SILCOR® 900HA (US Version)

Fast-cure, hand-applied liquid waterproofing membrane

Product Description

SILCOR® 900HA is a two component, hand-applied seamless liquid waterproofing that is typically foot-trafficable after 2 hours of application. SILCOR® 900HA forms a fully-bonded waterproof membrane that is extremely durable with excellent wear and chemical resistance and has a high tolerance against mechanical damage.

Product Applications

New and remedial waterproofing for elevated decks including:

- Parking and plaza decks
- Podiums and terraces
- Split slabs and wet rooms
- Balconies
- Green roofs
- Planters
- PRMA

Product Information

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<thead>
<tr>
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<th>APPROX. UNIT SIZE</th>
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<tbody>
<tr>
<td>SILCOR® 900HA (Resin)</td>
<td>2.2 lb bottle - approx. 0.2 gal</td>
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<tr>
<td>SILCOR® 900HA (Iso)</td>
<td>19.8 lb pail - approx. 2.2 gal</td>
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<tr>
<td>Storage</td>
<td>Store between 40°F – 80°F</td>
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<tr>
<td>Shelf life</td>
<td>12 months</td>
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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, solvent free
- **Low Odor** – low VOC
- **Elastomeric** – accommodates minor structural movements and bridges concrete shrinkage cracks
- **Durable** – tough with excellent wear and damage resistance
- **Excellent 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)
- **SILCOR® Primer EPS** – two-component epoxy primer (for substrate application temperatures 65°F -105°F)
- **Dry Quartz Silica Sand**
  - 16/30 mesh for broadcast into primer (optional)
  - 20/40 mesh for patching and repair
- **BITUTHENE® Liquid Membrane** – two component elastomeric liquid applied detailing accessory
- **PREPRUFE® Tape** – reinforced pressure sensitive tapes for detailing
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. Surface preparation for specific substrates is discussed below.

Concrete must be allowed to cure for at least 28 days. Concrete 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 (Primer)

Priming should be completed prior to applying SILCOR® 900HA.

- Add the complete Part B to the Part A to assure correct mixing ratio.
- Mix with a slow turning mixer (less than 300 rpm) for 3 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 mils thickness with complete coverage of the surface. If the surface is very porous and absorbs primer to the extent that open surface remains, additional primer should be added in this area within the pot life or recoat time of the primer.
• The SILCOR® membrane should be applied 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 SILCOR® membrane application window using SILCOR® Primers can be extended by broadcasting dry quartz silica sand into the primed surface. Broadcast sand to full saturation. Use sand of 16/30 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.

For complete descriptions and instructions on SILCOR® Primers, consult the separate technical data sheets.

**SILCOR® 900HA membrane 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. Once SILCOR® Part A and SILCOR® Part 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 SILCOR® 900HA 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-mils which should be verified using a wet film thickness gauge during application of the membrane.

**Properties**

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<th><strong>TYPICAL VALUE</strong></th>
<th><strong>TEST METHOD</strong></th>
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<tr>
<td>Resistance to hydrostatic head over post formed crack head</td>
<td>&gt; 230 ft</td>
<td>ASTM D5385</td>
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<tr>
<td>Tensile Strength</td>
<td>1450 psi</td>
<td>ASTM D412</td>
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<tr>
<td>Elongation</td>
<td>450 %</td>
<td>ASTM D412</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>&gt; 280 lb/in</td>
<td>ASTM D624 C</td>
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<tr>
<td>Adhesion to concrete</td>
<td>Concrete failure or 2MP and above(^1)</td>
<td>ASTM D4541</td>
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<tr>
<td>Shore Hardness</td>
<td>75 A</td>
<td>ASTM D2240</td>
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<tr>
<td>Low temperature crack bridging</td>
<td>Pass</td>
<td>ASTM C836</td>
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<tr>
<td>Abrasion resistance (Taber Wear Index)</td>
<td>200 mg(^2)</td>
<td>ASTM D4060</td>
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<tr>
<td>Water vapor permeance</td>
<td>0.5 perms, with primer</td>
<td>ASTM E968</td>
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<tr>
<td>Solids Content</td>
<td>100%</td>
<td>ASTM D1644</td>
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<tr>
<td>Density (Resin, Iso)(^1)</td>
<td>9.5 lb/gal</td>
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\(^1\) Based on using one 5 gal pail of each part and broadcasting dry quartz silica sand to full saturation.
### 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 has excellent chemical resistance. 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.

SILCOR® 900HA Liquid Waterproofing, at recommended thickness, 60–day maximum exposure prior to overburden installation. If exposure time is expected to exceed the above guidelines, SILCOR® must be temporarily protected or SILCOR® TOPCOAT 70 could be installed within 72-hours of the initial SILCOR® installation until the final overburden is installed.

SILCOR® is not intended for permanent exposure and in instances on PRMA projects where small portions will be left exposed (such as vertical upturns, flashings, etc.), SILCOR® TOPCOAT 70 is to be installed within 72–hours of the initial SILCOR® installation.

### 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 web site at gcpat.com.