Product NOT specified.

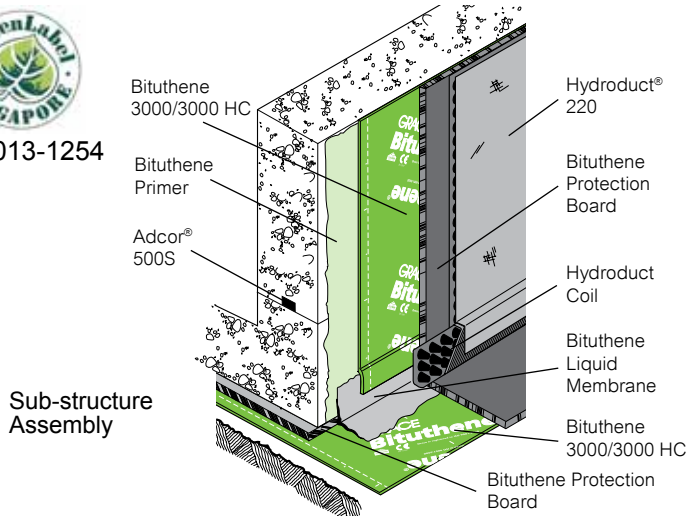
Bituthene® 3000/3000 HC

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.

040-013-1254



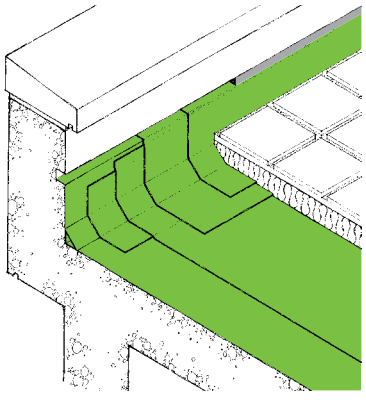
Sub-structure Assembly

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 rubberied 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



Inverted Roof Assembly

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 @23ºC	683 N/m	ASTM D1876
Cycling over crack @-32ºC	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^2. S	ASTM E96 [12]

Did NOT meet specification. Spec lists at 300%

Spec lists 40lbf minimum, ASTM E 154/E 154M

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 +35ºC

- 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

Australia 1800 855 525 New Zealand (64-9) 448 1146 China Mainland (86-21) 3158 2888
Hong Kong (852) 2675 7898 India (91-124) 402 8972 Indonesia (62-21) 893 4260 Japan (81-3) 3537 6366
Korea (82-32) 820 0800 Malaysia (60-3) 9074 6133 Philippines (63-49) 549 7373 Singapore (65) 6265 3033
Thailand (66-2) 709 4470 Vietnam (84-8) 3710 6168

GRACE

CANNONDESIGN

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB
PROJECT NAME

8274 BIG BEND BLVD
ADDRESS

NUMBER

WEBSTER UNIVERSITY
OWNER

CANNON DESIGN
ARCHITECT / ENGINEER

DEVIN D GATES
SUBMITTED BY

071326-001
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

071326
SPECIFICATION SECTION / PARAGRAPH

Grace
MANUFACTURER / SUPPLIER

ITEM / PRODUCT ID

REQUIRED DATE

PRIORITY

◯ CRITICAL

ITEM BEING SUBMITTED (check only one)

- ◯ Shop Drawings
- ◯ Samples (_____ copies)
- ◯ LEED Submittal
- ◯ Certification / Qualifications
- ◯ Record Documents
- ◉ Product Data
- ◯ Coordination Drawing
- ◯ Calculations
- ◯ Schedules
- ◯ O&M Manuals
- ◯ Other _____

ITEM BEING SUBMITTED FOR (check only one)

◉ Action ◯ Information Only ◯ Record

REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)

PARIC

PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:
Devin D. Gates

DEVIN D GATES — REVIEWED BY
05/18/16 — DATE

To be completed by Reviewer

07 1326-001
CANNON DESIGN SUBMITTAL NUMBER

5/19/16
RECEIVED DATE

- ◯ A. No Exceptions Taken
  No further review of submittal is required.
- ◯ B. Make Corrections Noted
  Incorporate corrections in work; resubmission is not required.
- ◉ C. Revise and Resubmit
  Revise as noted, and resubmit for review.
- ◯ D. Rejected
  Submittal is not in compliance with Contract Documents; provide new submittal.
- ◯ E. For Record / Information Only
  Submittal was reviewed for Record / Information purposes only.
- ◯ F. Not Required for Review
  Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

A/E COMMENTS ◯ See attached sheet(s) for additional comments

1. KWA has reviewed the supplied documents. KWA has approved the following products:
   a. Bituthene Liquid Membrane
   b. Bituthene Mastic
   c. Hydroduct 220
   d. Perm-a-barrier WB Primer
   e. STYROFOAM Brand Square Edge Insulation
2. KWA has rejected the following product:
   a. Bituthene 3000/3000 HC
3. Contractor shall coordinate this product with all material that will be in contact with it, for compatibility and that no issues with the warranty will occur.
4. “Bituthene 3000/3000HC” does not meet requirements. “Bituthene 3000 and Bituthene Low Temperature” meets specified requirements.

REVIEWED BY

5/24/16
DATE

PARIC
EXPERIENCE. EXCELLENCE.
77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0040

Paric Corporation

PROJECT: Webster University Interdisciplinary Science Building

DATE: 05/18/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: Waterproofing materials product data

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☑ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications	☐ Attached	☐ Returned for Corrections
☐ Other:	☐ Separate Cover Via:	☑ Due Date: 03/28/2016

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal		071326-001	1		05/18/2016	Waterproofing materials product data	Submitted

NOTES:

CC: Paric Corporation, Kathy Bathe

Project Coordinator: Paric Corporation, Kathy Bathe

Signed: _____
Devin Gates