

SILCOR[®] Primer BS 117

Primer for SILCOR[®] Protective Coatings and Membranes

(replaces CHEMSPRAY[™] 117 Clear Primer)

Product Description

A one-part, fast curing, solvent based, polyurea modified penetrating primer for dry concrete, masonry, metals and other substrates. SILCOR[®] Primer BS 117 is designed specifically as a primer for SILCOR[®] polyurea and hybrid polyurea coatings.

SILCOR Primer BS 117 may also be used as a primer for SILCOR[®] polyurethane membranes.

Product Uses

SILCOR Primer BS 117 provides high penetration to prepared concrete and masonry substrates, providing high adhesive strength between these surfaces and SILCOR polyurea, hybrid polyurea and polyurethane membranes and protective coatings.

As a primer for GCP membranes in exposed, non-exposed and permanent immersion areas such as roof decks, landscaped decks and planters, podiums, plant rooms, car park decks and ramps, water tanks and areas of high vehicle or foot traffic.

It penetrates deeply into prepared, porous substrates and is effective at filling and sealing surface porosity in concrete, reducing the occurrence of outgassing and membrane pinholes.

Advantages and Features

- Simple application by brush, roller or airless spray
- 1-part – no mixing required
- Fast cure and recoat time allowing same day priming and membrane application
- Low viscosity and high substrate penetration
- Promotes high adhesion between substrate and membrane
- Cured primer is water resistant and protects the structure during rain interruptions
- Assists with reducing concrete / masonry outgassing

System Components

Primer

- SILCOR Primer BS 117

Ancillary Components

- SILCOR[®] LM PU Sealant – 1-part, polyurethane sealant for detailing and filleting

Typical Properties

PROPERTY	VALUE	TEST METHOD
Appearance	Clear, brown liquid	
Viscosity	60 – 100 mPa.s (25 °C)	ASTM D2196
Specific Gravity	0.95 g/ml (25 °C)	ASTM D1475
% Solids (v/v)	58.2 %	ASTM D2369
VOC Content	418 g/litre	ASTM D2369
Pull-Off Adhesion Strength		
Concrete (Dry)	2.45 MPa (concrete failure occurred)	ASTM D7234
Steel (90µm blast profile)	3.43 MPa (primer adhesion failure occurred)	ASTM D4541

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

Limitations of Use

- Information contained in this document is general and does not cover all possible application scenarios or imply product suitability for an application. Please contact your local GCP representative for further information and to discuss your specific requirements prior to proceeding with installation
- This PDS does not constitute a Product Specification, Work Method Statement or Scope of Works
- SILCOR Primer BS 117 is not suitable for priming damp or green concrete
- SILCOR Primer BS 117 is not suitable for use as a primer for SILCOR® water based acrylic, water based polyurethane modified acrylic, or cementitious waterproofing membranes.
- Do not dilute with solvent or any other material
- Do not add water to the product – may result in generation of carbon dioxide gas pressure

Safety and Handling

- Users must 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
- SDSs can be obtained by contacting your local GCP representative or office

Storage and Shelf Life

- Observe the shelf life and use on a first in, first out basis
- Store at temperatures between 15 °C and 25 °C
- Store undercover in dry, protected conditions, out of direct sunlight, rain and weather
- Do not store near naked flames, sparks or foodstuffs
- Stored at these conditions, in unopened packaging, shelf life is 12 months from date of manufacture

Supply

SILCOR Primer BS 117 18kg pail

Installation

The following information is general only. For installation information specific to your project contact your local GCP representative or the GCP Australia website gcpat.com.au

Technical Support, Details and Installation Information

- The most up to date typical detail drawings, Work Method Statements (WMS) and Inspection Test Plans (ITP) are available from your local GCP representative.
- Only refer to current versions of documents.
- Documents not provided recently by your local GCP representative or those found on websites other than gcpat.com.au may be out of date, obsolete or in error and must not be used.

Environmental Conditions

The following conditions must be achieved prior to and during product application and cure.

PROPERTY	VALUE
Ambient Temperature	10°C to 40°C
Substrate Temperature	10°C to 40°C
Relative Humidity	85% maximum
Dew Point	At least 3°C below substrate temperature
Approximate Wind Speed	15 knots maximum (to prevent windblown debris)

Substrate Preparation

- A successful waterproofing installation is dependent on the thoroughness of substrate preparation.
- See project specific Work Method Statement (WMS) for detailed requirements.
- Concrete must be cured 28 days or have a moisture content less than 5.0% prior to primer application. Measure moisture content using a moisture meter calibrated for testing concrete.
- Generally, remove all contaminants that might limit primer penetration or adhesion, such as dust, laitance, sealers, curing compounds, form release agents, paint, grease, oils etc.
- Remove contaminants by appropriate means including scrapping, high pressure water blasting (4000 psi / 275 bar with a Rotor-Jet head), diamond grinding or captive abrasive blasting. After preparation, remove all traces of dust and debris from the surface by thorough vacuuming or pressure washing (recommended) to drainage
- Allow substrate to dry to less than 5.0% moisture content

Primer Application

Application Equipment

The following equipment is typically required for SILCOR Primer BS 117 installation.

EQUIPMENT

Roller and roller tray

Quality, non-shedding roller sleeves

Mixing

- This product typically does not require mixing before use

Primer Application (General)

- SILCOR Primer BS 117 is a penetrating primer - measurement of applied WFT or DFT is not possible
- Highly porous substrates may require two or more coats
- Apply one coat of SILCOR Primer BS 117 by non-shedding 8-12mm roller at a minimum rate of 0.30kg/m²/coat, with min. 50% overlaps between roller passes
- Examine the primed surface for concrete outgassing, evident by bubbles forming and popping in the wet primer. If bubbles are seen, concrete was poorly vibrated and finished when placed, and has very high porosity
- Where outgassing pinholes are present, allow primer to cure tack free. Within the primer recoat time (see table below), re-prime using the same primer and application rate, at a cross direction to the previous coat
- Reduce the effects of outgassing concrete by priming while concrete temperature is decreasing. Decreasing temperature draws primer into porosity permanently sealing it off, preventing pin hole or bubble formation in the membrane
- Allow primer to cure tack free. Within 6 hours of priming, re-prime if required or commence membrane application. Delay greater than the primer recoat time requires full primer removal to bare concrete and repriming
- When correctly primed, the dry primed surface will have an even semi-gloss to gloss appearance, without dry areas or ponding of primer
- Do not add solvent to the primer

Typical Product Cure and Recoat Times

PROPERTY	VALUE
Pot Life (25 °C, 65% RH)	Not applicable
Tack Free Time	
@ 10 °C substrate temperature, 60% RH	4 hours
@ 15 °C substrate temperature, 60% RH	2 hours
@ 20 °C substrate temperature, 60% RH	1 hour
@ 25 °C substrate temperature, 60% RH	40 minutes

@ 30 °C substrate temperature, 60% RH	25 minutes
@ 35 °C substrate temperature, 60% RH	20 minutes
@ 40 °C substrate temperature, 60% RH	15 minutes
Recoat Time	
@ 10 °C substrate temperature, 60% RH	4 hours to 12 hours
@ 15 °C substrate temperature, 60% RH	2 hours to 10 hours
@ 20 °C substrate temperature, 60% RH	1 hour to 8 hours
@ 25 °C substrate temperature, 60% RH	40 minutes to 6 hours
@ 30 °C substrate temperature, 60% RH	25 minutes to 4 hours
@ 35 °C substrate temperature, 60% RH	20 minutes to 3.5 hours
@ 40 °C substrate temperature, 60% RH	15 minutes to 3 hours
Rain Resistant Time	
@ 10 °C substrate temperature, 60% RH	4 hours
@ 15 °C substrate temperature, 60% RH	2 hours
@ 20 °C substrate temperature, 60% RH	1 hour
@ 25 °C substrate temperature, 60% RH	40 minutes
@ 30 °C substrate temperature, 60% RH	25 minutes
@ 35 °C substrate temperature, 60% RH	20 minutes
@ 40 °C substrate temperature, 60% RH	15 minutes

Maintenance

Not applicable for a primer. Primer must receive membrane within recoat time and not remain exposed beyond this time.

Clean-up

- Mixing and application equipment should be cleaned immediately with xylene solvent.
- All solvents should be used only in accordance with the manufacturer's recommendations
- Review solvent Safety Data Sheet (SDS) before use.

Coverage

- SILCOR Primer BS 117 applied in one coat at 0.30kg/m² will yield approximately 60m²/18kg pail
- Coverage will vary depending on the profile of the surface and product wastage
- High concrete porosity may require more than two or more coats to correctly prime and seal

Product Warranty

GCP and contractors recognised by GCP as experienced in the application of GCP products will provide warranties for individual projects. Warranty periods offered are dependent on project details, complexity and use. Requests for long warranty periods typically require increase product application rates or build-up to ensure longevity. Contact your local GCP representative in the early stages of your project to obtain a project specific GCP Specification detailing required product build-up and application rates.

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Last Updated: 2025-05-13

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