with normal precautions for chemicals.
Viscosity	Approx. 375 cps (centipoises)

Compressive Strength

Pure	At 5°C	At 23°C	At 32°C
4 hours	-	-	-
8 hours	-	1.2	22.1
16 hours	-	31.1	43.5
1 day	-	41.4	62.8
3 days	27.6	73.8	72.5
7 days	46.9	75.9	72.5
14 days	71.1	82.8	72.5
28 days	85.6	89.7	72.5

Epoxy Mortar (1: 5)	At 5°C	At 23°C	At 32°C
4 hours	-	-	5.5
8 hours	-	-	28.3
16 hours	-	2.8	39.3
1 day	0.8	34.5	47.6
3 days	42.8	46.9	48.3
7 days	43.5	54.5	60.7
14 days	46.9	58.7	60.7
28 days	48.3	59.3	60.7

Modulus of Elasticity in Compression	Pure	Epoxy Mortar	(ASTM D-570)
7 days	2200 MPa	28 days — 5600 MPa	

Tensile Strength in Flexure	Pure	Mortar	(ASTM D-790)
	96,6 MPa	15,2 MPa	

Modulus of Elasticity in Flexure	Pure	Mortar	(ASTM D-790)
	2600 MPa	6500 MPa	

Tensile Strength	Pure	Mortar	(ASTM D-638)
	61.4 MPa	14 days 5.8 MPa	
	7 days		

Modulus of Elasticity in Tension	Pure	Mortar	(ASTM D-638)
	2800 MPa	5200 MPa	
	14 days		

Elongation at Break	Pure	Mortar	(ASTM D-638)
	5.4 %	0.3%	

Tensile Adhesion Strength	Resistance from hardened concrete to hardened concrete 2 days (wet curing) 27.6 MPa 4 days (wet curing) 20.0 MPa 2 days (dry cure) 19.3 MPa	(ASTM C-882)
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Shear Strength	Pure	Mortar	(ASTM D-732)
	35,2 MPa	15.9 MPa	
	14 days shear strength		

Heat Deflection Temperature	Pure	Mortar	(ASTM D-648)
	51°C	54°C	

Water Absorption	(24 hours immersion) 0.27%
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Mixing Ratio	Component "A": Component "B" = 2: 1 by volume.
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Pot Life	Approx. 25 minutes (mass of 60 grams)
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Waiting Time / Overcoating	At 4°C	At 20°C	At 35°C
(3-5 mils) Pure	14-16 hours	3 -3.5 hours	1.5-2 hours

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The surface must be clean and healthy. It can be dry or wet, but free of deposits. Dust, grout, grease, curing components, impregnated waxes, foreign particles and disintegrated materials must be removed.

- In concrete: Clean the surface with a pressure sand-blast or use any other approved mechanical method.
- In steel: Clean the surface with pressure sandblasting until reaching white metal grade.

MIXING

Pre-mix each component: Provide 1 part of component "B" to 2 parts of component "A" by volume in a clean bucket. Mix homogenously for 3 minutes with a spatula or a low speed drill (400-600 rpm), until the mixture shows a uniform color. Mix only the amount you intend to use in the application.

How to prepare an epoxy mortar: Slowly add 4 to 5 parts by volume of an oven-dried aggregate with 1 part of the already mixed Sikadur®-35 Hi-Mod LV product. Continue mixing until uniform consistency is achieved.

APPLICATION METHOD / TOOLS

For filling cracks by gravity:
Sikadur®-35 Hi-Mod LV must be poured into the prepared V-shaped crack. Continue positioning until completely filled. Seal the bottom of the plate before re-filling, should the cracks reflect.

For injection of pressure cracks:
Use an automatic injection device or a manual method. Place the appropriate nozzles into the system you are going to use. Seal cracks with Sikadur Injection Gel or Sikadur-31 Adhesive or Sikadur Panel. When the epoxy adhesive sealer has cured, inject Sikadur®-35 Hi-Mod LV, with firm pressure. Consult your service representative for additional information.

For anchoring bolts, pins, connectors and fasteners:
In anchors the diameter of the gap is greater than or equal to 1.5 times the diameter of the bolt or rod, with a minimum thickness of the 1.6 mm.

To seal plates:
Esparsa Sikadur®-35 Hi-Mod LV, on the plate. Let it penetrate. Remove excess material in order to avoid film formation on the surface. Seal interior plates not buried only.

For an epoxy mortar:
Primes the prepared surface with pure Sikadur®-35 Hi-Mod LV. Place the prepared epoxy mixture before the primer dries. Put the epoxy mixture with the help of flat. Compact and level with vibrator or trowel. The finishing mortar with Sikadur®-35 Hi-Mod LV is for indoor use only.

IMPORTANT CONSIDERATIONS

Minimum temperature in the substrate and in the environment: 4°C.

Do not dilute with solvents. Consult your service representative.

Only use kiln-dried aggregates.

This epoxy mortar is for indoor use only.

Do not seal outer subfloor panels.

The minimum age of concrete must be between 21 and 28 days, depending on the curing or drying conditions, for the mortar and for the impermeable plates. Porous substrates should be evaluated to verify the wet vapor transmission rate prior to application of the product.

It should not be used to inject into cracks under hydrostatic pressure.

Do not inject into cracks larger than 6 mm. Consult your service representative.

Welding should not be applied to metallic elements glued with the epoxy adhesive, as the maximum permissible service temperature of the adhesive will probably be exceeded, with adhesive damage and glue failure.

The ambient temperature during application must be at least 3°C

The dew point.

The service temperature of the glue system must be below the deflection temperature (HDT) of the adhesive.

▪ **Component "A" - Irritant, sensitizing:** Contains epoxy resin. It can cause extreme sensitivity on the skin and eyes. High vapor concentrations may cause respiratory irritation. Avoid contact with skin. Use only with adequate ventilation. Wear safety goggles and chemical resistant gloves. In case of excessive lung discomfort, wear a NIOSH / MSHA approved respirator. Remove contaminated clothing. See MSDS for more accurate information.

▪ **Component "B" -Corrosive, sensitizing:** Contains amines (substances derived from ammonium). Contact with eyes or skin may cause severe burns. May cause extreme respiratory or skin sensitivity after prolonged or repeated contact. Irritating to skin and eyes. High vapor concentrations may cause respiratory irritation. Avoid contact with skin. Use only with adequate ventilation. The use of safety goggles and chemical resistant gloves is recommended. In case of excessive lung discomfort, wear a suitable NIOSH / MSHA approved respirator. Remove contaminated clothing. See MSDS for more detailed information. Welding should not be applied to metallic elements glued with the epoxy adhesive, as the maximum permissible service temperature of the adhesive will probably be exceeded, with adhesive damage and glue failure.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

Keep out of reach of children.

- First aid: Call a physician immediately. If eye contact occurs, flush with clean water for at least 15 minutes; In case of contact with skin, wash immediately with soap and water.
- Hygiene conditions after use: Allow the area where the product is used to ventilate. Collect waste material with absorbent material. Dispose of them according to the locally applicable regulations of the city or country where they are used. Material that has not been cured can be removed with an approved solvent. The material already cured can only be removed with the help of mechanical means.

LEGAL NOTES

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 in accordance with Sika's recommendations. 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 written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. 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.

Sika Korea Ltd.

135 gil 16, Nonhyun-ro
Gangnam-ku, Seoul, Korea
Tel : +82 2 6912 1500
Fax: +82 2 6912 1555
web: <http://kor.sika.com>



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