PROCOR® Above-Grade

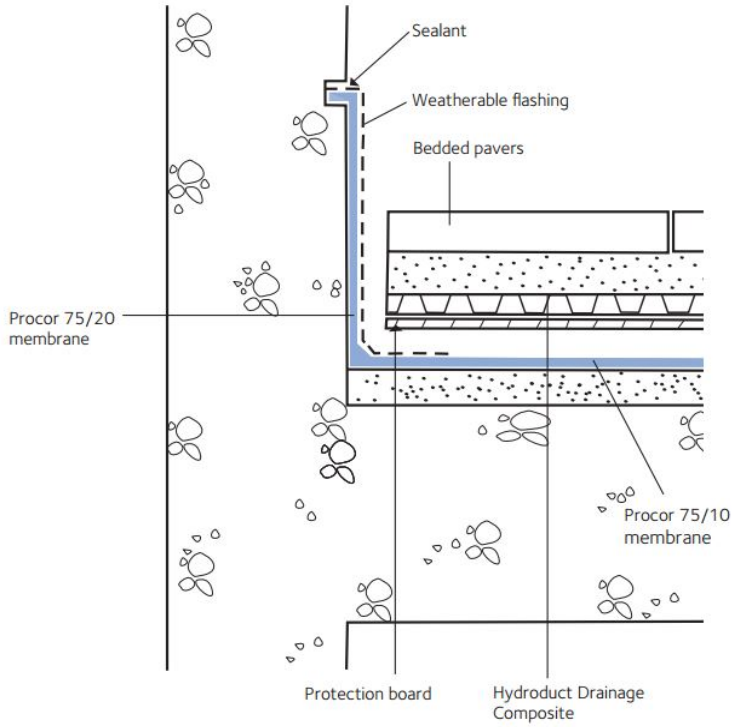
Elevated decks, green roofs and plaza fluid applied waterproofing

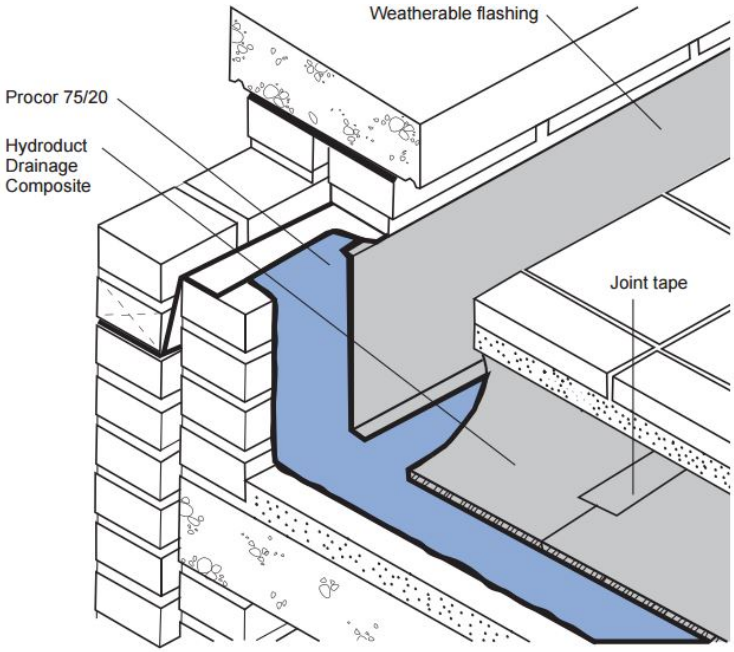
Product Description

PROCOR®is a two component, synthetic rubber, cold vulcanized fluid applied waterproofing membrane. PROCOR®is formulated for application to external surfaces of structural concrete, masonry and other substrates needing waterproofing. It cures to form a resilient, monolithic, fully bonded elastomeric sheet.

PROCOR®protects elevated decks, plazas and inverted roofs against water and water vapor penetration.

Architectural and Industrial Maintenance Regulations limit the Volatile Organic Compound (VOC) content in products classified as Architectural Coatings. The VOC content of PROCOR®waterproofing membranes is less than 75 g/L. Refer to Technical Letters at gcpat.com for the most current list of allowable limits.





Product Advantages

- Fully bonded - water cannot track beneath the membrane
- Elastomeric - accommodates minor structural movements and will bridge concrete shrinkage cracks
- Asphalt free formulation - does not become brittle with age and remains flexible to -22 ºF (-30 ºC)
- Chemical cure - 100% solids no loss of thickness, wet thickness equals dry thickness
- Seamless - continuous waterproofing integrity with easy detailing
- Primerless - applied to the substrate with minimal surface preparation
- Damp surface tolerant - can be applied over freshly set green concrete as soon as concrete is structurally sound
- Solvent free - no volatile organic solvents
- Cold applied - eliminates open flame fire hazards during application
- Quick and easy application - by airless spray or trowel
- Low temperature application - wide temperature application window, spray applied down to 20 ºF (-7 ºC)
- Versatile - easy to use at drains, pipe penetrations, inside and outside corners, etc.
- ASTM C836 - meets or exceeds all physical performance criteria

Principal Applications

New and remedial waterproofing of elevated concrete decks including:

- Concrete and masonry basements
- Split slabs and wet rooms
- Retaining walls
- Parking/plaza decks
- Podiums and terraces
- Planters and green roofs

System Options and Accessories

- PROCOR® 75 Spray Grade - for horizontal and vertical applications
- PROCOR® 10 Pourable Grade - for horizontal applications
- PROCOR® 20 Trowel Grade - for vertical applications and details
- PROCOR® Deck System 3R - comprises 2 layers of PROCOR® at 3 mm (120 mil) total thickness with an embedded layer of PROCOR® reinforcing mesh to provide ultra strength and thickness control
- HYDRODUCT® Drainage Composites - high compressive strength, high flow drainage sheets
- BITUTHENE® Liquid Membrane - for detailing at pipe entries, etc.
- PREPRUFE® Tape - for detailing transitions between other GCP waterproofing products and difficult to bond to materials
- PROCOR® Concrete Sealer - to control the effects of vapor drive in concrete and masonry surfaces that could create pin holes and blisters

Installation

Safety

All users must read and understand product label and SDS (Safety Data Sheet) before use. Carefully read detailed precaution statements on the product labels and SDS before use. SDSs can be obtained from our web site at gcpat.com or by calling our toll free number 866-333-3SBM (3726) for technical assistance.

Application

PROCOR®fluid applied waterproofing membranes are typically applied at a minimum thickness of 60 mil (1.5 mm). PROCOR®is supplied in three user friendly grades. PROCOR®10 and 20 are designed for hand application. PROCOR® 75 is designed for application through commercially available airless two-component spray equipment. GCP has a network of trained PROCOR®Specialist Spray Applicators. Contact GCP for details of local applicators, application techniques and spray systems.

Decks

All decks must be structurally sound to provide a clean, firm and smooth surface for membrane application. GCP recommends the following:

- No excessive deflection or movement of the deck
- Deck shall provide for support of the maximum anticipated dead and live loads, and for the maximum expected expansion and contraction of the roof system structure
- All projections, penetrations and openings in the deck shall be completed before PROCOR® application begins
- Joints in pre-cast/pre-stressed concrete decks are to be grouted so the top surface is level and smooth before membrane application

Slope For Drainage

A minimum slope to drain of 1/8 in./ft (11 mm/m) shall be used on all concrete decks. In horizontal applications where a minimum slope of 1/8 in./ft (11 mm/m) cannot be achieved, a 2-coat application of PROCOR®membrane is recommended to achieve the total thickness. Slope should be achieved with a monolithic structural slab and not with a separate concrete fill layer. Technical recommendations contained in ASTM C898, *Standard Guide for Use of High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane With Separate Wearing Course*, shall be observed.

Surface Preparation

All concrete surfaces must be wood float or form finish and free from frost, dirt, grease, oil or other contaminants. All irregularities and voids that may not be filled or bridged by the membrane during application must be filled using a lean grout mix, parging or pretreatment with PROCOR®membrane. Particular attention must be paid to all bug holes, poorly consolidated concrete or other conditions that result in surface irregularities greater than 1/4 in. (6 mm) across and/or 1/8 in. (3 mm) in depth. Concrete form lines and any high spots greater than 1/8 in. (3 mm) in height should be removed. All substrates must be wire-brushed, swept with a stiff broom or blown off with low pressure air to remove dirt, dust and loose stones.

Surfaces with excessive laitance may require shot blasting or pressure washing to provide a dense smooth surface, free from contaminants.

Under certain conditions it may be necessary to apply PROCOR®Concrete Sealer to minimize the formation of pin holes and blisters. Contact GCP Applied Technologies if in doubt about the suitability of the substrate.

Application to freshly set Green Concrete or Damp Surfaces

PROCOR®may be applied to freshly set green concrete as soon as the concrete has attained sufficient strength to bear traffic loads without damage. For wall applications PROCOR®may be applied 24 hours after the concrete forms have been removed. PROCOR®may be applied to surfaces that are damp to the touch. All visible water must be removed prior to application. On green or damp concrete substrate applications, direct sunlight may cause the surface temperature to rise rapidly, resulting in blisters and pinholes. Under these conditions apply PROCOR®Concrete Sealer or a scratch coat of PROCOR®before applying PROCOR®membrane.

Do not apply PROCOR®waterproofing membranes in wet, rainy weather. Once curing has begun (usually less than one hour) PROCOR®membranes will not be affected by light rain showers.

Application Temperature

Hand Application - PROCOR®10 and 20 membranes may be applied at ambient and substrate temperatures 40°F (4°C) and above. Do not apply the material if there is condensation or frost on the substrate or if the ambient temperature will fall below 40°F (4°C) within one hour of application completion.

Spray Application - The minimum temperature for spray application is 20°F (-7°C). Do not apply PROCOR®if there is condensation or frost on the substrate. Refer to Technical Bulletin, *Spraying* PROCOR® *75 at Low Temperatures*, for details on cold weather spraying.

Detailing and Pretreatment of critical areas

All detailing shall be completed prior to applying the full coverage of PROCOR®membrane. The continuous field application shall completely cover detail areas to provide double thickness coverage. GCP has published application procedures and drawings for specific constructions such as inside and outside corners, drains and other penetrations, non-moving joints and hairline cracks, etc. For the most installation information, refer to the published PROCOR® *Standard Application Procedures* and PROCOR® *Standard Detail Drawings* available from your GCP representative.

Hand Application

Use PROCOR®10 for horizontal hand applications. Use PROCOR®20 for vertical applications. Carefully follow the mixing instructions on the container. PROCOR®10 is best applied using the "pour and spread" method. PROCOR®20 is best removed from the container and troweled onto vertical surface using a hand trowel.

Application sequence should be planned so that there is no need to walk on the freshly applied material.

PROCOR®10 and 20 will cure in 24 to 48 hours, obtaining strength and losing its surface tack. The membrane can typically accept light foot traffic in 24 to 48 hours.

Spray Application

PROCOR®75 membrane is formulated for spray application to both horizontal and vertical surfaces. Contact GCP Applied Technologies for details of spray equipment and trained, experienced applicators.

Thickness Control

Application thickness of PROCOR®10, 20, and 75 must be controlled by regularly spot checking the thickness with a wet film thickness gauge during application. Trowel ridges on the PROCOR®membrane are acceptable as long as the minimum thickness is maintained.

Mixing and Pot Life

PROCOR® 10 or 20 Hand Application

Follow mixing instructions printed on the container. Note that the pot life of PROCOR®10 and PROCOR®20 is maximized by slow mixing, avoiding high sheer conditions. Once mixed, the pot life is typically 30 to 60 minutes.

PROCOR® 75 Spray Application

PROCOR®75 is applied through specialized two component pumps and spray nozzles. Parts A and B are mixed in the nozzle at the time of application. There is no "pot life" associated with Part A or Part B prior to mixing. Prior to beginning spray operations, Part A should be thoroughly mixed to bring any settled material into solution.

Coverage Rates

PROCOR®fluid applied waterproofing membrane is typically applied at a minimum thickness of 60 mil (1.5 mm). The theoretical coverage rate (not including waste) at a 60 mil (1.5 mm) thickness is about 25 ft^2/gal (0.6 m^2/L). Coverage rates will be reduced over rough and uneven substrates.

Protection, Drainage, and Insulation boards and systems

Protect in-place PROCOR®membranes to avoid damage from other trades, construction materials and backfill. Protection products may be installed after the membrane has started to cure and attained a soft sticky rubber consistency, usually within a few hours or less from the time of application.

For future repair or maintenance on deck installations it may be advantageous to be able to remove the protection board and access the membrane surface without damaging the in-place product. Therefore, drainage, protection and insulation products should not be bonded to PROCOR®membrane on horizontal decks, refer to PROCOR®Application Procedures for details.

To maximize the efficiency of PROCOR®deck waterproofing systems, use GCP HYDRODUCT®drainage composites to protect the membrane.

On horizontal applications, use HYDRODUCT®660 Drainage Composite - 1/8 in. (3 mm) or 1/4 in. (6 mm) asphalt hardboard or extruded polystyrene insulation board may also be used.

On vertical applications, use HYDRODUCT®220 Drainage Composite. Other products such as 1/4 in. (6 mm) asphalt impregnated board or 1 in. (25 mm) extruded polystyrene may also be used.

Of the above products, only HYDRODUCT®provides positive drainage to the system.

Backfill

Allow PROCOR®waterproofing membrane to cure at least 48 hours prior to placement of overburden to avoid displacement of the membrane. Use care during the overburden placement operation to avoid movement of the protection board or damage to the waterproofing system.

Flood Testing

Where flood testing is desired, refer to ASTM Standard D5957-98 or most current version with the following modifications. Allow the PROCOR®membrane a minimum of 48 hours cure before beginning flood testing. Test to a minimum water depth of 2 in. (50 mm) during and after the flood test, visually look for any sign of leakage in the system. Mark any leaks and repair when the membrane is dry. Low voltage electronic leak detection techniques may be used to supplement visual observation and flood testing.

Repair Procedures

In-place PROCOR®can be repaired with PROCOR®10, 20 or 75. When repair of the membrane is necessary it is important to start with a clean, well bonded, dust free surface. Follow published GCP *PROCOR®Standard Application Procedures*.

Cleaning

Many tools and equipment are often effectively cleaned by allowing the material to cure and simply peeling it off the next day.

Storage and Handling Information

PROCOR®waterproofing membranes (Part A and Part B) should be stored under cover in original sealed containers above 40°F and below 100 ºF (4°C to 38 ºC). Do not allow Part B to freeze. If freezing of Part B occurs, discard the material. The shelf life is 9 months in unopened containers.

Limitations

PROCOR®membranes should not be used in areas where they will be permanently exposed to weather or traffic. Maximum exposure period to sunlight is 30 days. PROCOR®membranes should not be used in negative side waterproofing applications.

Specification Clauses

Manufacturer's Guide Specifications can be obtained at gcpat. com or by calling your local GCP representative.

Packaging

PRODUCT	UNIT OF SALE	APPROXIMATE COVERAGE
PROCOR® 75	75 gallon (284 L) kit	1875 ft^2 (175 m^2) ki
PROCOR® 10	5.3 gallon (20 L) k	132 ft^2 (12.3 m^2) kit
PROCOR® 20	1.9 gallon (7.2 L) kit	47 ft^2 (4.4 m^2) kit
HYDRODUCT® 660	One 4 ft x 50 ft (1.22 m x 152 m) roll	200 ft^2 (18.6 m^2) roll
HYDRODUCT® 660	One 4 ft x 50 ft (1.22 m x 152 m) roll	200 ft^2 (18.6 m^2) roll

Footnote: Nominal coverage PROCOR ®75/10/20 at 60 mil (1.5 mm) based on 25 sf/gal for smooth concrete. Coverage will vary with substrate condition.

Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Resistance to hydrostatic head over ⅛ in. (3.2 mm) post formed crack	65 ft (20 m)	ASTM D5385
Peel adhesion to concrete	5 lbs/in. (880 N/m)	ASTM D903 modified[1]
Elongation	500%	ASTM D412
Pliability, 180° bend over 1 in. (25 mm) mandrel at -23°F (-30°C)	Unaffected	ASTM D1970
Low temperature flexibility and crack bridging 1/8 in. (3.2 mm) crack cycling at -15°F (-26°C)	Pass	ASTM C836
Extensibility over 1/4 in. (6.4 mm) crack after heat aging	Pass	ASTM C836

Footnote:

1. PROCOR ®waterproofing membrane is applied to concrete and allowed to cure. Peel adhesion of the membrane is measured at a rate of 2 in. (50 mm) per minute with a peel angle of 90° at room temperature.

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA

GCP Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6

Last Updated: 2022-05-06