Around the world, the construction industry is constantly changing. Building designers demand improved structural integrity; clients demand shorter programme times and lower maintenance costs; and contractors demand improved productivity. Grace meets these challenges by developing its market knowledge and technical expertise and applying this know-how to innovate value-added product solutions.

Grace today offers its customers a unique package of specialty building materials that includes sheet and liquid waterproofing, cementitious coatings and mortars, protection for concrete joints and structural fire protection. In addition, Grace Construction Products offers a level of service and support for our products that is unique in the industry.

With more than 125 locations in over 70 countries, Grace provides expert technical service through all phases of a project.
OUR STRENGTHS

Innovation
Our researchers have developed a continuous stream of products that help customers solve complicated problems and meet ever-changing needs. We develop and apply technologies to translate complex chemistry into profitable, sustainable solutions for our customers. We optimise mix costs, use economical materials more efficiently, deploy leading scientists to define market-driven systems and services and add new products and new applications so our partners can stay focused on generating continued profitability enhancements.

International Project Solutions
Working on projects across borders and continents has become a common and necessary practice in today’s environment. Grace has a global team committed to ensure international projects run smoothly and get the full support and coordination from the conception of the specification to its execution. We have the broad technology portfolio and the expertise to bridge differences in construction practices, regulatory requirements and cultures.

Personalised Service
Grace technical support specialists are knowledgeable and experienced, and are focused on helping improve customer operations and overall productivity. We make it our business to know your business. Our team of highly trained people devote their energies to help our customers build their business.

Reputation for Reliability
The Grace brand is built on our people, our innovation and our reputation for reliability essentially means ‘peace of mind’ for customers.

OUR SERVICE

As a customer of Grace Construction Products, you have access to the most extensive, responsive and comprehensive technical support within the waterproofing market. As the industry leader, we are able to provide a level of service that is unmatched. We at Grace pride ourselves in always bringing added-value to the supply of structural waterproofing.

Pre-Contract Support
In conjunction with our technical sales team and technical services department we can offer guidance and assistance in assessing cost effective fit for purpose waterproofing solutions.

Site Support
The Technical helpline is your link to telephone support or on-site technical assistance. Our Technical team is highly trained in multiple waterproofing systems. In addition the Grace Technical Service Site Support team can, where appropriate, attend site to assist site personnel unfamiliar with waterproofing installation techniques, with a view to developing best site practice.
Waterproofing Products
1. Waterproofing for Substructure Slabs
   - Preprufe® Waterproofing System
   - Adprufe® Waterproof Concrete System
   - Hydroduct® Cavity Drain System
2. Waterproofing for Substructure Walls
   - Preprufe® Waterproof System
   - Adprufe® Waterproof Concrete System
   - Hydroduct® Cavity Drain System
   - Bituthene® System
   - Betec® Waterproof Cementitious System
3. Waterproofing for Balconies and Podiums
   - Silcor® Seamless Waterproofing
4. Waterproofing for “Green” Roofs
   - Silcor® Seamless Waterproofing
   - Hydroduct® Drainage System
5. Waterproofing for Water-Retaining Structures
   - Betec® Cementitious Waterroofing
   - Silcor® Seamless Waterproofing
   - Bituthene® System
6. Air and Vapour Barrier for External Wall
   - Grace® Air-Vapour Barrier System
7. Bridge Deck Waterproofing
   - Servidek® System
8. Roofing Underlaymen’s
   - Grace® Ice And Water Shield
9. Waterproofing for Tunnels
   - Preprufe® Bituthene® Waterroofing System
   - Silcor® Seamless Waterproofing
Protection Products
10. Fire Protection for Steel Structures
    - Monokote® Fireproofing
11. Fire Protection for Building Core
    - Monokote® Fireproofing
12. Corrosion Inhibition
    - DCI® S Corrosion Inhibition System for Concrete
**PREPRUF® SYSTEM**

**FOR BASEMENT WATERPROOFING**

**BS 8102:2009 TYPE A SYSTEM**

Flexible, multi-layered composite sheet membranes comprising a white HDPE film, highly aggressive pressure sensitive adhesive and a weather resistant protective coating layer. The Preprufe® membranes provide a passive protection system that does not rely upon hydration processes or swell in contact with water. An intimate bond is formed to the poured in-situ structural concrete by means of a pressure sensitive adhesive preventing lateral water and moisture migration between the membrane and structure.

Preprufe® membranes are chemically resistant in all types of soil or water and protect the structure from salt and sulfate attack. Preprufe® membranes are tested to withstand a 70m head of water, have a zero permeance to moisture, do not activate prematurely due to wet conditions and are unaffected by ground settlement beneath slabs. The physical characteristics ensure that protection against Methane, CO₂ and Radon are in excess of the minimum requirements stated in BRE Reports ‘Construction of new buildings on gas contaminated land’ (BR 212) and ‘Radon: guidance on protective measures for new dwellings’ (BR 211).

- Advanced Bond Technology™
- Preprufe® is reliable, practical and highly effective

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**Advantages**

- Zero water tracking
- Engineered for blind side and post applied applications
- Preprufe® keeps water in its place. ...outside

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**Preprufe® SyStem**

**for Basement Waterproofing**

BS 8102:2009 Type A System

Flexible, multi-layered composite sheet membranes comprising a white HDPE film, highly aggressive pressure sensitive adhesive and a weather resistant protective coating layer. The Preprufe® membranes provide a passive protection system that does not rely upon hydration processes or swell in contact with water. An intimate bond is formed to the poured in-situ structural concrete by means of a pressure sensitive adhesive preventing lateral water and moisture migration between the membrane and structure.

Preprufe® membranes are chemically resistant in all types of soil or water and protect the structure from salt and sulfate attack. Preprufe® membranes are tested to withstand a 70m head of water, have a zero permeance to moisture, do not activate prematurely due to wet conditions and are unaffected by ground settlement beneath slabs. The physical characteristics ensure that protection against Methane, CO₂ and Radon are in excess of the minimum requirements stated in BRE Reports ‘Construction of new buildings on gas contaminated land’ (BR 212) and ‘Radon: guidance on protective measures for new dwellings’ (BR 211).

- Advanced Bond Technology™
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---

**PREPRUF® SYSTEM**

<table>
<thead>
<tr>
<th>Membranes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preprufe® 300R</td>
<td>Pre-applied waterproof membranes that develop an adhesive bond to poured concrete to prevent water migration. For use below basement slabs</td>
</tr>
<tr>
<td>Preprufe® 160R</td>
<td>Pre-applied waterproof membranes that develop an adhesive bond to poured concrete to prevent water migration. For use on basement walls</td>
</tr>
<tr>
<td>Preprufe® 160 Flex</td>
<td>Pre-applied flexible waterproof membrane that develops an adhesive bond to poured concrete. For use directly onto various piled structures</td>
</tr>
<tr>
<td>Preprufe® 800 PA</td>
<td>Self-adhesive Preprufe® membrane for basement walls in open excavations</td>
</tr>
</tbody>
</table>

**Ancillaries**

- Preprufe® Tape HC/LT: Self-adhesive tapes for use with Preprufe® membranes. (Hot climate & low temperature grades available)
- Preprufe® Tieback Covers: A specially designed, two-part cover used to maintain waterproofing integrity at soil retention tieback heads
- Preprufe® Preformed Corners: Prefabricated corners specially designed to maintain the waterproofing integrity at the inside and outside corners of a building
- Adcor®: Range of Hydrophilic waterstops & Hydrophilic injection tubes
- AT Servitite®/AT Serviseal®: Range of passive and active internal and external PVC waterbars
The Grace Adprufe™ System is a combination of Adprufe™ 100 liquid admixture, ADVA® high range, high efficiency superplasticisers and the latest in active waterstop technology Adcor® and Serviseal® AT for both construction and expansion joints. Adprufe™ 100 a new generation liquid admixture for integrally waterproofed concrete structures such as basements, water retaining structures, swimming pools, tunnels and lift pits. Adprufe™ 100 can be used in all types of Portland Cements, including sulphate resisting cements, concretes containing pulverised fuel ash (pfa), ground granulated blast furnace slag (ggbfs) and microsilica. For use with more specialist cements contact Grace Construction Products.

The Adprufe™ System offers design flexibility by combining with Grace Preprufe® waterproofing membranes and Hydroduct® CF drained cavity systems for enhanced protection in critical applications. Suitable for Grades 1, 2, 3 Type ‘B’ basement construction as defined in BS 8102:2009.

Advantages
- Fast track for reduced contract times
- Engineered solutions for movement joints
- All weather installation
- Design flexibility when combined with Grace membranes
- Excellent workability for ease of placement

### ADPRUFE™ Typical Concrete Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drying Shrinkage (%)</td>
<td>0.04</td>
</tr>
<tr>
<td>Comp Strength 1 day (N/mm²)</td>
<td>19.2</td>
</tr>
<tr>
<td>Comp Strength 28 day (N/mm²)</td>
<td>64.5</td>
</tr>
<tr>
<td>Flex Strength 1 day (N/mm²)</td>
<td>2.47</td>
</tr>
<tr>
<td>Flex Strength 28 day (N/mm²)</td>
<td>6.45</td>
</tr>
<tr>
<td>Water Vapour Permeability gm/NS</td>
<td>290 x 10⁻¹²</td>
</tr>
</tbody>
</table>

### Water Absorption (%)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 minutes</td>
<td>0.7</td>
</tr>
<tr>
<td>30 minutes</td>
<td>1.1</td>
</tr>
<tr>
<td>60 minutes</td>
<td>1.6</td>
</tr>
<tr>
<td>120 minutes</td>
<td>2.1</td>
</tr>
</tbody>
</table>

### ISAT (ml/m/s)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 minutes</td>
<td>0.094</td>
</tr>
<tr>
<td>30 minutes</td>
<td>0.051</td>
</tr>
<tr>
<td>60 minutes</td>
<td>0.048</td>
</tr>
</tbody>
</table>
HYDRODUCT® SYSTEM
FOR BASEMENT WATERPROOFING
BS 8102:2009 TYPE C SYSTEM

Internally placed high density, high strength, chemically resistant polyethylene drained cavity formers. Engineered to reduce the risk of water ingress beneath floor screeds and between concrete and blockwork walls of new and existing sub-structures. Hydroduct® forms part of a type C structure as described by BS 8102:2009.

When installed Hydroduct® CF creates an efficient, continuous drainage path, which must be linked with the site internal drainage system.

Hydroduct® may also be used as an external drainage system for basement walls, or podium decks. Grace has a wide range of these available for different applications (see table below).

<table>
<thead>
<tr>
<th>HYDRODUCT® Internal cavity formers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydroduct® CF20</td>
</tr>
<tr>
<td>Hydroduct® CF08</td>
</tr>
</tbody>
</table>

Hydroduct® may also be used as an external drainage system for basement walls, or podium decks. Grace has a wide range of these available for different applications (see table below).

### External Drainage

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydroduct® 401</td>
<td>11mm studded drainage core with a separation geotextile bonded to the other face. For falls &gt;1:80</td>
</tr>
<tr>
<td>Hydroduct® 501</td>
<td>25mm studded drainage core with a separation geotextile bonded to the other face. For falls &lt;1:80</td>
</tr>
<tr>
<td>Hydroduct® Root Barrier</td>
<td>Heavy-duty polyethylene root barrier for “green” roofs and planter boxes</td>
</tr>
<tr>
<td>Hydroduct® 200</td>
<td>11mm studded drainage core with filter fabric to one face for pedestrian &amp; lightly trafficked roof decks</td>
</tr>
<tr>
<td>Hydroduct® 220</td>
<td>11mm studded drainage core with filter fabric to one face with a pressure dissipation plastic film bonded to the other face. For service reservoirs and other buried applications</td>
</tr>
<tr>
<td>Hydroduct® 650</td>
<td>Suitable for applications of Hydroduct® 220 with the added benefit of vehicular traffic</td>
</tr>
</tbody>
</table>

### Advantages

- Chemically resistant to common ground water contaminates
- All weather installation
- Allows for inspection and maintenance
SILCOR® LIQUID WATERPROOFING SYSTEM
FOR PODIUM DECKS & ROOFS
SILCOR®... FAST, ROBUST, COOL

A robust two component resin based system combined at the point of application provides a seamless fully bonded tough waterproofing solution for Podium decks, roofs, walkways and exposed new and refurbished roofing.

Engineered by Grace specifically for structural waterproofing, Silcor® is available in a range of hand and spray applied grades.

Advantages
- Cold applied... no hot works
- Rapid cure for quick back in use area
- Silcor® is reliable, practical and highly effective

<table>
<thead>
<tr>
<th>SILCOR®</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silcor® 900 MP</td>
<td>A two component resin based spray applied liquid waterproofing system for podium decks and buried roof applications</td>
</tr>
<tr>
<td>Silcor® 900 HA</td>
<td>A two component resin based hand applied liquid waterproofing system for podium decks and buried roof applications</td>
</tr>
<tr>
<td>Silcor® 500 EM</td>
<td>A single component resin based hand applied liquid waterproofing system for exposed roofing applications - Certified to ETAG005</td>
</tr>
<tr>
<td>UV Top Coats</td>
<td>Range of UV stable top coats available</td>
</tr>
<tr>
<td>Primers</td>
<td>Range of primers for different substrates available</td>
</tr>
</tbody>
</table>
**BETEC® CEMENTITIOUS COATINGS FOR BASEMENT WATERPROOFING**

A Range of cementitious waterproof coating systems designed for the protection of new and existing structures such as basements, swimming pools, lift pits, concrete tanks, floors, wet areas (kitchens, bathrooms), small tiled balconies, planter boxes.

BETEC® waterproof coatings offer excellent adhesion to correctly prepared internal or external concrete, masonry and rendered type surfaces.

<table>
<thead>
<tr>
<th>BETEC®</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETEC® Flex</td>
<td>Flexible waterproof cementitious coating for waterproofing masonry structures</td>
</tr>
<tr>
<td>BETEC® Seal</td>
<td>Waterproof cementitious coating for waterproofing concrete structures</td>
</tr>
<tr>
<td>BETEC® NSM</td>
<td>Cementitious mortar for repair and levelling of substrates prior to the application of BETEC® Flex</td>
</tr>
<tr>
<td>BETEC® Plug</td>
<td>Quick setting cementitious waterproof plugging compound</td>
</tr>
<tr>
<td>BETEC® Mesh</td>
<td>Reinforcing mesh for use where substrate cracking has or is likely to occur</td>
</tr>
</tbody>
</table>

**BITUTHENE® MEMBRANES FOR WATERPROOFING**

An advanced self-adhesive water, moisture and gas proofing membrane for protection of sub-structures in accordance with the relevant requirements of BS8102:2009.

The Bituthene® 8000 grade membrane has a unique non-metallised grey colour solar reflective composite carrier film to reduce heat gain while the membrane is exposed and to easily spot damage prior to placement of overlying construction. It is printed with the Bituthene® logo to aid identification and an overlap line at each edge to ensure minimum overlaps and correct alignment.

**Advantages**

- Available with damp surface tolerant primer
- Bituthene® retains its crucial properties for the life of the structure
- It is simple to use and requires no naked flame
- Available in a range of grades to suit application temperature and project needs

**BITUTHENE®**

- **Bituthene® 8000**: Advanced, self-adhesive water and vapour proof membrane for sub-structures
- **Bituthene® 6000**: Heavy-duty, preformed composite membrane combining a self-adhesive rubber/bitumen compound and a tough, puncture resistant 4 ply polyethylene waterproof laminate for waterproofing critical sub-structures and civil works
- **Bituthene® 5000**: Self-adhesive waterproof sheet membrane and protection system for application under sand carpet and hot rolled asphalt
- **Bituthene® 4000**: Self-adhesive HDPE waterproofing membrane with enhanced bonding characteristics
- **Bituthene® 2000**: Damp proofing for concrete floors
- **Bituthene® GP**: Self-adhesive rubber/bitumen/HDPE waterproof membrane for low risk applications
- **Bituthene® MRX**: Methane and Radon gas resistant, self-adhesive membrane
Project references

- Dubai Airport (DXB)
  Dubai, UAE
- Emirates Towers
  Dubai, UAE
- Westfield Shopping Centre
  Stratford, UK
- Muggenheim Museum
  Bilbao, Spain
- Aldar Headquarters,
  Al Raha Beach Development
  Abu Dhabi, UAE
- Qatar National
  Convention Centre
  Doha, Qatar
- Morocco Mall
  Casablanca, Morocco
- MAXXI
  Rome, Italy
- Masdar Institute of Science & Technology
  Abu Dhabi, UAE
- Zlote Tarasy
  Warsaw, Poland
- Canary Wharf
  Towers
  London, UK
**Self-adhesive rubber/bitumen polyethylene waterproof membrane for basements and substructures.**

- Pre-applied waterproof membranes that develop an adhesive bond to poured concrete to prevent water migration.
- Provides against water, damp and gas.
- Seals to the structure, not the substrate.
- Prevents water tracking between membrane and structure.
- Simple application, no priming, bolts or protection.
- Unaffected by settlement of substrate below suspended slabs.
- Effectiveness not dependent on hydration or confinement.
- Year round application advantages.

**Preprufe® Tapes**

Self-adhesive tapes for use with Preprufe® membranes, available in hot climate and low temperature grades.

**Preprufe® 300R/160R**

Pre-applied waterproof membranes that develop an adhesive bond to poured concrete.

- Can be used with irregular profiles such as sheet piling.
- Lightweight and flexible – easy to handle and install without special corner pieces.
- Inert – unaffected by groundwater conditions.
- Smooth surface – site contamination easily removed.
- Excellent chemical resistance.

**Preprufe® 800 PA**

Post applied self-adhesive Preprufe® membrane for basement walls in open excavations.

- Non-bituminous – synthetic self-adhesive membrane based on Preprufe® technology.
- Adhesion – excellent concrete adhesion at all temperatures.
- Productivity – 1.2 metre wide roll for increased worker efficiency.
- Fully bonded – eliminates water migration to prevent water tracking between membrane and substrate.
- Elasticomic – accommodates movements and bridges concrete shrinkage cracks.
- Superior properties – high strength, elongation, tear resistant properties.
- Water and vapour barrier – prevents protection for all basements which need to be leak free.
- Gas resistance – Methane and Radon gas protection.

**Preprufe® Tieback Covers**

The Preprufe® Tieback Cover is a specially designed, two-part cover used to maintain waterproofing integrity at soil retention tieback heads.

- Moisture tolerant primer system – allows application in damp or marginal weather conditions.
- Cold applied – simple application to substrates especially at low temperatures.
- 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).

**ANCILLARIES**

**Preprufe® SC1**

Synthetic primer for use with Preprufe® 800PA waterproof membrane.

**Bituthene® LM**

Two component elastomeric liquid applied detailing compound for waterproofing around service penetrations, piles etc. in conjunction with Bituthene® and Preprufe® waterproofing systems.

**ADPRUFE™ SYSTEM**

**Adprufe™ 100**

Advanced admixture for integrally waterproof concrete structures. Adprufe™ is an innovative liquid admixture that significantly reduces both the permeability and drying shrinkage of concrete.

**Bete™ 350**

Waterproof cementitious compound for sealing tie-bar holes.

- Rapidly sets in 30 minutes at 20°C.
- Waterproof, able to withstand 10 bar pressure.
- High bond strength to substrate.

**SELF-ADHESIVE BITUTHENE® MEMBRANE**

**Bituthene® 8000/8000S**

Advanced water, moisture and gas proofing membrane for sub-structures comprising an ultra adhesive compound with a unique, light coloured HDPE film providing reduced solar gain and warning of accidental damage.

- Soft applied and flexible.
- Suitable for application to “green” concrete.
- Moisture tolerant primer system.
- Wide application temperature range.
- Enhanced overlap security.

**Bituthene® 6000**

Heavy duty, preformed composite membrane combining a self-adhesive rubber/bitumen compound and a tough, puncture resistant 4 ply polyethylene membrane laminate for waterproofing critical sub-structures and civil works.

**Bituthene® 5000**

Self-adhesive waterproof sheet membrane and protection system for application under sand carpet and hot rolled asphalt.

- Cold applied – no heating plant or hot bitumen bedding adhesive required.
- Flexible – easily applied, conforms to changes in profile, accommodates shrinkage cracks up to 0.6mm.
- Robust – accepts road laying machinery.
- Pre-formed – guaranteed thickness, not subject to site variation.
- Mesh reinforced – provides dimensional stability and resistance to damage.
- Rubber/bitumen – self-adhesive to substrate, lap integrity achieved by application of hot finishes.

**Bituthene® 4000**

Self-adhesive HDPE waterproofing membrane.

- Cold applied – simple application to substrates especially at low temperatures.
- Suitable for application to “green” concrete – reduces programme schedules.
- Moisture tolerant primer system – allows application in damp or marginal weather conditions.
- Wide application temperature range – excellent bond to self and substrate from -10°C to +35°C.
- Overlap security – enhanced bond provides additional security.
- Cross laminated high density polyethylene carrier film – provides high tear strength, puncture and impact resistance.
- Flexible – accommodates concrete shrinkage cracks.
- Acid 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).

**Bituthene® 3000**

Self-adhesive rubber/bitumen polyethylene waterproof membrane for basements and substructures.

- Waterproof – capable of resisting a hydrostatic head when fully supported.
- 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).
- Cross laminated film – provides dimensional stability, high tear strength, puncture and impact resistance.
- Cold applied – no heating, self-adhesive overlaps ensure continuity.
- Chemically resistant – provides effective external protection against aggressive soils and ground water.
- Cross laminated high density polyethylene carrier film – provides high tear strength, puncture and impact resistance.
- Controlled thickness – factory-made sheet ensures constant, non-variable site application.

**Bituthene® 2000**

Self-adhesive rubber/bitumen high density polyethylene damp proof membrane and Radon gas barrier for ground floor slabs.

- Fully bonded membrane with sealed laps.

**Bituthene® GP**

Self-adhesive rubber/bitumen/HDPE waterproof membrane for low risk applications.

- Waterproof – capable of resisting a hydrostatic head when fully supported (up to 1 metre of water).
- Cold applied – no heating, self-adhesive overlaps ensure continuity.
- Flexible – accommodates minor settlement and shrinkage movement.
- Controlled thickness – factory-made sheet ensures constant, non-variable site application.
- Rubber/bitumen – flexibility and resistance to most dilute acids and alkalis.
- Lighter roll – for ease of application.
- Longer roll – for less storage.

**PREPRUFE® SYSTEM**

**Preprufe® 300R/160R**

Pre-applied waterproof membranes that develop an adhesive bond to poured concrete to prevent water migration. For use below slabs and on basement walls.

- Protects against water, damp and gas.
- Seals to the structure, not the substrate.
- Prevents water tracking between membrane and structure.
- Simple application, no priming, bolts or protection.
- Unaffected by settlement of substrate below suspended slabs.
- Effectiveness not dependent on hydration or confinement.
- Year round application advantages.

**Preprufe® 160 Flex**

Pre-applied flexible waterproof membrane that develops an adhesive bond to poured concrete.

- Can be used with irregular profiles such as sheet piling.
- Lightweight and flexible – easy to handle and install without special corner pieces.
- Inert – unaffected by groundwater conditions.
- Smooth surface – site contamination easily removed.
- Excellent chemical resistance.

**Preprufe® 800 PA**

Post applied self-adhesive Preprufe® membrane for basement walls in open excavations.

- Non-bituminous – synthetic self-adhesive membrane based on Preprufe® technology.
- Adhesion – excellent concrete adhesion at all temperatures.
- Productivity – 1.2 metre wide roll for increased worker efficiency.
- Fully bonded – eliminates water migration to prevent water tracking between membrane and substrate.
- Elasticomic – accommodates movements and bridges concrete shrinkage cracks.
- Superior performance – high strength, elongation, tear resistant properties.
- Water and vapour barrier – provides protection for all basements which need to be leak free.
- Gas resistance – Methane and Radon gas protection.

**Preprufe® Tieback Covers**

The Preprufe® Tieback Cover is a specially designed, two-part cover used to maintain waterproofing integrity at soil retention tieback heads.

- Overlap security – enhanced bond provides additional security.
- Moisture tolerant primer system – allows application in damp or marginal weather conditions.
- Cold applied and flexible.
- 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).

**ANCILLARIES**

**Preprufe® SC1**

Synthetic primer for use with Preprufe® 800PA waterproof membrane.

**Bituthene® LM**

Two component elastomeric liquid applied detailing compound for waterproofing around service penetrations, piles etc. in conjunction with Bituthene® and Preprufe® waterproofing systems.

**ADPRUFE™ SYSTEM**

**Adprufe™ 100**

Advanced admixture for integrally waterproof concrete structures. Adprufe™ is an innovative liquid admixture that significantly reduces both the permeability and drying shrinkage of concrete.

**Bete™ 350**

Waterproof cementitious compound for sealing tie-bar holes.

- Rapidly sets in 30 minutes at 20°C.
- Waterproof, able to withstand 10 bar pressure.
- High bond strength to substrate.
## SELF-ADHESIVE BITUTHENE® MEMBRANE

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bituthene® MRX</td>
<td>Methane and Radon gas resistant, self-adhesive membrane.</td>
</tr>
<tr>
<td>Grace® Ice &amp; Waterproof</td>
<td>Self-adhesive roofing underlayment for premium roof leak protection on sloping timber boarded roofs.</td>
</tr>
<tr>
<td>Grace® Ultra</td>
<td>Self-adhered roofing underlayment for high temperature applications.</td>
</tr>
<tr>
<td>Solarshield® 100</td>
<td>Textured aluminium sheet combined with a self-adhesive rubber/bitumen compound suitable for exposed flashings.</td>
</tr>
<tr>
<td>Bituthene® B1 Primer</td>
<td>A solvent-based primer used to prepare vertical and sloping surfaces and suspended slabs, for Bituthene® 3000 only.</td>
</tr>
<tr>
<td>Bituthene® Primer S2</td>
<td>A rubber-based primer in solvent specially formulated to provide good initial adhesion of Bituthene® waterproofing membranes.</td>
</tr>
<tr>
<td>Bituthene® Primer W2</td>
<td>A water-based surface conditioner specifically formulated to prepare concrete, masonry and wood surfaces for the Systems.</td>
</tr>
</tbody>
</table>

## BITUMINOUS TAPES

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perm-A-Barrier® Detail Membrane</td>
<td>Self-adhesive, rubberized asphalt/polyethylene detail membrane for air and vapour barrier applications.</td>
</tr>
<tr>
<td>Perm-A-Barrier® Alu Flashing</td>
<td>Self-adhesive, rubberized asphalt detail membrane comprising an aluminium faced film for air and vapour barrier applications.</td>
</tr>
<tr>
<td>Bitustik® 4000/Standard</td>
<td>Double sided self-adhesive tape suitable for various detailing and sealing applications.</td>
</tr>
</tbody>
</table>

## PRIMERS

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bituthene® B1 Primer</td>
<td>A solvent-based primer used to prepare vertical and sloping surfaces and suspended slabs, for Bituthene® 3000 only.</td>
</tr>
<tr>
<td>Bituthene® Primer S2</td>
<td>A rubber-based primer in solvent specially formulated to provide good initial adhesion of Bituthene® waterproofing membranes.</td>
</tr>
<tr>
<td>Bituthene® Primer W2</td>
<td>A water-based surface conditioner specifically formulated to prepare concrete, masonry and wood surfaces for the Systems.</td>
</tr>
</tbody>
</table>

## SEALANTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bituthene® Mastic</td>
<td>1 part solvent based bituminous mastic for sheet membrane termination chasels.</td>
</tr>
<tr>
<td>Servijoint® 1</td>
<td>One part, high modulus polyurethane sealant/adhesive suitable for membrane terminations and joints in building facades.</td>
</tr>
<tr>
<td>Servijoint® 2</td>
<td>Two part, cold applied, gun grade polysulphide sealant for sealing vertical movement joints in buildings and civil engineering structures.</td>
</tr>
<tr>
<td>Vertiseal®</td>
<td>Two part, cold applied, gun grade polysulphide sealant for sealing vertical movement joints in buildings and civil engineering structures.</td>
</tr>
<tr>
<td>Paraseal</td>
<td>Two part, cold applied, pouring grade polysulphide sealant for sealing horizontal movement joints in buildings and civil engineering structures.</td>
</tr>
<tr>
<td>Primer PS &amp; PU</td>
<td>Two part, cold applied, pouring grade polysulphide sealant for sealing horizontal movement joints in buildings and civil engineering structures.</td>
</tr>
</tbody>
</table>

## MOVEMENT JOINTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serviband™</td>
<td>Flexible joint system for buried movement joints in concrete decks.</td>
</tr>
<tr>
<td>Hydroduct® CF</td>
<td>Hydroduct® CF is a highly efficient, cost effective drained cavity former. When installed against the internal face of concrete floors and walls Hydroduct® CF will provide a continuous drainage path that must link with the site internal drainage system.</td>
</tr>
<tr>
<td>Hydroduct® 401</td>
<td>Polypolyrene non-woven filter fabric on one face of an 11 mm studlined drainage core with a separation geotextile bonded to the other face. For low and regular maintenance green roofs and planter boxes with minimum falls of 1 in 80.</td>
</tr>
<tr>
<td>Hydroduct® 501</td>
<td>Polypolyrene non-woven filter fabric on one face of an 25 mm studlined drainage core with a separation geotextile bonded to the other face. For draining and irrigating, low and regular maintenance green roofs and planter boxes with falls of less than 1 in 80.</td>
</tr>
<tr>
<td>Hydroduct® Root Barrier</td>
<td>Heavy-duty polyethylene root barrier for “green” roofs and planter boxes.</td>
</tr>
<tr>
<td>Hydroduct® Vertical Drainage Sheets</td>
<td>Creep resistant geocomposite drainage sheets that provide highly efficient drainage to reduce hyrdraetic pressure on basement walls. Product Range – Hydroduct® 200, Hydroduct® 220, Hydroduct® Coir 150.</td>
</tr>
</tbody>
</table>
**WATERSTOPS**

**Adcor® 500S**
- Solid, hydrophilic rubber jointing strip which swells when exposed to water to prevent leak paths in concrete construction joints.
- Delay coating to prevent premature swelling.
- Accommodates complex pours. Simple to fix.

**Adcor® 550PI**
- Pre-applied multi-injectable hydrophilic waterstop.
- Easy installation.
- Contains no sodium bentonite and non-polluting to ground water.
- Retains cohesive strength at both original and expanded volume.
- No need for protective steel mesh.
- Conformable – can be installed onto a variety of irregular substrates.

**Adcor® Mastic**
- One component swellable mastic that prevents water entry through joints in concrete sub-structures.

**Adcor® Adhesive MS**
- Damp surface tolerant adhesive for bonding Adcor 500S to smooth concrete and steel structures.

**AT System**
- High performance waterstop system which combines the mechanical properties of PVC with co-extruded hydrophilic element.
- Active hydrophilic bulbs expand in contact with water to plug voids.
- Engineered Profiles for internal and external application.
- Improved factor of safety for critical basements and water retaining structures.

**Serviseal®**
- Flexible, internal PVC waterstop system for passive protection of joints in concrete structures.
- Proven profile, 5mm thick web.
- Positive anchorage for tying wire.
- Available to link with Serviseal® external waterstops.

**PVC Edgetie**
- Flexible external PVC waterstop system for passive protection of expansion, construction and contraction joints in reinforced concrete structures.
- 195, 240, 320mm and Pilecap sections.
- Pre-fabrication service.

**Servitite®**
- High performance, internal PVC waterstop system for passive protection of critical joints in reinforced concrete structures.
- 10mm thick web.
- Flexible and pliable.

**JOIN FILLERS**

**Aerofil 1**
- Low density, compressible, closed cell polyethylene filler for structural expansion joints and building facades.

**Aerofil 2**
- High density, compressible, closed cell polyethylene filler for movement joints in civil/structural works and water retaining structures.

**Slipstrip 2**
- Bearing slips made from dense extruded polyethylene sheet for fixed end rotation joints or as a low friction, structural slip membrane.

**PROTECTION**

**Grace Protection Board 3 mm**
- Bituminous board for permanent protection of Grace waterproof membrane.
- Recommended for use with Bituthene® and backfilled Preprufe® membranes.
- Rot resistant.
- Provides protection against damage from backfill and site operations.
- Can be folded through 90°.
- Lightweight.
- Easy to install.

**Servipak®**
- Durable, lightweight protection boards for shielding waterproofing membranes from abrasive backfill, site damage and reinforcement fixing.

**LIQUID MEMBRANE**

**Silcor® 900HA**
- Hand Applied (Spray Applied)
- High-strength, simple, cold applied seamless waterproofing system for smaller decks, complex areas and detailing.
- Self-leveling and Fast-cure – for a quick, quality installation and time to traffic.
- Fully bonded – eliminates water migration between membrane and substrate.
- Superior Performance – high tensile strength, elongation, and flexibility to bridge cracks and seal complex detail areas.
- Total System – Fast-cure, moisture tolerant primer for quality, seamless job.

**Silcor® 900 MP**
- Spray Applied
- High-strength and flexible seamless waterproofing spray-applied system for fast installation and high productivity.
- Rapid-Set – quick self-curing system for fast installation and time to traffic.
- Fully bonded – eliminates water migration between membrane and substrate.
- Superior Performance – high tensile strength, elongation, and tear resistant properties. Self-protected with excellent wear and abrasion resistance.
- Total System – Fast-cure, moisture tolerant priming for quality, seamless job.

**Silcor® 500 EM**
- Single component, cold applied polyurethane liquid system for roofs, decks and balconies.
- Two layer system with reinforcement.
- Simple application.
- Water vapour permeable.
- Fully bonded - eliminates water migration to prevent water tracking between membrane and substrate.

**Servirufe® Traffic Deck**
- Flexible waterproofing and integral protection system for podiums, plaza decks, courtyards and basement roofs subject to vehicular traffic and pedestrian access.
- Two layer system combines advantages of sheet & liquid.
- Robust protection, fully compatible, bonded system.

**Servidek® and Servipak®**
- Simple, cold liquid applied waterproofing system with robust protection board to accept sand carpet and hot asphalt.
- Chemically-curing rubber/bitumen compound.

**GAS PROTECTION**

**Grace Gas Membrane 400**
- Loose laid sheet membrane system designed to protect buildings against the ingress of Methane, Radon, Carbon Dioxide, hydrocarbon vapours and water vapour.
- Fully compatible with Grace Preprufe® and Bituthene® membrane systems to form an integrated waterproofing and gas resistant protection system.
- Prevents the transmission of Methane, Radon and Carbon Dioxide gases.
- Resistant to hydrocarbon vapours.
- Fully bonded lap system.
- Robust – resistant to on-site damage.
- Good puncture resistance.
- High tear and tensile strength.
- Flexible – can accommodate normal building movements.
- Watertight.

**Bituthene® MR DPC**
- Aluminium faced gas resistant DPC; for use in cavity walls to maintain a continuous gas barrier across the wall cavity.

**WATERPROOFING CEMENTITIOUS**

**Betec® Flex**
- Two component, flexible, cementitious coating for waterproofing/damp-proofing of new and existing structures.

**Betec® Seal**
- One component, cementitious coating for waterproofing/damp-proofing of new and existing structures.

**Betec® Mesh**
- Reinforcing mesh for use where substrate cracking has or is likely to occur.

**Betec® Band 15**
- Elastomeric tape for use at all designed movement joints, construction joints and horizontal to vertical joints.

**Betec® Plug**
- Quick setting, cementitious, waterproof plugging compound for stopping flowing/seeping water entry into sub-structures.