

# Grace Bituthene®

## Cold Applied, Self-Adhesive Sheet Membrane

### Description

The original cold applied waterproofing sheet membrane invented by W.R. Grace in 1965. The unique qualities of Bituthene® waterproofing systems continue to protect major projects in Australia and worldwide.

### Uses

Used for lift pits, basement walls and slabs, cut and cover tunnels, podiums, balconies, landscaped areas, roofing, car parks, bridge decks and strip sealing of box culverts.

### Features

Bituthene® membranes comply with all **Green Star** requirements and have zero VOC rating.

- No toxic or hazardous ingredients
- Immediate access for finishes
- Cold applied and self-adhesive
- Guaranteed uniform thickness
- Laminates to the substrate completely
- Permanently flexible, tough double barrier
- Easily cut to tape width for culvert joints or road pavement crack repair under AC.
- No slip-sheet required for toppings
- Self-sealing to minor punctures
- Fully compatible with Grace Preprufe® cold fusion membranes and Chemind liquid membrane systems

### Grades

#### Bituthene® 2000

- Multi purpose, cost-effective membrane for under slab, retaining walls, lift pits and podium slabs. Also used for heavy duty, double layer applications.

#### Bituthene® 3000

- Premium quality, heavy-duty tanking membrane for all civil and commercial applications.
- Used for basements, lift pits, tunnels, culverts, podiums, landscaped areas, planters, balconies and roof decks.

#### Bituthene® 5000

- Exclusively designed to allow for hot asphalt paving to be placed safely by hot-mix paving machines. Used for car parks, culverts, bridge decks, ramps, helipads and access driveways.

#### Bituthene® 6000

- Exceptional puncture resistance from its 4 ply laminate barrier layer.
- Designed for critical sub-structures and civil works with 100 year design life.
- Used in subways, power generation facilities, water treatment, infrastructure works and chemical plant.

For assistance in correct selection of Bituthene® grade, product system or specific detail, contact Chemind Construction Products Technical Department.

### Typical Properties

Attribute	Bituthene® 2000	Bituthene® 3000	Bituthene® 5000	Bituthene® 6000
Colour	Grey-Black	Grey-Black	Black	Grey-Black
Thickness	1.0 mm	1.5 mm	1.6 mm	1.6 mm
Roll Size	1 m x 30 m	1 m x 20 m	1 m x 20 m	1 m x 20 m
Tensile Strength (ASTM D882)	40,000 kN/m <sup>2</sup>	40,000 kN/m <sup>2</sup>	40,000 kN/m <sup>2</sup>	40,000 kN/m <sup>2</sup>
Elongation (ASTM D412)	150%	300%	100%	300%
Hydrostatic Resistance (ASTM E96)	5 m	60 m	N/A	60 m
Lap Adhesion (ASTM D1876)	648 N/m	683 N/m	N/A	683 N/m
Puncture Resistance (ASTM E154)	250 N	250 N	900 N	490 N
Permeance (ASTM E96)	< 2 ng/m <sup>2</sup> sPa	< 2 ng/m <sup>2</sup> sPa	N/A	< 2 ng/m <sup>2</sup> sPa

## Preparation

Surfaces must be sound, smooth and free from dust, loose matter, oil, grease or other contaminants.

Concrete should be cured for a minimum of 28 days.

All surface defects shall be repaired using Chemind Chembond modified mortar.

Use Chemind Chemflex PU sealant to form fillets to internal corners or penetrations.

## Application

### Detailing

Detail internal corners, turn-ups, outlets, pile caps and penetrations with Bituthene<sup>®</sup> LM or Bituthene Mastic Membrane to give a minimum dry film thickness of 1.0 mm.

### Priming

- Apply one coat of Bituthene<sup>®</sup> Primer at a rate of 5-7 m<sup>2</sup>/litre and allow to dry.
- Use Bituthene<sup>®</sup> Water Based Primer for full **Green Star** compliance, or otherwise for damp surfaces or "green" concrete.

**NOTE** – ensure that no curing compound is present or if so, that it is Bituthene compatible.

### Joints

- Apply Bituthene<sup>®</sup> membrane strip cut to required width at all joints and footings.

### Application of Continuous Membrane

- Vertical
  - ♦ Apply Bituthene<sup>®</sup> membrane cut to length (max. 2.5 m), by peeling back 300 mm of release paper and pressing onto the primed surface.
  - ♦ Smooth by hand from centre to edge as wallpaper.
  - ♦ Pull release paper down progressively while smoothing surface. If end laps are necessary, lowest sheet is laid first to provide a shingle type overlap.
- Horizontal
  - ♦ Lay Bituthene<sup>®</sup> membranes from the low point to the high point across the fall line, so that the laps shed water.
  - ♦ Use 65 mm side and end laps and roll firmly to ensure a watertight seal.

### Perimeter edges and Over Flashing

- Use Bituthene<sup>®</sup> Liquid Membrane or mastic to overflash and seal all perimeter edges, penetrations, cuts and outlets.

## Surfacing

Do not leave Bituthene<sup>®</sup> membranes exposed – cover with surfacing or protective system such as:

- Tanking
  - ♦ Cover with Chemind Protectoboard or Chemind Rapid Drain.
  - ♦ Use s/steel fixing strip and/or Bituthene LM Liquid Membrane at top edge for neat finish.
- Exposed Surfaces
  - ♦ Cover with concrete topping or screeds, paving slabs on Chemind Multi-Pads or mortar bed, ceramic tiles on bedding.
- Insulated - Thermally
  - ♦ Use Chemind Insul-Foam insulation board for a guaranteed thermal insulation result.
- Insulated - Acoustically
  - ♦ Use Chemind Sound-Shield mat or Sound-Kontrol sound deadening sheet under tiles, etc.

## Packaging & Coverage

- Bituthene<sup>®</sup> - Allow 10 -15% wastage
- Primer in 20 litre pails - 5 m<sup>2</sup>/litre
- Mastic in 15 litre pails – Allow 1 pail to 7 rolls of Bituthene<sup>®</sup>
- Bituthene<sup>®</sup> Liquid Membrane in 5.7 litre kits - 1 litre/m<sup>2</sup> or as required.
- Bituthene Mastic Membrane in 15 litre pails – 1.25 - 1.5 litres/m<sup>2</sup> or as required.

## Storage

Store Bituthene<sup>®</sup> rolls on end in a clean, dry, cool place.



For more information, see the  web site at [www.graceconstruction.com](http://www.graceconstruction.com)



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