

PRODUCT DATA SHEET

SikaQuick® VOH LD

FAST SETTING, DUST REDUCED, ONE COMPONENT, CEMENTITIOUS VERTICAL AND OVERHEAD REPAIR MORTAR

PRODUCT DESCRIPTION

SikaQuick® VOH LD is a fast setting, dust reduced, one component, ready-to-use repair mortar for vertical and overhead applications using specialty cement blends.

USES

- Fast repairs to overhead and vertical concrete and mortar surfaces on grade, above and below grade.
- As a repair material for building facades, parking structures, industrial plants, bridges, etc.
- As a fast setting repair material for new construction defects.

CHARACTERISTICS / ADVANTAGES

- Dust reduced mortar
- Minimal time required between lifts
- Fast finishing time
- Time/labor-saving material; application up to 3" (76 mm) on vertical surfaces in one layer
- Easy to use; just add water
- High bond strength ensures excellent adhesion
- High early and ultimate strength
- Increased freeze/thaw durability and resistance to deicing salts
- Suitable for exterior and interior applications.
- Overhead thickness up to 2" (50 mm) per lift
- Fiber reinforced and polymer modified
- Contains corrosion inhibitor
- Rapid hardening as defined by ASTM C 928.
- Use in cold temperatures with SikaQuick Winter Boost [minimum substrate 35° F (2° C); minimum ambient 20° F (- 7° C) during cure]

PRODUCT INFORMATION

Packaging	44 lb (20 kg) bag
Appearance / Color	Gray powder
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged, sealed packaging.
Storage Conditions	Store dry at 40° - 95° F (4° - 35° C) Protect from moisture. If damp, discard material

TECHNICAL INFORMATION

Compressive Strength	3 hours	> 1,500 psi (10.3 MPa)	ASTM C 109 73 °F (23 °C) 50 % R.H.
	1 day	> 3,000 psi (20.7 MPa)	
	7 days	> 4,500 psi (31.0 MPa)	
	28 days	5,500 psi (37.9 MPa)	
Modulus of Elasticity in Compression	7 days	2.2 x 10 ⁶ psi (15.2 GPa)	ASTM C 469
Flexural Strength	1 day	400 psi (2.8 MPa)	ASTM C 293 73 °F (23 °C) 50 % R.H.
	7 days	600 psi (4.1 MPa)	
	28 days	1,000 psi (6.9 MPa)	
Splitting tensile strength	1 day	200 psi (1.4 MPa)	ASTM C 496 73 °F (23 °C) 50 % R.H.
	7 days	250 psi (1.7 MPa)	
	28 days	500 psi (3.4 MPa)	
Slant Shear Strength	1 day	1,000 psi (6.9 MPa)	ASTM C 882 modified*
	7 days	1,600 psi (11.0 MPa)	
	28 days	2,000 psi (13.8 MPa)	
* Mortar scrubbed into mechanically prepared, saturated surface dry (SSD) substrate at 73 °F (23 °C) and 50 % R.H.			
Pull-Out Resistance	28 days	> 250 psi (1.7 MPa) Substrate failure	ASTM C 1583 73 °F (23 °C) 50 % R.H.
Shrinkage	28 days	< 0.05 %	ASTM C 157 modified per ASTM C 928 73° F (23° C) 50% R.H.
Rapid Chloride Permeability	28 days	Low range (between 1,000 - 2,000 Coulombs)	ASTM C 1202 (AASHTO T 277) 73° F (23° C) 50% R.H.

APPLICATION INFORMATION

Mixing Ratio	6 - 6.5 pints (2.8 - 3.1 L) of clean, potable water per 44 pound (20 kg) bag		
Fresh mortar density	125 lb/ft ³ (2.0 kg/L)	ASTM C 138	
Coverage	0.44 ft ³ (0.01 m ³) per bag (Coverage figures do not include allowance for surface profile and porosity, or material waste.)		
Layer Thickness		Min.	Max.
	Overhead	1/8" (3 mm)	2" (51 mm) per lift
	Vertical	1/8" (3 mm)	3" (76 mm) per lift
Product Temperature	65° - 75° F (18° - 24° C) before mixing with water		
Ambient Air Temperature	> 45° F (7° C)		
Substrate Temperature	> 45° F (7° C)		
Set Time	10 - 25 minutes	ASTM C 266	
Final set time	< 35 minutes	ASTM C 266	

Application Time	Approximately 15 minutes	
Finishing time	20 - 30 minutes	
Waiting / Recoat Times	<u>Time between lifts</u>	<u>Final Set time</u>
	<u>Acrylic water-based (i.e. breathe-able)</u>	<u>Minimum 4 hours</u>
	<u>Epoxy / Polyurethane-based (i.e. vapor barrier)</u>	<u>Minimum 6 hours</u>
Compatibility and adhesion testing is always recommended.		

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.

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.

LIMITATIONS

- Do not use solvent based curing compounds.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Protect potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® 32, Hi-Mod.
- Remixing product after it begins to set is prohibited.
- Bonding agents like Sika® Armatex® 110 EpoCem and others, which cure at a slower rate than SikaQuick® VOH LD, should not be used.
- If a bonding agent is absolutely necessary, and surfaces are not scheduled to receive a vapor barrier coating, consider Sikadur® 32, Hi-Mod and moist cure for a minimum 24 hours prior to putting SikaQuick® VOH LD into service.
- SikaQuick® VOH LD is not a vapor barrier after cure.
- Refer to Sika® Antisol®-250 W product data sheet for use.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

- Surface must be clean, sound and free of frost.
- Remove all deteriorated concrete, dirt, dust, laitance, oil, grease, and other bond-inhibiting materials from the area to be repaired.
- Preparation work should be done by high pressure water blast, scabblor or other appropriate mechanical means to obtain an exposed aggregate surface profile of $\pm 1/16"$ (1.6 mm) [i.e. minimum CSP-5].
- To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test.
- Saw cutting perimeter edges of the concrete repair

area with a dovetail angle is preferred.

- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.

PRIMING

- **Reinforcing steel:** Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high pressure washed with clean water after mechanical cleaning and wiped dry. For priming of reinforcing steel for corrosion protection only, use Sika® Armatec® 110 EpoCem (consult current Product Data Sheet).
- **Concrete Substrate:** A scrub coat of SikaQuick VOH LD can be applied prior to placement of the mortar. The repair mortar must be installed by trowel at the designated repair thickness into the wet scrub coat before it dries.

MIXING

- Wet down all tools and mixer to be used.
- Mix mechanically with a low-speed drill (400–600 rpm) and mixing paddle or mortar mixer.
- Mix to a uniform consistency, maximum 3 minutes.
- Manual mixing can be tolerated only for less than a full unit.
- Thorough mixing and proper proportioning of the powder and liquid is necessary.
- Inaccurate proportioning of the powder to liquid will result in a finished product that may not conform to the typical published performance property values.

With water

- Start mixing with 6 pints (2.8 L) of water per bag.
- Adjust the water dosage by a maximum amount of +/- 1/2 pint if necessary, to achieve the desired consistency.
- Do not over-water. Over-watering may result in difficulty handling and/or not meeting typical published performance property values.

With Sika Latex R

- Start mixing with 6 pints (2.8 L) of SikaLatex®-R per bag.
- Adjust the SikaLatex®-R dosage by a maximum amount of +/- 1/2 pint, if necessary, to achieve the desired consistency.
- Do not overdose with SikaLatex®-R. Using too much SikaLatex®-R may result in difficulty handling and/or

not meeting typical published performance property values.

APPLICATION

- The mixed SikaQuick® VOH LD must be worked well into the prepared substrate, filling all pores and voids.
- Compact well. Force material against edge of repair working towards the center. Thoroughly compact the mortar around exposed reinforcement.
- After filling repair, consolidate, then screed.
- Finish with steel, magnesium, wood, plastic floats, or damp sponges, depending on the desired surface texture.

MULTIPLE LIFTS

- Where multiple lifts are required, score top surface of already placed lift to produce a roughened substrate for the next lift.
- Allow preceding lift to harden and achieve Initial Set.
- SSD previous lift by lightly misting with clean water. Remove all standing droplets.
- Repeat procedure until desired installation thickness is achieved. Finish the final lift of SikaQuick® VOH LD as described above.
- If previous layers are over 6 hours old, mechanically prepare the substrate and dampen.

CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
- Moist curing should commence immediately after finishing.
- Moist cure with wet burlap, a fine mist of water topped with polyethylene sheeting, or a Sika® Antisol®-250 W*
- Curing compounds adversely affect the adhesion of following lifts of additional mortars or protective coatings.
- Protect freshly applied mortar from direct sunlight, wind, rain and frost.

* Pretesting of curing compound is recommended.

CLEANING OF TOOLS

- Uncured product may be cleaned from tools and surfaces with water. Cured product must be removed mechanically.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or 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 label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended

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Product Data Sheet

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