

## Bituthene® 3000/3000 HC

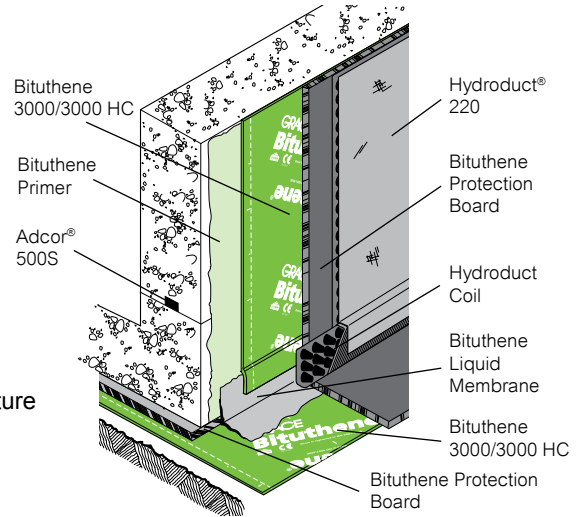
High performance waterproofing membrane for sub-structures and flat deck applications

### Description

Bituthene® 3000/3000 HC is a high performance, cold applied, flexible, preformed waterproof membrane combining a special high performance cross-laminated, HDPE carrier film with a unique self-adhesive rubber bitumen compound.



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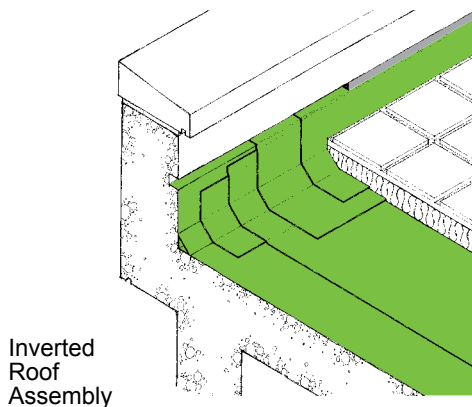


### Applications

- Basement
- Sub-structures
- Flat decks
- Roof assemblies
- Elevated or grade level podiums
- Plaza decks / Roof gardens / Terraces

### Advantages

Features	Advantages
Waterproof	• High hydrostatic head resistance
High density cross laminated polyethylene film	• Provides dimensional stability • Provides puncture resistance
Single layer	• Simple, reliable, low labour cost with the benefit of site programmed installation
Gas Resistant	• Methane, carbon dioxide and radon gas protection in excess of the standard membrane requirements in BRE Reports 211 (radon) and 212 (methane and carbon dioxide)
Cold applied	• No flame hazard • No heating required
Self-adhesive rubberised asphalt	• Continuity ensured at overlaps • Unique rubber/bitumen formulation allows healing of small punctures
Factory controlled thickness	• No variation by site practices
Chemically resistant	• Provides effective external protection against aggressive environments and ozone attack
Flexible	• Accommodates minor settlement and shrinkage movement
Tanking security	• Combined flexible membrane and waterstop system for security



### Installation

- Measures should be taken to ensure that all surfaces are free from ice, frost or condensation. Roof slab surfaces must be dry, and free from sharp protrusions, and any hollows to be filled with high strength mortar.
- Horizontal and vertical faces must be smooth, regular, dry and free from nails. Prime the horizontal and vertical surfaces with one coat of Bituthene Primer applied by brush or roller at a rate of 6-8 sq m per litre depending on the

## Physical Properties

Property	Typical Values	Test Method
Colour	Dark Grey	NA
Nominal Thickness*	1.5 mm	NA
Tensile strength of membrane	4 N/mm	ASTM D412 modified **
Elongation of membrane (to ultimate failure of rubberised asphalt)	200%	ASTM D412 modified **
Lap adhesion @23°C	683 N/m	ASTM D1876
Cycling over crack @-32°C	No effect 100 cycles	ASTM C836
Puncture resistance of membrane	>220N	ASTM E154
Resistance to hydrostatic head	60 m	ASTM D5385
Tear resistance	23 N/mm	ASTM D624
Permeance	1.9 na/Pa. m <sup>2</sup> . S	ASTM E96 [12]

Typical test values represent average values from samples tested. Test methods noted may be modified.

\* Nominal thickness refers to the thickness of the membrane without release liner.

\*\* The test is run at a rate of 100 mm per minute.

Please consult Grace representative on recommended installation temperature.

porosity of the surface, and allow to dry completely before the application of Bituthene 3000/3000 HC.

- Bituthene 3000/3000 HC should be laid by peeling back the protective silicone release paper and applying the self-adhesive face on to the surface to ensure good initial bond.
- Adjacent rolls are aligned and overlapped 50mm minimum at side and 50mm\*\*\* at ends, and the overlaps well rolled with a firm pressure using a lap roller to ensure complete adhesion and continuity between the layers.
- Following the application and inspection, care should be taken to prevent damage by following trades. As soon as practicable after the application, Bituthene 3000/3000 HC should be protected from exposure to the weather and physical damage using Bituthene protection boards, insulation or Hydroduct® drainage composites laid dry.
- Any punctured or damaged areas should be cleaned and patched using Bituthene 3000/3000 HC with minimum 50mm laps all around.
- Following the application, care should be taken to prevent damage by following trades by using Bituthene protection boards spot bonded with Pak Adhesive or a 25mm screed as horizontal protection. Vertical faces to be protected against damage from backfilling and reinforcement by using Bituthene protection boards spot bonded with Pak Adhesive.

\*\*\* For usage in China mainland, please follow China GB code requirement for lapping. For more details, please contact your local Grace representative.

## Supply

Pack size	1m x 20m roll (20 sqm)
Gross weight	39 kg
Storage	Dry conditions below +35°C

- The junction between the slab and parapet shall have a fillet of Bituthene Liquid Membrane or other acceptable methods placed firmly into position before using 300mm wide reinforcing corner strips of Bituthene 3000/3000 HC placed centrally over the axis of the change of direction.
- 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 lightweight insulating concrete.

## Health and Safety

Refer to relevant Material Safety Data Sheet.

## Quality Assurance

W. R. Grace (Singapore) Pte. Ltd. is certified to ISO 9001 Quality Systems by the Singapore Productivity and Standards Board for the manufacture of Bituthene Waterproofing Membranes under the registered certification number ISO 93-2-0268.

## Grace Technical Services

For assistance with working drawings for projects and additional technical advice, please contact Grace Technical Services.

## [www.grace.com/construction](http://www.grace.com/construction)

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