SILCOR® 900MP

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

Product Description

SILCOR®900MP is a premium performance two-component spray-applied seamless waterproofing membrane that cures within 2 minutes to form a high-strength, elastomeric, and fully-bonded waterproof membrane. Silcor 900MP is extremely durable with excellent wear and chemical resistance and does not normally require additional protection against mechanical damage.

Principal Applications

New and remedial waterproofing for elevated decks including:

- Parking and plaza decks
- Podiums and terraces
- Split slabs and wet rooms
- Balconies
- Green roofs
- Water features / Planters
- IRMA

Design

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

Product Advantages

- **Fast Cure** – will accept foot traffic after 2 mins.
- **Seamless** – continuous waterproofing.
- **Productivity** – spray-applied for maximum coverage per day.
- **Fully bonded** - resists water tracking beneath the membrane
- **Non-flammable** – 100% solids. Solvent free.
- **Low Odor** – low VOC.
- **Elastomeric** - excellent crack bridging properties to accommodate movement.
- **Durable** – tough with excellent wear and damage resistance.
- **Chemical Resistance** – excellent fuel and chemical resistance.

Installation

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

1. 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 of Silcor. 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 should 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 should 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.

2. Priming

Priming should be completed prior to applying Silcor 900MP.

- Add the complete B-component to the A-component 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.
- The primer should be applied 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 should be evenly distributed onto the surface with foam rubber squeegees and rolled into the surface, within the pot life, 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 leaving an open surface, additional primer must be added in this area within the pot life or recoat time of the primer.
- The recoat window of the primer is typically up to 24 hours. This window is influenced by ambient temperature and humidity. When the recoat window time is exceeded before the membrane is applied, re-apply a new layer of the Silcor Primer.
- The recoat window of 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 instructions and descriptions on Silcor Primers, consult the separate technical data sheets.

3. Machine 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 RESIN and ISO components are supplied directly from drums with diaphragm or T-pumps ensuring 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 and mixing chamber. The components are designed for a 1:1 mixing ratio by volume. A high-yield air compressor is needed to operate the pumps and the spray equipment. See your equipment manufacturer requirements for appropriate air compressor specification and settings.

Substrate temperature must be between 40°F and 120°F and exceed the dew point temperature by a minimum of 5°F.

4. Material Pre-Conditioning

Silcor Resin components are pigmented and need to be mixed before application with a twistfork or similar hand held mixer. Mix at low speed to avoid air entrapment until a homogeneous color is obtained. After mixing, it is recommended to keep the blend agitated using a slow turning mixer in the drum. Silcor Isocyanate components are supplied ready to use and do not need pre-mixing.

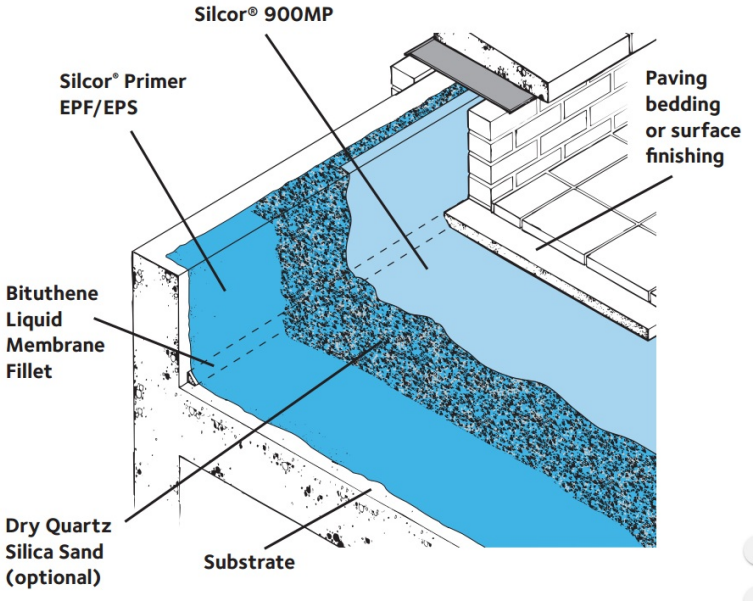
They are moisture sensitive and need to be protected from all sources of moisture.

5. Spray-Application

Silcor membranes are sprayed multi-directional (up-down / left right) in several coats to obtain uniform coverage and membrane thickness. Hold the gun perpendicular to the substrate at a distance of 24 to 35 inches. When applying, care is required at the overlap to ensure even coverage of the overlap area. Spray applied Silcor membranes must 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. Refer to the Silcor Application Manual for more detailed installation instructions.

System Components

- SILCOR® 900MP – premium performance two component, spray-applied seamless waterproofing membrane
- SILCOR® Primer EPF – two-component epoxy primer (for substrate temperatures 40°F-80°F)
- SILCOR® Primer EPS – two-component epoxy primer (for substrate 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



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

Detailing

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

Chemical Resistance

Silcor 900MP offers protection to a wide range of chemicals. Contact GCP for specific details and recommended applications.

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.

Warranties

GCP and trained contractors can provide warranties for individual projects. Contact GCP for further details.

Health and Safety

For Silcor 900MP, Silcor Primer EPF, and Silcor Primer EPS read the product label and Safety Data Sheet (SDS) before use. SDS's can be obtained from GCP Applied Technologies.

Supply

	APPROX. UNIT SIZE
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
SILCOR® Primer EPS (Part A)	12.1 lbs pail - approx. 1.5 gal
SILCOR® Primer EPS (Part B)	9.9 lbs pail - approx. 0.9 gal
Storage	Store between 40°F & 80°F
Shelf life - Silcor 900MP	9 months

Physical Properties

	TYPICAL VALUE TEST METHOD
Tensile Strength	4090 psi ASTM D412
Tear Resistance	487 lb/in. ASTM D624 C
>479 psi or concrete Adhesion to Concrete	ASTM D4541failure (note 1)
Low Temperature	
ASTM C836Crack Bridging	Pass
Shore Hardness	91 ASTM 2240
Abrasion Resistance	
ASTM D4060(Taber Wear index)	255 mg (note 2)

Footnotes:

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

2. H18/1000 cycles/1000g

Liquid Properties

	TYPICAL VALUE	TEST METHOD
Viscocity - Resin	400-600 cps (note 1)	Brookfield Viscometer
Viscocity - Iso	800-1200 cps (note 1)	Brookfield Viscometer
Solids Content	100%	ASTM D1644
Density (Resin, Iso)	8.6 lb/gal 9.2 lb/gal	ASTM D4541

Coverage Rate (80 mil thickness)	16.4 ft2/gal 2000 ft2/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.vn/solutions/products/silcor-liquid-waterproofing/silcor-900mp