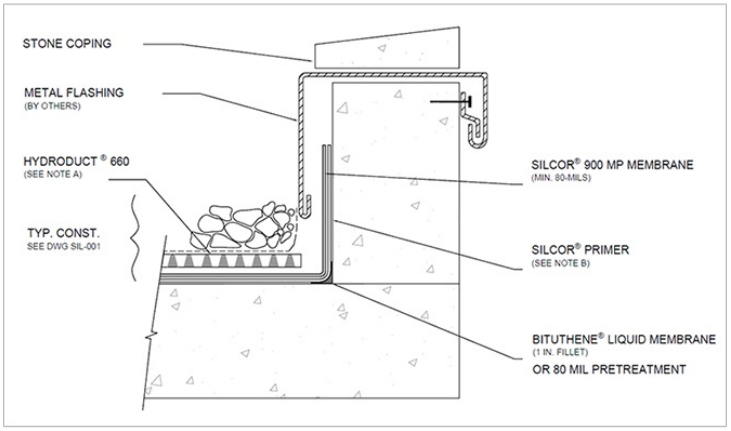
SILCOR® 900MP

Rapid-set, spray-applied, liquid waterproofing membrane for podium decks, green roofs, and terraces.

Certified to NSF/ANSI/CAN 61 – 5

Product Description

SILCOR® 900MP waterproofing is a premium performance, two-component, spray-applied, seamless waterproofing membrane that cures within two minutes to form a high-strength, elastomeric, and fully-bonded waterproof membrane. SILCOR® 900MP waterproofing is extremely durable, with excellent wear and chemical resistance, and does not normally require additional protection against mechanical damage.



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** –Accepts foot traffic after two minutes.
- **Seamless** – Continuous waterproofing integrity.
- **Productivity** – Spray-applied for maximum coverage per day.
- **Fully bonded** – Resists water tracking beneath the membrane.
- **Non-flammable**– Low VOC.
- **Low Odor**
- **Elastomeric** – Accommodates movement and bridges concrete shrinkage cracking.
- **Durable** – Tough, with excellent wear and damage resistance.
- **Chemical Resistance**

- **NSF Certified (Drinking Water System Components Certification)** – SILCOR® 900MP is certified for use with SILCOR® Primer EPF in accordance with NSF/ANSI/CAN 61.
- **UL Certified** Underwriter's Laboratory (UL) Classification for various assemblies under TGFU.R7910
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Principal Applications

New and remedial waterproofing for:

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

Design

The SILCOR® 900MP spray-applied 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 ⅛ inch per feet.

System Components

- SILCOR® 900MP – Premium performance, two-component, spray-applied seamless waterproofing membrane.
- SILCOR® Primer EPF – Two-component epoxy primer (for temperatures 40°F-80°F).
- BITUTHENE® Liquid Membrane – Two-component elastomeric, liquid-applied detailing accessory.
- PREPRUFE® Tape – Reinforced, pressure-sensitive tapes for detailing.

Installation

SILCOR® 900MP liquid waterproofing should be applied by experienced, trained contractors. Effective liquid waterproofing application starts with a good surface preparation of the substrate.

Surface Preparation

All grease, curing agents, oils, 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 before application. 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 an 115 psi cohesive strength. Concrete surface moisture content must be less than 5% prior to application of SILCOR®primers. Moisture content must be checked using appropriate meters and test methods.

Priming

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

- Add the complete B-component to the A-component to ensure a 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 pattern.
- After pouring onto the surface, the primer shall be evenly distributed onto the surface with foam rubber squeegees and rolled using Perlon rollers.
- The primer shall 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 the primer is less than 10-mils 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. Care should be taken if excess material is left in the mixing container and not distributed onto the surface.
- The SILCOR® membrane shall be applied after initial primer curing but within 24-hours. This window is influenced by ambient temperature and humidity. If this time is exceeded before the membrane is applied, re-apply a new layer of SILCOR® primer.

For complete descriptions and instructions on using SILCOR® primers, consult separate technical data sheets.

Spray Equipment and Temperature

SILCOR® membranes are rapid setting, high performance materials designed to be used with high-pressure proportioners such as Graco® Reactor E-XP2, H-XP2, and H-XP3 or similar high-pressure plural component spraying equipment. Both Part A and Part B components are supplied directly from drums with diaphragm or T-pumps, ensuring a continuous flow of material to the machine. Due to the high reactivity of the system, components are kept separately until they reach the spray gun mixing chamber. The components are designed for a 1:1 mixing ratio by volume. The 1:1 volume mixing ratio shall be maintained at a tolerance of +/- 2%. See your equipment manufacturer for appropriate air compressor and electrical power specifications and settings.

Substrate temperature should be between 40°F and 175°F and exceed the dew point temperature by a minimum of 5°F. Can be installed down to 20°F. Please contact GCP's Technical Service when installation below 40°F is anticipated.

SILCOR® resin (Part B) components are pigmented and need to be mixed before application with an air driven corkscrew-type mixer or similar. Mix at low speed to avoid air entrapment until a homogeneous color is obtained. After mixing, keep the Part B component agitated using a slow turning mixer in the drum during spray application using the 3-bung lid. SILCOR® isocyanate (Part A) components are supplied ready to use and do not need pre-mixing.

Both Part A and B are moisture-sensitive and need to be protected from all sources of moisture.

SILCOR® 900MP Spray Application

SILCOR® membranes are sprayed multi-directionally (up-down / left right) in several passes to obtain uniform coverage and membrane thickness. The spray gun is held perpendicularly to the substrate at a distance of 24 to 36 inches. When applying, care is required at the overlap to ensure even coverage of the overlap area. Spray-applied SILCOR® membranes should be applied at a minimum thickness of 80-mils. In order to achieve uniform membrane thickness, a smooth and constant gun speed is required by the gun operator.

Laps

When applying the SILCOR®membrane over previously installed and cured SILCOR®membrane, wait 24 hours before application. Abrade using mechanical means (a minimum of 6 inches) onto the existing SILCOR®, solvent wipe the abraded area, and lap the new SILCOR® membrane 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® membrane.

Repairs

Any damaged or unbonded SILCOR® membrane should be removed to expose the original substrate and SILCOR® primer. The existing SILCOR® membrane should be abraded at a minimum 6 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 and immediately after flash off of solvent, installation of the new SILCOR® membrane shall occur, ensuring it extends a minimum of 6 inches onto the abraded, pre-existing SILCOR® membrane. It is recommended that the perimeter of the repair area be taped off to provide a clean termination at the required 80-mil thickness.

Detailing

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

Drinking Water System Components Certification

SILCOR® 900MP is certified for use with SILCOR® Primer EPF in accordance with NSF/ANSI/CAN 61 when installed in a tank (min. 500 gallons) with a maximum dry film thickness of 80 mils per coat.

Limitations

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

The SILCOR® membrane is not intended for permanent exposure. SILCOR® 900MP liquid waterproofing, at recommended thickness, can be exposed for a maximum of 180-days prior to overburden installation. If exposure time is expected to exceed the recommended duration, the SILCOR® membrane must be temporarily protected until overburden is installed.

SILCOR® 900HA should not be used with SILCOR® 900MP. If repairs to SILCOR® 900MP cannot be completed with SILCOR® 900MP, please contact your local GCP technical representative.

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.

Supply

	UNIT OF SALE
SILCOR® 900MP (resin)	400 lb - 55 gal drum
SILCOR® 900MP (iso)	495 lb - 55 gal drum
SILCOR® Primer EPF (Part A)	7.1 lbs pail - approx. 0.7 gal
SILCOR® Primer EPF (Part B)	4.0 lbs pail - approx. 0.5 gal
Storage	Store between 40°F & 80°F
Shelf Life - SILCOR® 900MP	12 months

Physical Properties

	TYPICAL VALUE	TEST METHOD
Tensile Strength	4090 psi	ASTM D412
Tear Resistance	487 lb/in.	ASTM D751
Adhesion to Concrete	479 psi[1]	ASTM D4541
Low Temperature Crack Bridging	Pass	ASTM C836
Shore Hardness	91A	ASTM 2240

Footnotes:

1. Tested on prepared, primed, and sand blended concrete or steel.

2. H18/1000 cycles/1000g

Liquid Properties

	TYPICAL VALUE	TEST METHOD
Viscosity - Resin	400-600 cps[1]	Brookfield Viscometer
Viscosity - Iso	800-1200 cps[1]	Brookfield Viscometer
Density (Resin, Iso)	8.6 lb/gal 9.2 lb/gal	ASTM D4541
Coverage Rate (80 mil thickness)	16.4 ft^2/gal 1800 ft^2/kit	internal
Gel Time	5 sec[1]	internal
Tack Free Time	8 sec[1]	internal
Trafficable (foot traffic)	2 mins[1]	internal

Footnotes:

1. Measured at 77ºF

All declared values shown in this data sheet are based on test results determined under laboratory conditions and with the product sample taken directly from stock in its original packing without any alteration or modification of its component parts.

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