

SILCOR[®] 580

Low-odour, heavy-duty-trafficable, polyurethane waterproofing membrane

Product Description

A tough, resilient, two-part, elastomeric polyurethane membrane for long-life waterproof protection. It is a premium grade, low VOC elastomer using the latest technology to provide long-life protective barriers to prestigious construction projects.

Product Uses

Intended for use as a robust waterproofing membrane on exposed substrates set to falls, when overcoated with SILCOR Top Coat 80 as UV colour stable membrane protection, to non-trafficable and foot trafficable areas. SILCOR 580 is also suited to use on exposed and non-exposed areas, when overcoated with a SILCOR 580 wear coat and SILCOR Top Coat 80 as UV colour stable membrane protection, to heavy foot traffic and light vehicle traffic areas.

Typical applications include:

- Stadiums, car park decks and other heavy foot or car vehicle traffic areas (with wear coat and top coat protection over)
- Balconies, roof decks and podiums (with top coat protection over)
- Green roofs and landscaped decks
- Plant room floors (with top coat protection over)
- Impact resistant, resilient flooring in laboratories, sports centres and gymnasiums
- Internal wet area floors under or over screeds

Advantages & Features

- Certified Class III – compliant with AS 4654.1-2012 for use as external, non-exposed waterproofing, installed to the requirements of AS 4654.2-2012
- Certified Class III – compliant with AS/NZS 4858-2004 for use as internal wet area waterproofing, installed to the requirements of AS 3740-2021
- Very Low VOC – <35g/L – reduced EH&S issues on site
- High physical properties; >700% elongation and >7MPa tensile strength
- Chemically cured by polyurethane resin - hardener reaction. Fast through cure, even during low humidity conditions
- Seamless – liquid applied and monolithic, eliminating vulnerable joints, seams, and laps
- Semi Self-Levelling – flows out to a smooth finish on horizontal substrates set to falls
- Fully Bonded – no water tracking between membrane and substrate
- Applied by roller, notched squeegee, pin rake, trowel or brush
- Cold Applied – no flame or heat required for application
- Accommodates typical structural movements encountered in well-designed construction
- Bridges non-structural concrete shrinkage cracks
- Polyurethane chemistry – free from bitumen or tar – will not bleed or stain

Product Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Liquid Membrane Properties		
Membrane Chemistry	High solids, 2-part reaction curing polyurethane	
Appearance	Grey flowing liquid	
Mix Ratio (by weight)	100 : 100 w/w	
Specific Gravity ¹ (g/ml)	Polyol = 1.40; Iso = 1.05 Mixed Membrane = 1.23	
Brookfield Viscosity (mPa.s)	Polyol = 6,000; Iso = 5,000 Mixed Membrane = 6,500	
Solids Content (%w/w)	97	
VOC (g/L)	<35	ASTM D3960
Working Time ¹ (minutes)	25	
Pot Life ¹ (minutes)	30	
Tack Free ¹ Time ¹ (hours)	4	
Gel Time ¹ (hours)	3	
Min. Recoat Time ¹ (hours)	15	
Max. Recoat Time ¹ (hours)	36	
Min. Through Cure Time ¹ (hours)	15	
Min. Cure Time ¹ (hours)	3	
Rain resistant		
Min. Cure Time ¹ (hours)	15	
Ready for flood testing, topping or backfilling		
Fully Cured Membrane Properties		
Shore A Hardness (°A)	80	ASTM D2240
Tensile Strength (MPa)	> 7.0 / >8.0	AS 4858 / AS 4654.1
Elongation (%)	> 500 / > 700	AS 4858 / AS 4654.1
Classification	Class III High Extensibility – AS 4858-2004 Class III High Extensibility – AS 4654.1-2012	AS 4858 / AS 4654.1
Resistance to Cyclic Movement	Pass / Pass – No fatigue cracking exhibited	AS 4858 / AS 4654.1
Bond Strength to Primed Concrete (N)	>7.7	AS 4654.1
Water Vapour Transmission Rate (g/m ² /24h)	7.99 / 7.99	AS 4858 / AS 4654.1

Resistance to Water Immersion	Pass / Pass	AS 4858 / AS 4654.1
Resistance to Bleach Immersion	Pass	AS 4858
Resistance to Detergent Immersion	Pass / Pass	AS 4858 / AS 4654.1
Resistance to Heat Ageing	Pass / Pass	AS 4858 / AS 4654.1
Service Temperature (Continuous)	-40°C to +100°C	

The above values and properties do not constitute a specification.

1 – Tested at 23°C / 60% RH. Values will vary dependent on temperature and/or humidity at time of use.

Design

- All horizontal substrates to have a minimum 1:100 fall to drainage and/or not retain water other than residual due to substrate surface tension. Falls to drainage in shower areas to be minimum 1:80.
- Drainage outlets / puddle flanges must be at low point of falls, installed flush or recessed to surrounding substrate.
- Drainage outlets must allow correct drainage both below and above screeds. Consult your GCP representative for specific requirements on your project.
- Where bonded screeds, renders, bedded pavers or direct stick tiles are to be installed to SILCOR 580 membrane, a tie coat must be installed to the cured membrane prior, consisting of an additional layer of SILCOR® 580 membrane, coarse aggregate blinded to refusal. See details below for further information. Note – aggregate broadcasting of the finished membrane (without incorporating the tie coat) is unacceptable.

Safety and Handling

- Installers must read and understand the product label and Safety Data Sheet (SDS) for each product.
- 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.

Storage & Shelf Life

- Store in original packaging between 15° and 25°C, under cover and protected from all sources of heat, ignition, moisture, frost and direct sunlight.
- Shelf life is twelve (12) months from date of manufacture when stored at these conditions in original, unopened packaging.

Limitations of Use

- Minimum applied membrane thickness required is specified by GCP and is dependent on intended areas of use and Product Warranty period desired. Consult your local GCP representative for further information
- Not to be installed as a negative pressure membrane
- Not to be installed to damp, wet, contaminated or unprepared substrates
- Not recommended for internal lining of water tanks due to self levelling properties
- Must not be applied if it is raining or rain is imminent
- Not to be installed when ambient humidity is above 85%

- Cure rate, drying time, recoat time etc. are affected by temperature:
 - High temperatures will reduce pot life and accelerate cure time
 - Low temperatures will extend pot life and cure time
- Information in this document does not cover all possible application scenarios, limitations, or imply product suitability for an application. Please contact your local GCP representative for further information and to discuss your requirements prior to proceeding with installation
- This PDS does not constitute a GCP Product Specification, Project Specification, Work Method Statement or Scope of Works. Please contact your local GCP representative for project specific installation information

System Components

PRODUCT	DESCRIPTION	PACKAGE SIZE
SILCOR® 580	2-part, high solids, polyurethane waterproofing membrane	36 kg set
SILCOR® Primer BS	1-part, penetrating solvent-based polyurethane primer for dry concrete, masonry, CFC sheet, CCS, many metals, PVC and ABS plastics	17 kg pail
EPOCOTE™ F100W	2-part, water-based epoxy primer for dry, green or damp concrete, masonry, CFC sheet, water resistant plasterboard, many metals, PVC and ABS plastics	20 L kit
SILCOR® LM PU Sealant	1-part, low modulus polyurethane sealant for detailing	600 ml foil sausage
SILCOR® Top Coat 75	2-part, membrane protective, aliphatic polyurethane top coat for non-traffic and foot traffic use	18 kg kit
SILCOR® Top Coat 80	2-part, membrane protective, aliphatic polyurethane top coat for heavy foot traffic and light vehicle traffic use	18 kg kit
PROTECTOBOARD™	High crush strength, fluted polypropylene, membrane protection board	1830 x 1220 x 3mm sheet
RAPID-DRAIN™	High crush strength, dimpled polypropylene, drainage and membrane protection board	15240 x 1220 x 10mm roll

Estimating

Please contact your local GCP representative for information specific to your project estimating needs.

General Guidance:

MINIMUM TOTAL DFT (MM)	MINIMUM TOTAL WFT (MM)	MAXIMUM TOTAL APPLICATION RATE (KG/M ²)	MAXIMUM TOTAL APPLICATION RATE (M ² /LITRE)	NUMBER OF COATS	MINIMUM DFT PER COAT (MM)	MINIMUM WFT PER COAT (MM)	APPLICATION RATE PER COAT (KG/M ²)	APPLICATION RATE PER COAT (M ² /LITRE)	MAXIMUM COVERAGE PER PAIL (M ²)
External Above Ground Areas – AS 4654.1									
1.40	1.45	1.78	0.69	1	1.40	1.45	1.78	0.69	20.2
1.50	1.55	1.90	0.64	1	1.50	1.55	1.90	0.64	18.9
2.00	2.08	2.54	0.48	1	2.00	2.08	2.54	0.48	14.1
3.00	3.11	3.81	0.32	1	3.00	3.11	3.81	0.32	9.4
Internal Wet Areas – AS 4858									
1.45	1.50	1.84	0.66	1	1.45	1.50	1.84	0.66	19.5
1.50	1.55	1.90	0.64	1	1.50	1.55	1.90	0.64	18.9

Note – The above values do not include wastage.

Suitable Substrates

SILCOR 580 may be applied to the following dry, cured, stable, prepared & primed substrates:

- Concrete or reinforced and core filled blockwork with compressive strength ≥ 20 MPa
- Cementitious screed, render or toppings with compressive strength ≥ 20 MPa
- Engineered screeds with compressive strength ≥ 25 MPa
- Compressed Fibre Cement sheet (CFC), Cement Composite Sheet (CCS)
- Water resistant plasterboard, water resistant plywood or water-resistant structural timber
- Many types of metals, PVC, and ABS plastics
- High strength rendered, aerated autoclaved concrete (AAC)

Substrate Quality

Substrates must be structurally sound, smooth, clean and dry.

Concrete

- Well compacted, moisture cured as required by AS 3600
- Minimum concrete age = 14-28 days, dependent on concrete thickness, moisture content and primer
- Compressive strength - minimum strength grade 20 MPa
- Concrete surface pull-off strength - minimum 0.6 MPa for internal wet area applications; minimum 1.0 MPa for foot trafficable / non-trafficable external surfaces; minimum 1.5 MPa for light vehicle trafficable areas
- Concrete finish – only steel trowel, light power float or off-form, well compacted (not burnished), free of honeycombing, voids or excessive porosity. Porous, low surface strength, tamped, bull float or broom finishes are unacceptable and must be rectified prior to primer and membrane application.
Where non-ponding external surfaces are specified, in accordance with AS 4654.2, concrete provided to the applicator shall be set to falls and be free of ponding depressions.
- Curing compounds - only non-permanent, degrading acrylic types. Must be removed by water blasting or grinding prior to priming

Concrete Block Masonry

- Sound, flush pointed mortar joints with no gaps or voids, reinforced and fully core filled. Excessively porous block work may require sealing with high strength (minimum 20 MPa) fairing compound prior to primer and membrane application

Screeds, Toppings and Renders

- Structurally sound, fit for purpose, minimum 20 MPa compressive strength grade and reinforced or resistant to fracture or break-up in use. Formulated, mixed and installed to provide a smooth surface without voids or excessive porosity. Minimum 3 days cure dependent on formulation, moisture content and GCP primer being used

Compressed Fibre Cement (CFC) Cement Composite Sheet (CCS) & W/R Plasterboard

- Installed to stable, structural framing. Installed and finished in accordance with manufacturer's directions. Free of all surface sealers, coatings, and primers

Metals

- Free of corrosion, gaps, holes and defects

Substrate Preparation

Concrete, Masonry, Screeds and Renders

- Remove all dirt, dust, concrete spillage, weak material, laitance, oil, grease, coatings, curing compounds, form release agents, rubber tyre marks, rain damage, corrosion marks and other contaminants / defects by an appropriate method, including brooming, vacuuming, scraping, water blasting (4000 psi with RotorJet head), captive shot blasting or grinding
- Remove ridges, sharp edges, deep broom finishes and chamfer external corners 12mm
- Repair concrete masonry defects including bug holes, honeycombing and gross pin holing using a low shrinkage PMC repair mortar, fairing compound or epoxy repair mortar, having equivalent compressive strength as the substrate. Allow all repairs to cure fully and dry to a moisture content below the maximum allowable for the GCP primer being used (see relevant primer PDS)
- Chase construction joints minimum 10mm x 10mm (square cut only). Chase static shrinkage cracks greater than 1.0mm width a minimum 6mm x 6mm (square cut recommended). All structural and dynamic cracks must be repaired by suitable means prior to chasing

Note - Outgassing occurs naturally in concrete and masonry surfaces as daily temperature increases and can lead to pin hole formation in applied primers, membranes, and coatings. Rectification of rain damaged or burnished concrete by grinding or sand blasting can expose high porosity concrete, leading to increased outgassing. The applicator must assess the prepared substrate for porosity and adjust repair and priming methods accordingly to minimise the effects of outgassing and pin hole formation in primers and membranes.

Compressed Fibre Cement Sheet (CFC)

Ensure sheeting materials used are free of all surface sealers, coatings and acrylic primers.

Ensure sheets have been installed to the manufacturer's requirements, and are clean, dry and contaminant free.

Light Weight Cement Composite Sheet (CCS)

In addition to CFC sheet requirements, due to laminar structure and low internal strength of CCS sheets, they must be prepared and primed carefully using a very low viscosity, high penetration GCP primer such as SILCOR Primer BS, only.

Metals

Remove all dirt, dust, oil, grease, corrosion and oxides from steel, aluminium, zinc/galvanising, copper, stainless steel etc. and roughen surface by abrasion or garnet blasting to SA 2.5 near white metal. Solvent wipe with clean xylene or methyl ethyl ketone (MEK) on a clean, lint free cloth. Prime surface within 30 minutes to minimize surface oxidation.

Plastics

Remove all dirt, dust, oil, grease and other contaminants.

For PVC, epoxy, polyester and ABS, solvent wipe with MEK solvent immediately prior to priming.

For difficult to bond plastics such as HDPE or PP, consult the GCP Technical Department before proceeding.

Aerated Autoclaved Concrete (AAC)

Surface must be high-strength rendered to seal and provide a strong, smooth finish. Allow render to dry to a moisture content below the maximum allowable for the GCP primer being used (see relevant primer PDS).

Detailing

External Above Ground Areas

- Detail according to NCC and AS 4654.2-2012 requirements, by installing minimum 15mm x 15mm bond breaker fillets of SILCOR LM PU Sealant low modulus polyurethane sealant to all internal corners and around penetrations. Detail and seal drainage outlets etc.
- Allow sealant to cure a minimum 12 hours

Expansion Joints

- Consult your local GCP representative for further information

Chased Non-Moving Construction Joints & Shrinkage Cracks

- Install bond breaker tape to base of primed square cut chases. Gun SILCOR LM PU Sealant to chase and tool to a smooth concave finish
- Allow sealant to cure a minimum 12 hours

CFC & Cement Composite Sheet Joints

- Ensure sheet joints are detailed per the manufacturer's directions

Internal Wet Areas

- Detail according to NCC and AS 3740-2021 requirements, by installing minimum 12mm x 12mm bond breaker fillets of SILCOR[®] LM PU Sealant to all internal corners. Detail and seal penetrations, drainage outlets etc.
- Allow sealant to cure a minimum 12 hours

Priming

General

- Prime all substrates with an appropriate GCP primer prior to applying SILCOR 580 membrane
- Application to porous substrates while substrate temperature is increasing may result in substrate outgassing and pin-hole formation in primer, leading to pin-hole formation in the membrane. This can be reduced or prevented by priming substrates when the substrate temperature is stable or falling
- The applicator must ensure primed substrate is pin-hole free prior to membrane application
- Adjust application procedures and schedule to suit local conditions
- Membranes must be applied to the primed surface within the primer recoat window. Consult the relevant primer PDS for further details. If recoat time of primer is likely to be exceeded, broadcast the freshly applied primer with clean, kiln dried, sharp quartz sand of 0.5 to 1.0mm diameter to 120% coverage (to refusal). Allow primer to cure completely and remove excess loose sand by vacuuming. Membrane may be applied to the sand blinded surface up to 14 days after laying, provided the surface remains clean, dry and free of all contamination.

Primer Selection – Below 5.0% Moisture Content

- Prime substrates using SILCOR® Primer BS or EPOCOTE™ F100W Clear
- For highly porous, damaged or old concrete and masonry, prime with EPOCOTE F100W Grey
- For greatest penetration and adhesion to CCS flooring substrates (Scyon Secura, CSR Cemintel etc), SILCOR Primer BS is recommended
- For metals, PVC, ABS and other non-porous substrates, use EPOCOTE F100W Clear or SILCOR Primer BS
- Coverage rate is dependent on surface porosity and may require two or more applications
- Consult the relevant primer PDS for further application information and application rate
- For difficult to bond metals such as stainless steel, copper and aluminium, prepare, clean, then wipe on Dow Chemical DOWSIL 1200 OS Primer per the manufacturer's directions, then apply membrane directly

Primer Selection – 5.0% to 6.9% Moisture Content

- Prime prepared concrete and masonry substrates using only EPOCOTE F100W Clear or allow substrates to dry <5.0%. Note 6.9% is the upper limit for testing surface moisture content using commercially available test equipment calibrated for concrete testing.

Membrane Application

General

Ensure the following parameters are met before and during membrane application and cure:

PARAMETER	LIMITS
Substrate Temperature	+5 °C to +35 °C (with temperature stable or falling)
Ambient Temperature	+5 °C to +35 °C
Relative Humidity	35% to 85%
Dew Point	Minimum 3 °C below substrate temperature

Condition

Clean, dry and free from condensation, contaminants, stones, leaves, debris etc.

Application Equipment

SILCOR 580 membrane is best applied in one coat to the required WFT / DFT using notched trowel, notched squeegee or pin rake. Typically, allowing for notch drag, a 5.0mm notch size gives 1.5mm cured membrane DFT.

The product may also be applied by two cross directional applications by 10-14mm nap, non-shedding roller or brush.

Material Pre-Mixing

- SILCOR 580 is supplied as a two-pail kit; 1 x 18kg pail of Polyol Component (grey coloured liquid) plus; 1 x 18kg pail of Iso Component (clear pale yellow coloured liquid).
- The Polyol Component must be mixed thoroughly before use using a minimum 650W, variable speed drill (maximum 600 RPM) fitted with a clean paddle or "Jiffy" type mixer. Avoid entraining air into the product during mixing. Mix until colour is homogeneous, ensuring bottom and sides of the pail are fully mixed. Clean the mixer thoroughly after use with acetone or xylene solvent.
- The Iso Component does not require mixing before use.

Membrane Mixing

- Into a clean, dry, polyethylene or polypropylene mixing container, weight out the required amount of SILCOR 580 polyol component and iso component. Ensure the correct 1:1 (by weight) mix ratio is used. Do not measure out components by volume.
- Mix components together thoroughly using a high torque, low (variable) speed electric stirrer fitted with a clean, dry, paddle, spiral or "Jiffy" impeller. Stirrer speed must be adjusted so that thorough mixing occurs without entraining air bubbles into the mix.
- Mix for 3 to 5 minutes, ensuring full mixing occurs at sides and base of mixing container.
- Pour the mixed membrane into a second, clean, dry mixing container and re-mix for 1 to 2 minutes.

Applied Membrane Thickness Control

Apply membrane at or above the minimum required thickness, as detailed in the GCP Project Specification. Product must be installed at the correct and specified Dry Film Thickness (DFT). Consult your GCP Specification for the project or contact your representative for further details.

To ensure correct DFT is installed, test applied thickness during application using a clean, accurate Wet Film Thickness (WFT) gauge and adjust applied thickness of liquid membrane accordingly. Test WFT regularly, typically every 2m² (0.5m² to 1m² for small areas).

Horizontal, Vertical or Sloping Application

SILCOR 580 is suitable for horizontal set to falls applications. Note this product is semi self-levelling and will run when applied to vertical or ramped surfaces.

Applied Membrane Appearance

SILCOR 580 is designed to self-level. Application by roller or brush typically produces a smooth surface finish suitable for use in direct foot traffic areas (with SILCOR Top Coat as UV protection), where a smooth, aesthetically pleasing finish is required.

Movement Areas

At potential movement areas such as detailed and sealed expansion joints, construction joints and active cracks, install a bond breaker tape centred over the joint or crack. Bond breaker tape should be a minimum 90mm wide for expansion joints, minimum 45mm wide for construction joints and minimum 20mm wide for moving cracks.

Bond breaker tape must be flexible, polyethylene faced, single sided adhesive and resistant to primer, membrane, xylene and heat (90°C or greater). Tape must be less than 0.5mm thickness. Adhesive must be natural rubber or butyl rubber based. Suitable tapes are 3M 8979 or Tesa 58663.

Reinforcing

Full reinforcing of SILCOR 580 is not typically recommended, provided the membrane is applied to the minimum specified WFT/DFT. Where high movement is expected at junctions and joints and use of a bond breaker tape is not possible, a reinforcing strip may be employed, as detailed in Membrane Detailing below.

Membrane Detailing

- To the SILCOR LM PU Sealant detailed internal corners, chamfered external corners, construction joints, penetrations, drainage outlets and cracks, apply SILCOR 580 or SILCOR 575 HB as a minimum 150mm wide application centred over the sealant fillet/corner/bond breaker tape. Apply to provide a minimum 1.0mm DFT (1.1mm WFT) and allow to cure to minimum recoat time.
- To the SILCOR LM PU Sealant detailed expansion joints, apply SILCOR 580 or SILCOR 575 HB as a minimum 200mm wide application centred over the joint bond breaker tape. Apply to provide a minimum 1.0mm DFT (1.1mm WFT) and allow to cure to minimum recoat time.

Where reinforced membrane is required in high movement areas, without bond breaker tape, the following process is recommended to ensure correct membrane function:

- Apply SILCOR 580 or SILCOR 575 HB to a minimum 1.0mm DFT (1.1mm WFT) as detailed above and allow to cure to minimum recoat time.
- 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.
- While wet, apply additional membrane to fully cover the reinforcing fabric with a minimum 1.0mm WFT of membrane. Allow to cure to minimum recoat time.
- Use only GCP's Reinforcing PE Fabric as reinforcing. Do not use fibreglass chopped strand mat or other reinforcing materials.
- Reinforce using the step wise method shown in i) to iii) above. Do not use a one-step wet-on-wet reinforcing method.

Application of Continuous Membrane

- Within the recoat window of the primer used, apply SILCOR 580 membrane to detailed and primed areas, at or above the required minimum thickness in one (or more) coat.
- Required minimum thickness is dependent on installation area, type of use of the area, topping or membrane protection being employed and product warranty period required and will be specified in the GCP Project Specification. Contact your local representative to obtain a GCP Waterproofing Specification for your project. Where not specified, a minimum DFT of 1.5mm must be employed for non-traffic / foot traffic areas and 3.0mm for heavy foot traffic / light vehicle traffic areas.
- Ensure good airflow in the application area for fastest membrane drying time
- Test WFT during application using a WFT gauge and adjust applied thickness accordingly.
- Continue membrane to turn-ups by a minimum 100mm above finished surface level, or as detailed in project specification or AS 4654.2-2012, whichever is greater.

Typical Membrane Cure & Recoat Times

AMBIENT OR SUBSTRATE TEMPERATURE (°C)	TACK FREE TIME (HRS)	MINIMUM RECOAT TIME (HRS)	MAXIMUM RECOAT TIME (HRS)	READY FOR FLOOD TESTING OR TILING (HRS)
35	2	5	30	8
30	3	10	33	12
23	4	15	36	15
15	8	16	60	20
10	15	20	80	24
5	24	24	100	48

Clean-up

Clean application equipment immediately using xylene solvent. Cured product must be removed mechanically.

Protection and Surfacing

SILCOR 580 must be permanently protected from damage by one of the following:

Top Coat to Exposed Foot Trafficable and Non-Trafficable Membrane and Turn-Ups

- Mix and apply SILCOR Top Coat 75 to all exposed membrane as a minimum two cross-directional coats at a minimum rate of 0.15kg/m²/coat. SILCOR Top Coat 75 contains an in-built slip resistance aggregate, making accurate measurement of applied film DFT or WFT difficult. Application rate of 0.15kg/m²/coat is approximately equal to a DFT of 83 micron/coat (165 micron for two coats) and a WFT of 135 micron/coat (270 micron for two coats)
- Consult the PDS for SILCOR Top Coat 75 for installation information

Top Coat to Exposed Heavy Foot Trafficable and Light Vehicle Trafficable Membrane

- Mix and apply a wear coat to the cured membrane, consisting of an additional coat of SILCOR 580 membrane to a 1.0mm WFT. Allow membrane to flow out fully then broadcast the uncured membrane with clean, kiln dried sharp quartz sand of 0.5 to 1.0mm diameter to 120% coverage (to refusal). Allow membrane to cure at least 24 hours and remove excess loose sand by vacuuming. Membrane must not be visible through the sand cover
- Mix and apply SILCOR Top Coat 80 to all exposed membrane as a minimum two cross-directional coats at a minimum rate of 0.20kg/m²/coat. SILCOR Top Coat 80 contains an in-built slip resistance aggregate, making accurate measurement of applied film DFT or WFT difficult. Application rate of 0.20kg/m²/coat is approximately equal to a DFT of 110 micron/coat (220 micron for two coats) and a WFT of 180 micron/coat (360 micron for two coats)
- Consult the PDS for SILCOR Top Coat 80 for installation information
- This process will provide a minimum P3/R10 slip resistance. For P4/R11 or P5/R12 ratings coarser aggregate and three coats of top coat at 0.2kg/m². Consult your GCP specification or GCP Work Method Statement for details

Top Coat to Semi-Exposed Membrane Under Pavers on Pods or Timber Decking

- Pods / jacks used should have a flat base with minimum footprint size of 150mm diameter to prevent point load damage to membrane.
- Where membrane will be covered by pavers on adjustable supports (pods) or by timber decking on framework, and the paver / timber gapping is limited to 6mm or less, no top coat protection of the membrane is required.

Unbonded Screeds and Topping Slabs

- Install PROTECTOBOARD™ or two layers of minimum 250 micron builder's plastic to the cured membrane as a slip sheet prior to installing screed or topping slab. Ensure all protection board/sheet laps are taped to seal.

Direct Stick Pavers, Tiles, Bonded Screed or Bonded Topping Slab

Membrane surface must be compatibilized before application of cementitious tile adhesives, bonded screed or topping slab as follows:

- Between 12 and 48 hours of final membrane application, lightly solvent wipe the membrane surface using isopropanol. Allow to dry, then apply a coat of SILCOR 580 or SILCOR 575 HB membrane at a rate of 0.95 kg/ m² (WFT=0.6mm). Broadcast the freshly applied membrane with clean, kiln dried, sharp quartz sand of 0.5 to 1.0mm diameter to 120% coverage (to refusal). Allow membrane to cure at least 24 hours and remove excess loose sand by vacuuming. Membrane must not be visible through the sand cover.
- Tiles may be applied using high quality polymer modified cementitious tile adhesives.
- Screeds and topping slabs should be polymer modified, or have a minimum 20 MPa compressive strength, to resist break-up in use.
- For heavy foot or vehicle trafficked bonded paving / topping slabs use only SILCOR 580 as the tie coat at a rate of 1.3 kg/ m² (WFT=1.0mm). Broadcast the freshly applied membrane with clean, kiln dried, sharp quartz sand of 1.0 to 2.0mm diameter to 120% coverage (to refusal). Allow membrane to cure at least 24 hours and remove excess loose sand by vacuuming. Membrane must not be visible through the sand cover.

Backfill

- Install PROTECTOBOARD or RAPID-DRAIN™ to membrane as protection and/or drainage prior to backfilling with graded fill or filling of landscaped areas with soil.
Where non-graded fill is to be used, install PROTECTOBOARD™ HS or high compressive strength drainage cell as protection.

Landscaping

- Install PROTECTOBOARD or RAPID-DRAIN membrane protection prior to backfilling with soil / planting media
- Install PROTECTOBOARD, RAPID-DRAIN, heavy-duty drainage cell or heavy-duty needle punched geotextile (minimum 500gsm) over the cured membrane as protection and/or drainage prior to soil loading.
- Where certified root resistance is specified, install a certified, 3rd party root barrier prior to backfilling with soil / planting media, or use SILCOR 780 HI-LP polyurea membrane.

Pebble Ballast

Install RAPID-DRAIN drainage cell over membrane to protect and ensure free drainage to falls prior to loading of pebble ballast. Ballast must be hand loaded with care to prevent damage to drainage cell or and membrane.

Insulation and Ballast

Install foam sheet insulation over RAPID-DRAIN to ensure free drainage to falls. Cover insulation with geofabric prior to loading of pebble ballast.

Maintenance

- Not typically required for non-exposed, covered membrane.
- For exposed top coated membrane areas, regular cleaning and inspection maintenance is required per the relevant GCP Operation and Maintenance manual for polyurethane membranes and top coats.

Product Warranties

- GCP will provide to the purchaser a product warranty for qualified individual projects on request.
- Contractors recognised by GCP as trained and experienced in the application of GCP products will provide installation warranties for equivalent time periods.
- GCP Product Warranty periods offered and minimum applied DFT required for that warranty period are dependent on project details and complexity. Contact your local GCP representative for specific requirements and a GCP Specification, before commencing waterproofing installation on your project.

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