

SILCOR[®] 550 LS

Product Description

SILCOR[®] 550 LS is a high performance, polyurethane to provide a continuous, seamless, elastomer waterproof membrane. SILCOR 550 LS is well suited for use in most areas of application in industrial and commercial design. It is specially formulated for easy roller application of all permanently flexible, tough, waterproof barriers.

Features

- Single component and easy application with brush and roller
- Simple, seamless, waterproof membrane
- Excellent chemical resistance
- Permanently flexible — total adhesion
- Systems for Total Project Specification

SILCOR 550 LS consists of polyurethane polymer, the coating film has rubber characteristics, excellent elasticity, high strength, high elongation and strong adhesion. It does not contain benzene solvents and pollution chemicals. Design a Total Waterproofing Envelope package with waterproofing systems from GCP Applied Technologies.

Uses

- Wet Areas — bathrooms, shower trays, laundries, toilets, spas
- External (non-exposed) — balconies, roof-decks, sill or window flashings, podiums
- Retaining walls
- It can be applied to most stable surfaces — block, brick, concrete, render, timber, CFC, GRC, ALC, etc.
- Horizontal application with self-leveling feature

Preparation

Surfaces must be sound, smooth and free from dust, laitance, loose matter, oil or other contaminants.

Concrete Finish – light steel trowel finish to provide low porosity, well densified surface without burnishing. Ensures minimal preparation work with high primer penetration and minimal outgassing from concrete pores.

Concrete should be cured 28 days and rendered 7 days. Concrete curing agent & form release used should be compatible with GCP products.

Use SILCOR LM PU sealant to fill joints, cracks, gaps and form angle fillets to internal corners or penetrations.

Movement Areas

At potential high movement areas such as expansion joints, open construction joints and active cracks, it is recommended to install a slip tape centred over the joint or crack to zero movement prior installation of SILCOR application. Slip tape should be a minimum 90mm wide for expansion joints, minimum 45mm wide for open construction joints and minimum 20mm wide for moving cracks. Slip tape must be polyethylene faced, single sided adhesive and resistant to primer, membrane, xylene and heat. Suitable tapes are 3M 8979 or Tesa 58663 by others.

Reinforcing

Full reinforcing of SILCOR 550LS is not typically required, provided the membrane is applied to the minimum specified WFT/DFT. Where high movement is expected at junctions and joints, and use of a slip tape is not possible, a reinforcing strip may be employed.

Membrane Typical Detailing

To the SILCOR LM PU Sealant detailed internal corners, chamfered external corners, construction joints, penetrations, drainage outlets and cracks, apply SILCOR 550LS as a minimum 150mm wide application centred over the sealant fillet/corner/slip tape. Apply to provide a minimum 1.0mm DFT and allow to cure to minimum recoat time.

To the SILCOR LM PU Sealant detailed expansion joints, apply SILCOR 550LS as a minimum 200mm wide application centred over the joint slip tape. Apply to provide a minimum 1.0mm DFT and allow to cure to minimum recoat time. Where reinforced membrane is required in high movement areas, without slip tape, the following process is recommended to ensure correct membrane function:

1. Apply SILCOR 550LS to a minimum 1.0mm DFT as detailed above and allow to cure to minimum recoat time.
2. Apply a second coat of membrane and lay Reinforcing PE Fabric strip into the wet membrane. Wet fabric through with membrane completely, ensuring no bubbles or wrinkles are present.
3. While wet, apply additional membrane to fully cover the reinforcing fabric with a minimum 1.0mm of membrane. Allow to cure to minimum recoat time.

Bond Breaker

Install SILCOR LM PU sealant as bond breaker. Allow all detailing work to skin cure before proceeding with general membrane installation.

Application

Primer

All surfaces to be waterproofed should be clean, sound and dry.

Priming of good quality, dense concrete is not necessary.

For absorbent surfaces such as porous concrete: a mixture of xylene (by others) dilution of 30g – 50g per 1kg of SILCOR 550LS as “primer” to treat the porous concrete (reduction of pinholes and concrete porosity) is allowed. It is mainly to tackle for high porosity concrete especially for absorbent surfaces such as porous concrete.

Priming can be applied by brush or roller and allow to cure for 4-8 hours (tack free) after application depends on site and weather condition. Do not allow primer to harden completely before proceeding with SILCOR 550LS membrane.

Ensure substrate is free of dust, dirt, concrete and construction waste, leaves or other foreign materials that may have blown onto the surface, by vacuuming or broom cleaning the surface. Repeat as necessary to maintain site cleanliness.

Application of Continuous Membrane

Before application, fully mix with a low speed mixer or drill with paddle until homogeneous and ensure material on bottom and sides of mixing container is fully mixed in. Mixing by hand is not allowed.

Apply SILCOR 550 LS membrane liberally by brush, squeegee roller or roller. Apply minimum 1.5kg/m² to achieve 1mm DFT (Dry Film Thickness), 1.2mm WFT (Wet Film Thickness) in one or two coats. Apply the second coat when the first coat is tack free. If the second coat is applied more than 24 hours, it is required to clean the first coat by xylene. Test WFT during application using a Wet Film Thickness Gauge. Min DFT is 1.2mm to 1.5mm depends on area application and project requirements.

Typical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Colour	Black	-
Specific Gravity	1.5-1.55g/cm ³	-
Solid % Vol	85	-
Cure Time – Ready for Flood Test, Tiling, Topping	72 hours*	-
Tensile Strength	> 2.0MPa	ASTM D412
Elongation	> 500%	ASTM D412
Shore A Hardness	50-60	ASTM D2240
Chemical Resistance	Excellent	ASTM C543

* Depends on thickness and curing condition

Surfacing

Allow product to cure overnight before foot traffic during application. Protect installed membrane from damage. If surface retains any tacky feel, access is achieved by a light broadcast of fine sand. Remove any loose materials before over-coating.

The following surfacing systems may be used after SILCOR 560 LS membrane has fully cured.

- Tiles -- Lay ceramic tiles on mortar bed or apply sand layer before application of suitable adhesive.
- Rigid Surfaces -- Use 0.2mm polyethylene slip-sheet under concrete toppings. Lay paving slabs supported on mortar bed.

Limitations:

- SILCOR 550LS should not be exposed to direct sunlight for extended periods of time – it is recommended to protect the membrane from UV exposure within 7 days after application
- In addition, the membrane should be covered by tiles, toppings or membrane protection to prevent damage by other trades
- SILCOR 550LS is unsuitable for trafficable applications – foot or vehicle
- Minimum applied thickness required is dependent on intended areas of application
- Cure rate is affected by temperature, humidity or subject to site condition
- High temperatures and/or high humidity will cause rapid surface skinning and cure
- Low temperatures and/or low humidity will significantly extend cure time

- Humidity below 35% RH can prevent product cures
- May need 2 to 3 coats for touch up during curing process due to high humidity environmental impact
- Protect freshly applied SILCOR 550LS from site damage and rain exposure/rain contaminants for next 8 hours

Theoretic Coverage

13m² / pail in 1mm thickness (DFT)

Thickness (DFT) recommendation* 1.2 – 1.5mm

Coverage @ 25°C, 60% RH 1.8 kg/m² – 2.25 kg/m²

* Thickness should be determined by specifier

Packaging

20kg pails

Clean Up

Use methylated spirits before curing. Exercise care when using solvent. Review all Safety Data Sheet (SDS) before use.

Shelf Life

Do not store product exposed to weather and sun. When kept in a cool, dry, protected area, sealed pails have a 9-month shelf life at 25°C, 60% RH, but once opened may solidify within a few days.

Health and Safety

In case of spills and accidents, refer to the SDS of the products or when in doubt contact your local GCP representative. Always wear protective clothing, gloves and protective goggles when handling chemical products. For full information, consult the relevant SDS.

Project Specification

GCP offers a comprehensive package of quality and proven systems to meet different project and application needs. Contact your local GCP representative for further information.

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