

SILCOR[®] 900HA (US Version)

Fast-cure, hand-applied liquid waterproofing membrane

Product Description

SILCOR[®]900HA liquid waterproofing is a two-component, hand-applied seamless liquid waterproofing that is typically foot-trafficable after two hours of application. SILCOR[®]900HA forms a fully-bonded waterproof membrane that is extremely durable, offers excellent wear and chemical resistance* and has a high tolerance against mechanical damage.

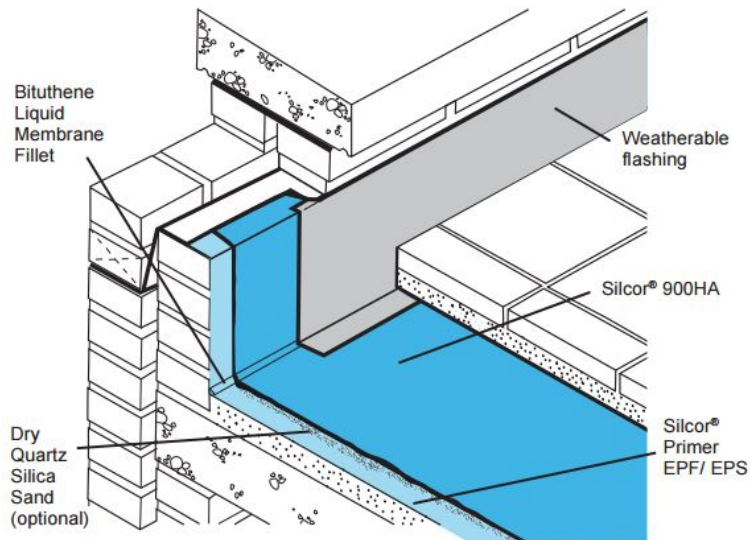
Product Applications

New and remedial waterproofing for elevated decks including:

- Plaza decks
- Split slabs
- Green roofs
- Planters
- PRMA applications

Product Information

	APPROX. UNIT SIZE
SILCOR [®] 900HA (resin) Part-A	2.2 lb bottle - approx 0.2 gal
SILCOR [®] 900HA (iso) Part-B	19.8 lb pail - approx. 2.2 gal
Storage	Store between 40°F – 80°F



Details shown are typical illustrations only and not working drawings. For assistance with working drawings and additional technical advice please contact GCP Technical Services.

Product Advantages

- Fast cure – quick self-curing system for rapid installation and return to service
- Fully bonded – water cannot track beneath the membrane
- Non-flammable – 100% solids
- Low Odor – low VOC
- Elastomeric – accommodates minor structural movements and bridges concrete shrinkage cracks
- Durable – tough with excellent wear and damage resistance
- Chemical Resistance
- Seamless – continuous waterproofing integrity with easy detailing

System Components

- SILCOR® 900HA – seamless waterproofing membrane
- SILCOR® Primer EPF – Two-component epoxy primer (for substrate application temperatures 40 °F- 80 °F)
- Dry Quartz Silica Sand
20/30 mesh for broadcast into primer (optional)
- BITUTHENE® Liquid Membrane – Two-component elastomeric, liquid-applied detailing accessory
- SILCOR® Top Coat 70 – Two-component aliphatic urethane for permanently exposed upturns and flashings
- PREPRUFE® Tape – Reinforced pressure sensitive tapes for detailing

Design

The SILCOR®900HA waterproofing system is designed for use as a fully adhered waterproofing layer on new and existing elevated structural decks. Best practice is to slope structural decks to drain a minimum of 1/8 in./ft.

Installation

SILCOR®900HA liquid waterproofing should only be applied by experienced, trained contractors. Effective liquid waterproofing application requires adequate surface preparation of the substrate. Failure to properly prepare the substrate will negatively impact the waterproofing performance.

Surface Preparation

All grease, curing agents, oil or other contaminants that can affect adhesion of the membrane to the surface need to be removed prior to application. Grease, dirt and grime can be removed using high pressure water cleaning, provided sufficient time is allowed for the residual humidity and water to dissipate. Sandblasting is not effective on contaminated concrete. After cleaning, the surface needs to be prepared to open the pores and make the surface ready to accept the primer. The preferred and most common method is sand or grit blasting.

Concrete must be allowed to cure for at least 28-days. Concrete should have at least a 115 psi cohesive strength. Concrete surface moisture content must be less than 5% prior to application of the SILCOR® primers. Moisture content must be checked using appropriate meters and test methods.

Mixing (Primer)

Mixing should be with a minimum 1000 W, variable speed drill and a 3-4 inch diameter helical blade mixing paddle.

Shake the Part A container well before opening. Add the entire contents of the Part A container to the B component and mix for at least one minute, until a uniform color is obtained. The mixed product should have a uniform color, free from streaks. Scrape any material from the side and bottom of the container to ensure thorough mixing.

Priming

Priming should be completed prior to applying SILCOR®900HA liquid waterproofing. Apply EPF primer when temperatures are declining to minimize the risk of blister formation, due to expansion of air or moisture evaporation in substrate pores at elevated temperatures, or in direct sunlight.

- Add the complete B-component to the A-component to ensure the correct mixing ratio.
- Mix with a slow turning mixer (less than 300 rpm) for three minutes in order to obtain a homogeneous mixture.
- Apply primers to the surface by brush or roller immediately after mixing.
- Pour the primer onto the surface in a zigzag trail.

- After pouring onto the surface, the primer is evenly distributed onto the surface with foam rubber squeegees and rolled using Perlon rollers.
- The primer should be evenly distributed at 10-mil thickness, with complete coverage of the surface. If the surface is very porous and absorbs primer to the extent the primer is less than 10-mil thick, additional primer should be added in this area within the pot life or recoat time of the primer. Heat is generated when components A and B are mixed, so care should be taken if excess material is left in the mixing container and not distributed onto the surface.
- The SILCOR® membrane should be applied after initial primer curing but within 24-hours. This window is influenced by ambient temperature and humidity. When this time is exceeded before the membrane is applied, re-apply a new layer of the SILCOR® primer.
- The application window for SILCOR® primers can be extended by broadcasting dry quartz silica sand into the primed surface. Broadcast sand to full saturation. Use sand of 20/30 mesh for coating thickness of up to 80-mils. For larger coating thicknesses, larger grain sizes can be used. Remove surplus sand and partially bonded particles with a scrubber after the primer is dry to the touch.

Consult the SILCOR® primer technical data sheet for a complete description and application instructions.

SILCOR® 900HA liquid waterproofing application

Substrate application temperature must be between 40°F and 120°F. Substrate temperature should exceed the dew point temperature by a minimum of 5°F. At ambient temperatures below 50°F, SILCOR® 900HA, along with all resin-based liquids, will thicken. To ease application, store at a minimum 68°F for a minimum of four hours before application. Shake the Part A container well before opening. Add the entire contents of the Part A container to the premixed B component and mix at low speed for at least one minute until a uniform color is achieved to avoid air entrapment.

The mixed product should have a uniform color, free from streaks. Scrape any material from the side and bottom of the container to ensure thorough mixing. Once A and B components are mixed, pour the mixture out of the pail onto the substrate immediately and spread with a notched trowel or squeegee. Do not over-work the liquid, as it is self-leveling. Surface imperfections such as pinholes and bubbles can be removed with a nylon-spiked roller within the working time of the liquid membrane. Minimum required application thickness is 80-mil, which should be verified using a wet film thickness gauge during application of the membrane.

Laps

For the installation of SILCOR® liquid waterproofing over previously installed and cured SILCOR®.

After 24-hours, abrade using mechanical means (a minimum of six inches) onto the existing SILCOR® membrane. Solvent wipe the abraded area, and lap new SILCOR® liquid waterproofing over the area. When a visible color change after exposure has occurred, a level of mechanical abrasion is required to reveal the original color of the SILCOR® membrane prior to solvent wiping and lapping the new SILCOR® liquid waterproofing.

Repairs

Any damaged or unbonded SILCOR®membrane should be removed to expose the original substrate and SILCOR®primer. Existing SILCOR®membranes should be abraded a minimum of six inches past the damaged area in all directions, including any SILCOR®primer that is remaining on the exposed substrate. Abrading must reveal the original color of the SILCOR®membrane. Solvent wipe the prepared areas and apply SILCOR®Primer only to exposed portions of the substrate. After the SILCOR®primer cures, clean the surrounding abraded SILCOR®membrane with solvent. Flash off installation of the new SILCOR® membrane should occur immediately after, ensuring it extends a minimum of six inches onto the abraded, pre-existing SILCOR®. It is recommended that the perimeter of the repair area be taped off to provide a clean termination at the required 80-mil thickness.

Refer to the SILCOR®Application Manual for more detailed installation instructions.

Properties

	TYPICAL VALUE	TEST METHOD
Resistance to hydrostatic head over post formed crack head	230 ft	ASTM D5385
Tensile Strength	1450 psi	ASTM D412
Elongation	450 %	ASTM D412
Tear Strength	> 280 lb/in	ASTM D624 C
Adhesion to concrete	Concrete failure or 2MP and above ¹	ASTM D4541
Shore Hardness	75 A	ASTM D2240
Low temperature crack bridging	Pass	ASTM C836
Abrasion resistance (Taber Wear Index)	200 mg ²	ASTM D4060
Water vapor permeance	0.5 perms, with primer	ASTM E96B
Solids Content	100%	ASTM D1644
Density (Resin, Iso) ¹	9.5 lb/gal 8.9 lb/gal	
Coverage Rate (80 mil thickness)	16.4 ft ² /gal 39 ft ² /kit	Internal
Pot Life	up to 8 minutes ³	Internal
Working Time	up to 15 minutes ³	Internal
Tack-Free Time	30 minutes ³	Internal

Footnote:

1. Tested on prepared, primed, and sand blinded concrete.
2. H18/1000 cycles/1000g
3. At 73 °F.

Intended Use

SILCOR®900HA hand-applied waterproofing system is designed for use as a fully adhered waterproofing layer on new and existing elevated structural decks.

Detailing

For complete detailing instructions, refer to SILCOR®900HA standard details.

Chemical Resistance

*SILCOR®900HA is resistant to a wide range of chemicals. Consult your local GCP representative for specific details and recommendations.

Limitations

Apply SILCOR®900HA directly to structural surfaces. Do not apply SILCOR®900HA over lightweight insulating concrete. Insulation, if used, must be installed over the membrane.

The SILCOR®waterproofing membrane is not intended for permanent exposure. SILCOR®900HA liquid waterproofing, at recommended thickness, can be exposed for a maximum of 60-days prior to overburden installation. If exposure time is expected to exceed the recommended duration, the membrane must be temporarily protected until overburden is installed.

When used in PRMA assemblies where small portions will be left exposed (such as vertical upturns, flashings, etc.), SILCOR®top coat 70 is to be installed within 24-hours of the initial SILCOR® installation. SILCOR®900HA should not be used with SILCOR®900MP.

SILCOR®membrane temperature should exceed the dew point temperature by a minimum of 5 °F prior to SILCOR®top coat 70 application.

Safety and Handling

Read and understand the product label and safety data sheet (SDS) for each system component. All users should acquaint themselves with this information prior to working with the products and follow the precautionary statements.

SDSs can be obtained by contacting your local GCP representative or office, by calling GCP toll free at 1-866-333-3SBM (3726) and in some cases from our website at gcpat.com.

gcpat.com | North America customer service: 1-866-333-3726

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gcpat.com/solutions/products/silcor-900-series-liquid-waterproofing/silcor-900ha