



## Silcor® 900HA System Installation

### Ancillary Materials, Equipment, and Tools

#### **SURFACE PREPARATION:**

##### **Concrete:**

Concrete should be allowed to cure for at least 28 days. Minimum cohesive strength of concrete required is 115 psi tested by pull-off adhesion testing. The concrete surface finish should also fall within an ICRI Concrete Surface Profile between 2-5. Where either of these values are not achieved, remove all laitance and create a proper surface profile by mechanical means. Surfaces must be clean, sound, and free of dust, laitance, sealers, grease or any other contaminants that might reduce adhesion. If power washing the substrate, allow sufficient time for the residual humidity to dissipate. The substrate surface moisture content before application of the primer must be less than 5%. The primer surface should be tack free and free of any surface moisture before application of the Silcor® membrane.

**Metal/Plastic:** These substrates must be mechanically abraded to ensure that rust scale, oils, paints and other contaminants are completely removed. Coarse grit sand paper or abrasive discs are recommended. The prepared substrates will then be solvent wiped and allowed to dry prior to the installation of the Silcor® 900HA system.

NOTE – Wire brushing should be avoided as it can create for an improper surface profile.

#### **PRIMER APPLICATION:**

##### **Mixing:**

Store Silcor® Primers in a dry and cool spot out of direct sunlight. Storing the product in direct sunlight will heat up the components and reduce pot life considerably. 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 homogenous mixture.

##### **Application:**

Silcor® primers should be applied when the temperatures are above 40°F. The primer needs to be applied to the surface immediately after mixing by brush, roller, or squeegee. The first mixed unit should be used to begin priming the flashings, penetrations and detailing with a suitable size roller and/or brushes. Subsequently mixed units will be applied by pouring onto the deck in a serpentine pattern and evenly distributed using a large (9" or larger) Perlon roller; or it may be applied using a flat or notched squeegee and then back-rolled. The primer needs to be evenly distributed at min. 10 mils thickness with complete coverage of the surface. If the surface is very porous and absorbs primer leaving inadequate coverage, additional primer will need to be added in this area within recoat time of the primer.

##### **Curing:**

The recoat window of the primer for Silcor® membrane application is 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-application of a new layer of the Silcor® Primer may be required (Contact your local GCP Representative for guidance). The recoat window of Silcor® Primers can be extended by broadcasting dry quartz silica sand into the primed surface during its pot life. Broadcast sand to full saturation and rejection. 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 the excess sand and any partially bonded sand particles with a broom and blower after the primer is dry to the touch. Silcor® Primers can also be mixed with dry quartz silica sand (20/40 mesh) (Roughly 4:1 sand:primer ratio) to make a repair material for leveling and filling small surface defects during the application of the primer.



### **Cleaning:**

Mixing and application equipment should be cleaned immediately with a suitable solvent. Remove hardened material mechanically. All solvents should be used only in accordance with manufacturer's recommendations. Do not use solvents to clean hands or skin.

### **Storage:**

Silcor® Primers should be stored under cover, protected from moisture in original sealed containers above 40°F (5°C) and below 80°F (25°C) or crystallization may occur. Shelf life is 2 years in unopened containers stored under the conditions described above.

### **NOTES –**

- Do not allow Silcor® Primer to sit in buckets after mixed as this will accelerate curing, reduce pot life, and primers will begin to give off a significant amount of heat
- Metal/Plastic substrates should not be primed, but must be pre-treated with Bituthene®-Liquid Membrane at a min. 60-mils prior to the Silcor® 900HA application
- In case of crystallized units of Silcor® Primer, reseal units, set aside and contact your local GCP Representative

### **BITUTHENE® LIQUID MEMBRANE DETAILING:**

A small fillet of Bituthene Liquid Membrane must be applied at all floor to wall transitions. At all penetrations, a fillet of Bituthene Liquid Membrane will be applied at the base and will extend a minimum of 4" vertically onto the penetrant. At drains, the Bituthene® Liquid Membrane will extend from the interior edge of the drain's flange and out to at least 6" past the exterior edge of the flange onto the concrete deck. Bituthene® Liquid Membrane must be allowed to cure to a "tack-free" state before proceeding with Silcor® 900 HA application.

Refer to standard Silcor® 900HA details for further instructions.

### **MEMBRANE APPLICATION:**

#### **Mixing:**

Mixing should be with a minimum 1000 W, variable speed drill and a 3-4 inch diameter mixing paddle. A paddle should be selected that will not entrain air into the Silcor® material during mixing. The mixing area should be out of direct sunlight, especially during hot weather as temperature will affect the pot life of the material. In winter climates, store both Parts A & B as close to room temperature as possible the night before to help mixing and application to substrate.

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.

#### **Application:**

The substrate surface temperature needs to exceed the dew point temperature by a minimum of 5°F before application. 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. The first mixed unit should be applied at flashings, penetrations and other details, by means of a 4" Perlon roller and/or brush or similar. Subsequently mixed units will be poured onto the deck and spread using a properly sized "V" notched squeegee or stub roller to achieve a min. 80 mil wet film thickness and immediately back-rolled with an 18" spiked roller. 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 but only within the working time of the Silcor® 900HA. As new Silcor® 900HA is being spread on the deck, previously applied Silcor® 900HA must be overlapped by at least 2". Care must be taken not to disturb the Silcor® 900HA that has begun curing, as this will result in gouges into the previous layer. Minimum required application thickness is 80 mils should be verified using a wet film thickness gauge during application of the membrane.

**PRELIMINARY INSPECTION:**

Once the Silcor® 900HA has cured to a solid, tack-free layer, a preliminary inspection should be conducted, to identify any obvious deficiencies (gouges, bare-spots, touch-ups at flashings, etc.) Address deficiencies within 24 hrs. If deficiencies cannot be addressed in this time, and membrane is allowed to cure more than 24-hours, the areas to be repaired must first be treated by abrading with coarse grit sand paper or grinding disc and then wiped clean with solvent prior to the re-application of an additional Silcor® 900HA layer that should extend a min. of 6" beyond the damage in all directions.

**OTHER CONSIDERATIONS:**

**Mixing Technique:** Care must be taken not to entrain air into the materials being mixed. A low speed drill and paddle are recommended.

**Mixing Station:** A shaded area in close proximity to the work area should be selected. Travel time of the mixed Silcor® 900HA to the application area must be minimized as much as possible.

**Overburden:** Ensure that the intended overburden includes an approved protection course if required by the designer or GCP. The membrane should be protected from work being performed by other trades.

**Water Testing/Leak Detection:** It is recommended that the membrane be tested, prior to the installation of the overburden. Consult with your local GCP representative for specific testing requirements based on specified warranty.

**RECOMMENDED ADDITIONAL MATERIALS AND EQUIPMENT:**

MIXING DRILL AND PADDLE

HIGH SPEED DRILL

SEGMENTED SANDING DISK

ANGLE GRINDERS AND BLADE(S)/CUP(S)

FLOOR GRINDER/SCARIFIER/SHOT BLASTING MACHINE

BLOWER

IR THERMOMETER AND PSYCHROMETER/HYGROMETER

VACCUUM CLEANER

EXTENSION CORD(S)

BROOM AND DUST PAN

GARBAGE BAGS



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GRADUATED CONTAINERS (VARIOUS SIZES)

5-GALLON BUCKETS

BITUTHENE LIQUID MEMBRANE

FAST SETTING REPAIR MORTAR

PATCHING SAND (Kiln Dried - 20/40 mesh size)

BROADCAST SAND (Kiln Dried - 16/30 mesh size, roughly 50 lbs bag per every 100sf)

DISPOSABLE CHIPPING BRUSHES

4" ROLLERS (Frames and Perlon naps)

9" OR LARGER ROLLERS (SILCOR PRIMER application)

FLAT or 1/16"-1/8" NOTCHED SQUEEGEE (SILCOR PRIMER application)

NOTCHED SQUEEGEE (1/4" v-notched for SILCOR 900 HA application)

1/4"x1/4" NOTCHED TROWEL (For Detail Areas)

18" SPIKED ROLLER

80 + MIL STUB ROLLERS

CAULKING KNIVES

MARGIN TROWEL

UTILITY KNIFE

CRESCENT WRENCH / SOCKET SET

NITRILE GLOVES

KNEE PADS

SAFETY GOGGLES

DUCT TAPE

10-MIL PLASTIC COVERS

SOLVENT CLEANER

RAGS