

BITUTHENE® DECK SYSTEM

Cold-applied, waterproofing system for inverted roofs, green roofs and elevated decks

System Description

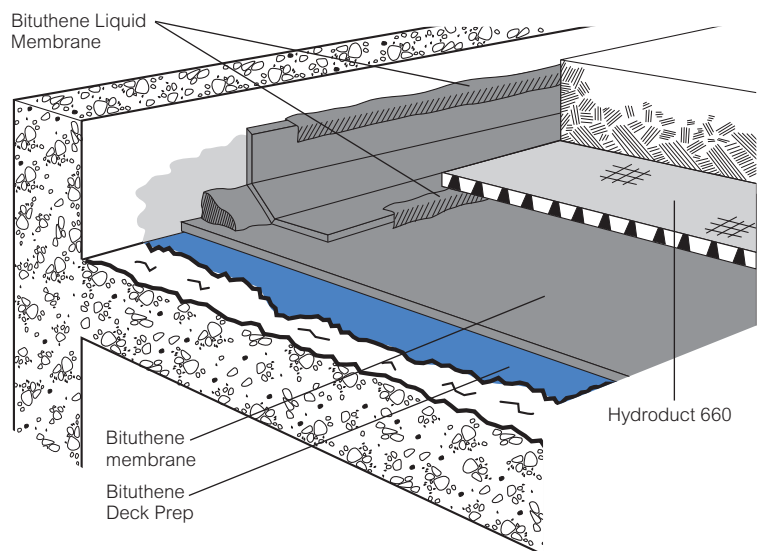
Bituthene® Deck System combines Bituthene 4000 sheet membranes with Bituthene Deck Prep® to provide a durable waterproofing system capable of accepting a wide variety of wearing surfaces on above occupied space, inverted roofs, green roofs and elevated concrete decks.

Advantages

- **Dual protection system**—combines the advantages of preformed sheet with seamless liquid for maximum assurance
- **Cold-applied**—eliminates fire hazard during application
- **Flexible**—accommodates minor structural movement and will bridge shrinkage cracks
- **Fully-adhered system**—prevents lateral water migration and transfers braking forces to substrate
- **Drainage system**—high compressive strength drainage sheet available to provide efficient deck drainage
- **Warranty system available**—by Grace trained applicators

System Components

- **Bituthene System 4000, Bituthene 3000 or Bituthene Low Temperature membrane**—self-adhesive, waterproofing membrane
- **Bituthene Deck Prep**—low viscosity, two component surface treatment coating designed to level and prepare surface prior to installing Bituthene membrane
- **Bituthene Liquid Membrane**—two component elastomeric, liquid applied detailing compound for use with Bituthene membranes
- **Hydroduct® 660 Drainwall Composite**—high compressive strength, high flow geocomposite horizontal drainage board and protection layer



Drawings are for illustration purposes only. Please refer to graceconstruction.com for specific application details.

Product Advantages

- Dual protection system
- Cold-applied
- Flexible
- Fully-adhered system
- Drainage system
- Warranty system available

Application Procedures

Safety, Storage and Handling Information

Bituthene products must be handled properly. Vapors from solvent-based primers and mastic are harmful and flammable. For those products, the best available information on safe handling, storage, personal protection, health and environmental considerations has been gathered. Material Safety Data Sheets (MSDS) are available at graceconstruction.com and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the MSDS before use.

Bituthene Deck Prep Application Surface Preparation

Note: Refer to Bituthene Deck Prep data sheet for complete installation instructions.

All surfaces must be dry and free from dirt, grease, oil, dust or other contaminants. Bituthene Deck Prep may be applied at temperatures of 25°F (-4°C) or above. Below 40°F (5°C), store in a warm place before application.

Mixing

Add the entire contents of the Part B container to Part A and mix for 3 to 5 minutes until uniform. Part A is black and Part B is clear. Take care to scrape material from the side and bottom of the containers to assure thorough mixing. A low speed (150 rpm) mechanical mixer with flat paddle blade is required. Do not apply any material if streaks can be seen due to insufficient mixing.

Once mixed, Bituthene Deck Prep should be poured directly onto the deck and spread with a squeegee over all areas that are to be waterproofed with Bituthene waterproofing membranes. Apply Bituthene Deck Prep within one hour after mixing. More time may be available at lower temperatures, however, at high temperatures thickening and curing may be faster. Material that has cured should be discarded.

Bituthene Deck Prep should be applied in sufficient thickness to smooth all rough areas and fill all voids. The minimum thickness is 80 mil. Apply material in thickness not to exceed ½ in. (13 mm) per coat. Bituthene Deck Prep will adhere to dry, unprimed concrete.

The product will support light foot traffic after an overnight cure. For interior applications, it may remain tacky even after fully cured.

Apply Bituthene waterproofing membranes directly to cured Bituthene Deck Prep. No priming or conditioning is necessary.

Cleaning

Clean tools and equipment with mineral spirits before Bituthene Deck Prep has cured. Mineral spirits is a combustible liquid and should be used only in accordance with the manufacturer's safety recommendations. Do not use solvents to clean hands or skin.

Bituthene Membrane Application

Note: Refer to Bituthene System 4000, Bituthene 3000 or Bituthene Low Temperature membrane data sheet for complete application procedures.

Corner Details

The treatment of corners varies depending on the location of the corner. For detailed information on Bituthene Liquid Membrane, see separate product information sheet.

- At plaza deck to wall inside corners—
Option 1: Apply membrane on wall and deck to within 1 in. (25 mm) of corner. Treat the inside corner by installing a ¾ in. (20 mm) fillet of Bituthene Liquid Membrane. Extend Bituthene Liquid Membrane at least 2½ in. (65 mm) onto deck membrane, and 2½ in. (65 mm) onto wall membrane. Terminate top of wall flashing with Bituthene Mastic, Bituthene Liquid Membrane or termination bar.
Option 2: Apply membrane on deck to within 1 in. (25 mm) of corner. Treat the inside corner by installing a ¾ in. (20 mm) fillet of Bituthene Liquid Membrane. Extend Bituthene Liquid Membrane at least 2½ in. (65 mm) onto wall.

Option 3: Apply membrane on deck to within 1 in. (25 mm) of corner. Treat the inside corner by installing a $\frac{3}{4}$ in. (20 mm) fillet of Bituthene Liquid Membrane. Apply membrane flashing sheet on wall, over fillet and 6 in. (150 mm) onto deck membrane. Apply 1 in. (25 mm) wide troweling of Bituthene Mastic or Bituthene Liquid Membrane over all terminations and seams within 12 in. (300 mm) of corner. Terminate top of wall flashing with mastic, Bituthene Liquid Membrane or termination bar.

- In planters, reflecting pools and fountains, apply membrane on wall and deck to within 1 in. (25 mm) of corner.

Treat the inside corner by installing a $\frac{3}{4}$ in. (20 mm) fillet of Bituthene Liquid Membrane. Extend Bituthene Liquid Membrane at least $2\frac{1}{2}$ in. (65 mm) onto deck membrane, and $2\frac{1}{2}$ in. (65 mm) onto wall membrane. Terminate top of wall membrane with Bituthene Liquid Membrane or termination bar.

- Wall to wall inside corner, apply 12 in. (300 mm) sheet membrane strip centered on corner. Press membrane tightly into corner to assure full contact. Cover the treated corner with a full sheet of membrane to ensure 2-ply coverage.
- Outside corners, apply 12 in. (300 mm) sheet membrane strip centered on corner. Cover the treated corner with a full sheet of membrane to ensure 2-ply coverage.

Joints

Properly seal all joints with waterstop, joint filler and sealant as required. Bituthene membranes are not intended to function as the primary joint seal. Allow sealants to fully cure. Pre-strip all slab and wall cracks over $\frac{1}{16}$ in. (1.5 mm) wide and all construction and control joints with 9 in. (230 mm) wide sheet membrane strip.

Application on Horizontal Surfaces

Apply membrane from the low point to the high point so that laps shed water. Overlap all seams at least 2 in. (50 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 resilient material such as a $\frac{1}{2}$ in. (13 mm) plastic foam 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 Liquid Membrane at the end of the day.

Protrusions and Drains

Apply membrane to within 1 in. (25 mm) of the base of the protrusion. Apply Bituthene Liquid Membrane 0.1 in. (2.5 mm) thick around protrusion. Bituthene Liquid Membrane should extend over the membrane a minimum of $2\frac{1}{2}$ in. (65 mm) and up the penetration to just below the finished height of the wearing course.

Flood Testing

Flood test all horizontal applications with a minimum 2 in. (50 mm) head of water for 24 hours. Mark any leaks and repair when the membrane is dry. Before flood testing, be sure the structure will withstand the dead load of the water. For well-sloped decks, segment the flood test to avoid deep water near drains.

Conduct the flood test 24 hours after completing the application of Bituthene waterproofing system. Immediately after flood test is completed, and all necessary repairs made, install Hydroduct 660 Drainage Composite to protect the Bituthene membrane from traffic and other trades.

Membrane Repairs

Patch tears and inadequately lapped seams with membrane. Clean membrane with a damp cloth and dry. Slit fishmouths 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 any repairs.

Drainage

Hydroduct 660 Drainage Composite is recommended for both active drainage and protection of the membrane. See Hydroduct 660 product information sheets.

Protection of Membrane

Protect Bituthene membranes to avoid damage from other trades, construction materials or finishes. Place protection immediately in temperatures above 77°F (25°C) to avoid potential for blisters.

- On horizontal applications, exposed to construction traffic, use Hydroduct 660 Drainage Composite. Adhere as necessary to membrane with Hydroduct Tape. Alternate methods of protection are to use 1/8 in. (3 mm) or 1/4 in. (6 mm) asphalt hardboard.
- Cover any exposed Bituthene membranes with weather resistant flashing such as copper, aluminum or neoprene. Install protection the same day the membrane is applied or immediately after 24 hour flood testing. No waiting before backfill or application of wearing course is necessary.

Insulation

Insulation, if used, must be applied over the membrane. Do not apply Bituthene membranes over lightweight insulating concrete.

Warranty

Warranties are available for the Bituthene Deck System upon request. Contact your Grace sales representative for details.

Technical Services

Support is provided by full time, technically trained Grace representatives and technical service personnel, backed by a central research and development staff.

www.graceconstruction.com

For technical assistance call toll free at 866-333-3SBM (3726)

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