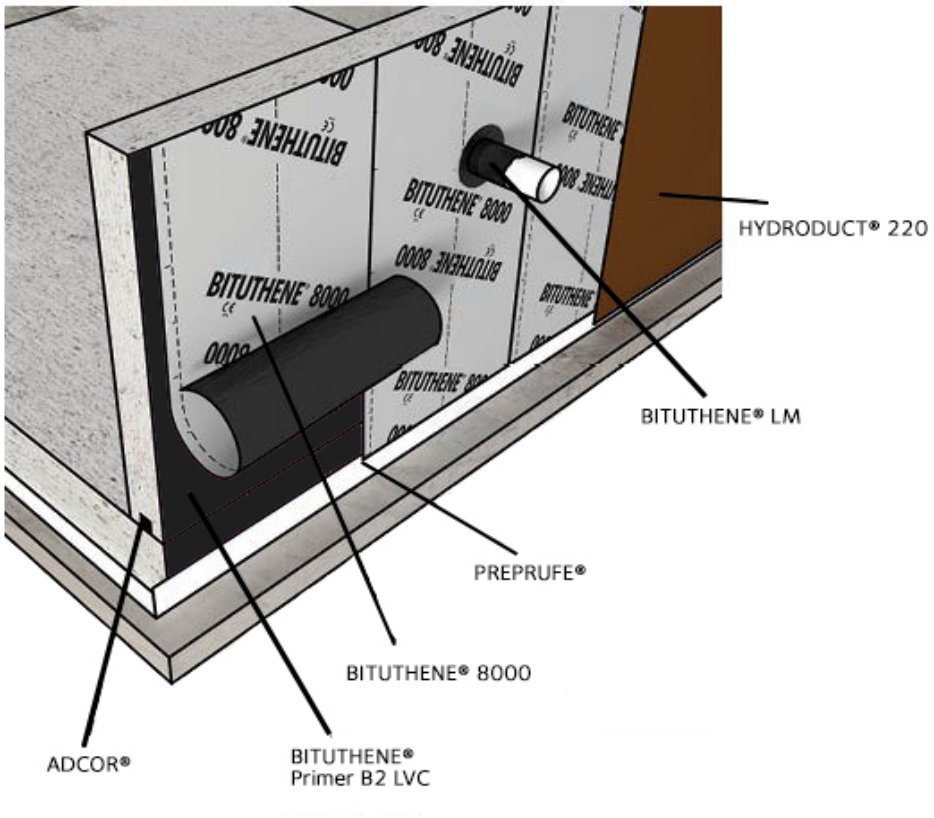
BITUTHENE® 8000 Data Sheet

Advanced, self-adhesive membrane with unique HDPE composite film that provides superior physical properties for water, vapor and gas proof application in sub-structures.

Product Description

GCP BITUTHENE® 8000 membrane combines the proven BITUTHENE® adhesive technology with a unique composite, grey-colored carrier film to provide superior performance, easier installation and protection from methane gas.



Drawings are for illustration purposes only.
Please refer to gcpat.comfor specific application details.

Advantages

- Water and vapor proof - protects basements from ground water and gasses
- Methane Barrier - BITUTHENE® 8000 membrane serves as an effective methane barrier, fully compliant with the Los Angeles Research Report (LARR) standards.
- Gas resistance - BITUTHENE® 8000 membrane will restrict the ingress of Radon, Benzene, Toluene, Gasoline & other VOCs Trichloroethylene & Tetrachloroethylene (TCE/PCE) into buildings from landfill and naturally occurring sources, satisfying the performance criteria for a gas-resistant membrane.
- Chemically resistant - provides effective external protection against most aggressive soils, contaminated ground water and hydrocarbons in suspension
- Superior performance - 230 ft (70 m) hydrostatic pressure resistance with ultra-low moisture transmission rate
- Durability –
  - Unique composite film - engineered for strength, flexibility, gas barrier and a smooth finish
  - This unique composite HDPE film makes BITUTHENE® 8000 extremely tough & durable.
- Quality Assurance –
  - Accidental damage which would otherwise be missed, is made more visible by the black compound showing through the light grey film.
  - Printed overlap line ensures minimum laps.
- Wide application "window" reduces delays - application temperature from 25ºF(-4ºC) and damp surface tolerant using BITUTHENE® Adhesive Primer B2 LVC
- System Compatibility - Can be combined with PREPRUFE® pre-applied membranes, BITUTHENE® Liquid Membrane, and HYDRODUCT® drainage composites and accessories for waterproofing system solutions

This document is applicable to projects and applications in the US only. Please refer to the local website for further information at gcpat.com, or contact your GCP representative.

Application

- Below-Grade: Foundation Walls (Concrete & CMU), Retaining Walls, Basements Decks & Planters: Plaza Decks, Split-Slab Decks, Planter Boxes
- Methane Barrier: LARR complying Methane barrier for foundation walls and under horizontal concrete slabs on grade. When installing under slab on grade, do not remove siliconized release paper. All overlap must be minimum 3".

Approval

- 'LARR' – Research Report 26224
- LADBS AC-L137 test report available upon request

System Components

Ancillary Components

- BITUTHENE® Adhesive Primer B2 LVC - low VOC, solvent-based primer to apply BITUTHENE® 8000 membrane to concrete surfaces
- BITUTHENE® liquid membrane – two component, elastomeric, liquid applied detailing compound
- BITUTHENE® mastic – rubberized asphalt-based mastic
- PREPRUFE® Detail Tape – double-sided, self-adhesive tape
- HYDRODUCT® drainage sheet - high impact and creep resistant geo-composite and protection layer

Limitations of Use

- Approved uses only include those uses specifically detailed in this product data sheet and other current product data sheets that can be found at gcpat.com.
- BITUTHENE® membranes are not intended for any other use. Contact GCP Technical Services where any other use is anticipated or intended.
- BITUTHENE® membranes are designed where in-service temperatures will not exceed 130°F (54°C).
- Do not use BITUTHENE® mastic to terminate BITUTHENE® membranes to PREPRUFE® pre-applied waterproofing systems. Terminations to PREPRUFE® membranes should only be done with BITUTHENE® liquid membrane.
- Do not apply BITUTHENE® Membranes over insulation or lightweight insulating concrete

SPECIAL NOTE: When this information is printed from the gcpat.com website, a footer appearing on this document will restrict its applicability to the United States. Note that the information and references in this document is hereby expanded and applied to North, Central and South America.

Safety and Handling Information

Users must read and understand the product label and Safety Data Sheets (SDS's) for each system component before use. All users should acquaint themselves with this information prior to working with the material. Carefully read detailed precaution statements on the product labels and SDS's before use. The most current SDS's can be obtained from the GCP web site at gcpat.com.

Storage

- All BITUTHENE® Membranes should be stored upright
- Observe one-year shelf life and use on a first in, first out basis.
- Store in dry conditions between 40°F (4.5°C) - 90°F (32°C).
- Store off ground, under tarps, or otherwise protected from rain and ground moisture.
- See Technical Letter #TL-0030 Shelf Life/Storage and Handling of GCP Waterproofing.

Installation

Technical Support, Details and Technical Letters

The most up to date detail drawings and technical letters are available at gcpat.com. Documents in hardcopy as well as information found on websites other than www.gcpat.com may be out of date or in error. Before using this product, it is important that information be confirmed by accessing www.gcpat.com and reviewing the most recent product information, including without limitation product data sheets and contractor manuals, technical bulletins, detail drawings and detailing recommendations. Please review all materials prior to installation of BITUTHENE® 8000 membrane. Support is also available by full-time technically trained GCP field sales representatives and technical service personnel, backed by a central research and development technical services staff. For technical assistance with detailing and problem solving please contact your local representative. A GCP Representative locater is available at www.gcpat.com.

Temperature

- Apply BITUTHENE® 8000 Membrane only in dry weather and when air and surface temperatures are above 25°F (-4°C).
- Apply BITUTHENE® adhesive primer B2 LVC in dry weather above 25°F (-4°C). (See separate product information sheet.)

Surface Preparation

Surfaces must be structurally sound and free of voids, spalled areas, loose aggregate and sharp protrusions. Remove contaminants such as grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone and debris. Concrete must be properly cured (minimum 7-days for normal structural concrete and 14-days for lightweight structural concrete). Certain conditions may require longer dry times, such as unusually wet weather or late removal of forms. On vertical applications BITUTHENE® Adhesive Primer B2 LVC may be used to allow priming and installation of membrane on damp surfaces or green concrete. Priming may begin in this case as soon as the concrete will maintain structural integrity. Use form release agents which will not transfer to the concrete. Remove forms as soon as possible from below horizontal slabs to prevent entrapment of excess moisture. Excess moisture may lead to blistering of the membrane. Cure concrete with clear, resin-based curing compounds which do not contain oil, wax or pigment. See Technical Letter #TL-0005 Curing Compounds and Form Release Agents. Except with BITUTHENE® Adhesive Primer B2 LVC, allow concrete to thoroughly dry following rain. Do not apply any products to frozen concrete.

Repair defects such as spalled or poorly consolidated areas. Remove sharp protrusions and form match lines. For rough or uneven deck surfaces use BITUTHENE® Deck Prep as a repair and leveling agent. See Above Grade Waterproofing BITUTHENE® Deck Prep product information sheet for details. On masonry surfaces, apply a parge coat to rough

concrete block and brick walls or trowel cut mortar joints flush to the face of the concrete blocks.

Priming

- Apply BITUTHENE® adhesive primer B2 LVC by a lamb's wool roller at a coverage rate of 325–425 ft ^{2}/gal (7.5–10.0 m^2/L). Allow primer to dry one hour or until tack-free.
- Dry time may be longer in cold temperatures. Re-prime areas if contaminated by dust. If the work area is dusty, apply membrane as soon as the primer is dry. In general, priming should be limited to what can be covered within 24-hours
- Do not apply any primer onto BITUTHENE® membrane.

Application on Vertical Surfaces

Apply BITUTHENE® 8000 membranes in lengths up to 8 ft (2.5 m). Overlap all seams at least 2.5 in. (65 mm). On walls higher than eight feet, apply membranes in two or more "shingled" lifts, with the upper sheet overlapping the lower by at least 2.5 in. (65 mm). Roll all membranes with a hand roller.

Terminate the membranes at grade level. Press each membrane firmly to the wall with the butt end of a hardwood tool such as a hammer handle or secure into a reglet. Failure to use heavy pressure at terminations can result in a poor seal.

All top-of-wall terminations should be sealed with BITUTHENE® LM liquid membrane or BITUTHENE® mastic. A termination bar may be used to ensure a tight seal. If the wall has been only partially covered by the end of the working day, apply a maximum ¼" bead of BITUTHENE® mastic tooled thin or BITUTHENE® LM liquid membrane along the exposed edges of the membrane at its temporary terminations to prevent vertical drainage of precipitation, which could undermining the membrane adhesion. Terminate the membranes at the base of the wall if the bottom of the interior floor slab is at least 6 in. (150 mm) above the footing.

Otherwise, use appropriate inside corner detail where the wall and footing meet. A 1/8 in. (3 mm) x 1 in. (25 mm) aluminum termination bar aligned with the top of the membrane is recommended for terminations on CMU, in earth covered decks and in earth-bermed applications where soil cannot be fully compacted. See technical letter 26 about BITUTHENE® membrane terminations for additional information.

Application on Horizontal Surfaces

Note: PREPRUFE® pre-applied membranes are strongly recommended and are the preferred products for below slab applications or for any application where the membrane is applied before concrete is poured. See PREPRUFE® membrane waterproofing product information sheets at gcpat.com.

All horizontal surfaces to receive BITUTHENE® 8000 membranes should be sloped to drain at least 1/8 in./ft. (11 mm/m). When a minimum slope of 1/8 in. /ft. (11 mm/m) cannot be achieved, two layers of BITUTHENE® 8000 membranes or 80-mils of BITUTHENE® Deck Prep surface treatment and one layer of BITUTHENE® 8000 membranes maybe an option. Contact your local GCP representative for more details.

Apply the membranes from the low point to the high point so that laps shed water. Overlap all seams at least 3 in. (76.2 mm). Stagger all end laps. Roll the entire membrane firmly, and completely as soon as possible. Use a linoleum roller or standard water-filled garden roller less than 30 in. (760 mm) wide, weighing a minimum of 75 lbs (34 kg) when filled. Cover the face of the roller with a "conforming" material such as 1/2 in. (13 mm) plastic foam sheeting or two wraps of indoor-outdoor carpet to allow the membrane to fully contact the primed substrate. Seal all T-joints and membrane terminations with BITUTHENE® LM liquid membrane by the end of the day of membrane application.

For Methane Barrier application under slabs on grade, leave release paper on. Measure 3" of side lap and end lap, rip the release paper only from the 3" section and make the overlap. Roll the entire overlap area firmly.

Repairs, Protection & Drainage

Patch tears and inadequately lapped seams with the same membrane as used on the surrounding surface. Clean the in place membrane with a damp cloth and completely dry. Slit fish mouths and repair with a patch extending 6 in. (150 mm) in all directions from the slit and seal edges of the patch with BITUTHENE® Liquid Membrane. Inspect the membrane thoroughly before covering and make all repairs prior to testing, covering or backfilling.

- Protect BITUTHENE® membranes immediately after application to avoid damage from other trades, construction materials or backfill, using HYDRODUCT® drainage composite boards. See HYDRODUCT® product data sheet at gcpat.com.

Drainage

HYDRODUCT® drainage composites are recommended for both active drainage and protection of the membrane

Insulation

Always apply BITUTHENE® Membrane directly to primed or conditioned structural substrates. Insulation, if used, must be applied over the membrane. Do not apply BITUTHENE® Membranes over insulation or lightweight insulating concrete.

Supply

BITUTHENE® 8000	3.28 ft X 65.6 ft Roll (215 sq ft) {1 m x 20 m, 20 sq m Roll} Weight 36kg

Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Color	light grey	
Application Temp	>25°F (-4°C)	
Thickness	60 mils (1.5 mm)	ASTM D3767 - method A
Low temperature Flexibility, 180° bend over 1 in. (25 mm) mandrel at -25°F (-32°C)	Unaffected/Pass	ASTM D1970
Tensile strength, film	5,500 psi (38 MPa)	ASTM D412
Elongation, ultimate failure of rubberized asphalt	300%	ASTM D412[1]
Crack cycling at -25°F (-32°C), (1/8 inch) 3.2mm	Unaffected/Pass	ASTM C1305
Lap shear	30 lbf (133 N)	ASTM D1002[1]
Peel strength	12 lbf/in. (2,100 N/m)	ASTM D903[2]
Puncture resistance, membrane	63 lbf (280 N)	ASTM E154
Resistance to hydrostatic head	230 ft (70m) of water	ASTM D5385
Water Vapor Permeance	<0.03 perms	ASTM E96, Method B
Water absorption	<0.05%	ASTM D570
VOC permeance	Not Detectable Membrane, Seam	ASTM F 739 Open loop
Methane Permeability	<10 mL/day.m^2.atm	ASTM D1434-82
Methane Permeability, Overlaps	<10 mL/day.m^2.atm	ASTM D1434
Diffusion Coefficient, TCE	<5.1 x10^{-13} m^2/s	Calculated
Diffusion Coefficient, PCE	<5.1 x 10^{-13} m^2/s	Calculated
Diffusion Coefficient, Benzene	<2.7 x 10^{-13} m^2/s	Calculated
Diffusion Coefficient, Toluene	<1.1 x 10^{-13} m^2/s	Calculated
Diffusion Coefficient, Ethylbenzene	<2.7 x 10^{-13} m^2/s	Calculated
Diffusion Coefficient, Xylene	<1.2 x10^{-14} m^2/s	Calculated

Footnotes:

1. The test is run at a rate of 2 in. (50 mm) per minute.

2. With BITUTHENE® Primer B2 LVC

3. Individual roll length may vary +/- 1%

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

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