

EUROPEAN HEADQUARTERS

Belgium
Grace N.V.
Dreve Richelle, 167
BE - 1410 Waterloo
Tel. +32 (0) 2 35 71 840
Fax +32 (0) 2 35 71 877

**EUROPE, MIDDLE EAST
& AFRICA OFFICES**

Belgium
Grace Construction Products N.V.
Industriepark 8
2220 Heist-Op-Den-Berg
Belgium
Tel. +32 15 24 93 60
Fax +32 15 24 80 72

France
Grace Produits de Construction S.A.S.
ZA des Foulletons
39140 Larnaud
Tel. +33 (0) 3 84 48 48 60
Fax +33 (0) 3 84 48 48 61

Germany
Grace Bauprodukte GmbH
Pyrmonter Straße 56
D-32676 Lügde
Postfach 1262
D-32669 Lügde
Tel. +49 (0) 5281 7704 0
Fax +49 (0) 5281 7704 99

Grace Bauprodukte GmbH
Atte Bottroper Straße 58
D-45356 Essen
Postfach 110128
Tel +49 (0) 201 86 14 70
Fax +49 (0) 201 61 94 75

Greece
Grace Hellas EPE
20 Lagoumitzi St.,
GR-17671 Kallithea
Athens
Tel. +30 210 923 14 04
Fax +30 210 923 59 93

India
W.R. Grace & Co. (India) Private Ltd.
10, Vatika Business Centre
2nd Floor, First India Place,
M.G. Road, Gurgaon, Haryana - 122002
Tel. +91 (124) 402 89 23 (ext. 923)
Fax +91 (124) 402 89 25

Call: +44 (0)1753 490000
Email: uksales@grace.com

or visit our website www.graceconstruction.com for more information

Adcor®, Adprufe®, Aerofil®, Betec®, Bituthene®, Hydroduct®, Preprufe®, Servidek®, Servijoint®, Servipak®, Servirufe®, Serviseal®, Servitite®, Silcor®, Vertiseal® and De Neef® are registered trademarks of W.R. Grace & Co.-Conn.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations and suggestions in conjunction with our Conditions of Sale which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. Grace Construction Products Limited, Ipswich Road, Slough, Berkshire SL1 4EQ.

These products may be covered by patents pending. © 2012 Grace Construction Products Limited
Printed in U.K 08/11 UK SBM SCR-01

W.R. Grace & Co. (I) Private Limited
90/2, Meppur Thangal Road,
Madavillagam Village,
Thirumazhisai
Thiruvalluvar District
TamilNadu-602103
Tel. +91 44 662 42 300
Fax +91 44 662 42 333

Ireland
Grace Construction Products
C/O Longs Specialist Construction Products
42 O'Casey Avenue
Parkwest Industrial Estate
Nangor Road
Clondalkin
Dublin 22
Republic of Ireland
Tel. +353 1 4010222
Fax +353 1 4010155

Italy
W.R. Grace Italiana SpA
Via Trento, 7
20017 Passirana di Rho (Milano)
Tel. + 39 02 935 37 1
Fax +39 02 935 37 516

Poland
Grace Sp. z o.o.
ul. Szczepanowskiego 10/2
60 541 Poznan
Tel. +48 (61) 843 92 92
Fax +48 (22) 855 41 32

South Africa
W.R. Grace Africa (Pty.) Ltd.
P.O. Box 2260
64 Rigger Road
Spartan
Kempton Park, 1620
Tel. +27 (0) 11 923 46 31
Fax +27 (0) 11 923 46 72

Russia
Grace GmbH & Co. KG
18, Yamaskogo Polya 3rd Str.
Moscow 125040
Tel. +7 495 937 48 40

Spain and Portugal
Grace S.A.
Riera Fonollar, 12
08830 Sant Boi de Llobregat (Barcelona)
Tel. +34 93 635 10 00
Fax +34 93 635 10 33

Sweden
Grace AB
Berga Allé 1
SE-254 52 Helsingborg
Tel. +46 (42) 16 78 07
Fax +46 (42) 16 78 05

Switzerland
Grace Construction Products SA
En Budron E9
1052 Le Mont-sur-Lausanne
Tel. +41 (0) 21 652 85 85
Fax +41 (0) 21 652 85 95

Turkey
Grace Yapi Kimyasallari San. ve Tic. A.S.
Tuzla Kimya Sanayicileri O.S.B.
E-8 Blok Orhanli - TUZLA
34956 - Istanbul
Tel. +90 216 593 09 70
Fax +90 216 593 09 63

United Arab Emirates
Grace Construction Products
Emirates Chemicals L.L.C.
P.O. Box 5006
Festival Tower, Suite 1701
Dubai Festival City
Dubai, United Arab Emirates
Tel. +971 4 232 99 01
Fax +971 4 232 99 40

United Kingdom
Grace Construction Products Limited
580-581 Ipswich Road, Slough
Berkshire
SL1 4EQ
Tel. +44 (0) 1753 490000
Fax. +44 (0) 1753 490001

Grace Construction Products Limited
830-832 Fountains Court
Birchwood Boulevard, Birchwood,
Warrington
Cheshire WA3 7QZ
Tel. +44 (0) 1925 855330
Fax +44 (0) 1925 855350



STRUCTURAL WATERPROOFING SYSTEMS

GRACE

GRACE



CONTENTS

About us	4	Product listings	22-27
Our commitments	5	Preprufe® System	22
Our strengths	6	Adprufe™ System	22
Our service	7	Self-Adhesive Bituthene® Membrane	23-24
Integrated Building Envelope Solutions	8-9	Bituminous Tapes	24
Waterproofing System Products	10-19	Primers	24
Preprufe® System	10-11	Sealants	25
Adprufe™ Waterproof Concrete System	12-13	Movement Joints	25
Hydroduct® System	14-15	Drainage	25
Silcor® Liquid Waterproofing System	16-17	Waterstops	26
Betec® Cementitious Waterproof Coatings	18	Joint Fillers	26
Bituthene® Membranes	19	Protection	26
Project references	20-21	Liquid Membrane	27
		Gas Protection	27
		Waterproofing Cementitious	27



Adcor®



Bituthene®



GRACE Ice & Water Shield®
Self-Adhered Roofing Underlayment



PERM-A-BARRIER®
AIR BARRIER SYSTEMS



Preprufe®
Advanced Bond Technology™



GRACE Ultra
Self-Adhered Roofing Underlayment





ABOUT US

Grace Construction Products is a unit of W.R. Grace & Co.-Conn, one of the world's leading specialty chemicals and materials companies with more than a 150 year long history and sales revenue of more than \$3 billion. Grace Construction Products is a specialist in the construction products industry with waterproofing systems, fire protection, specialty mortar systems, concrete admixtures and fibres, cement processing additives, products for architectural concrete and products for manufactured concrete that strengthen, protect and enhance the world's most important structures.

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 speciality 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 COMMITMENTS

To the Environment, Health & Safety

Grace is committed to safety in construction and has pioneered for over 40 years the use of cold applied products in lieu of hot applied sheets and liquids. The work continues with the introduction of water based and solvent free products to further reduce the hazards to health and safety. Through the Grace Commitment to Care Programme, every Grace plant worldwide is fulfilling our goal of operating in a manner that protects the health and safety of employees, the public and the environment.

Our achievements for Grace worldwide include:

- A continuous reduction in both recordable incident and lost time incident rates.
- A continuous reduction in emissions to air, water and land.

To Innovation

Grace Construction Products is committed to raising the standards for the industry through the development of innovative new products and practices to meet the needs and demands of its customers. From our global state of the art R&D facility in Cambridge, Massachusetts through to regional centres of excellence, Grace technology leaders work to fulfil their mission to provide value added benefits to its customers.

To Quality

We set high expectations for everything we do and meet our commitments. As you would expect, Grace Construction Products Limited is certified to BS EN ISO 9001:2000.





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.

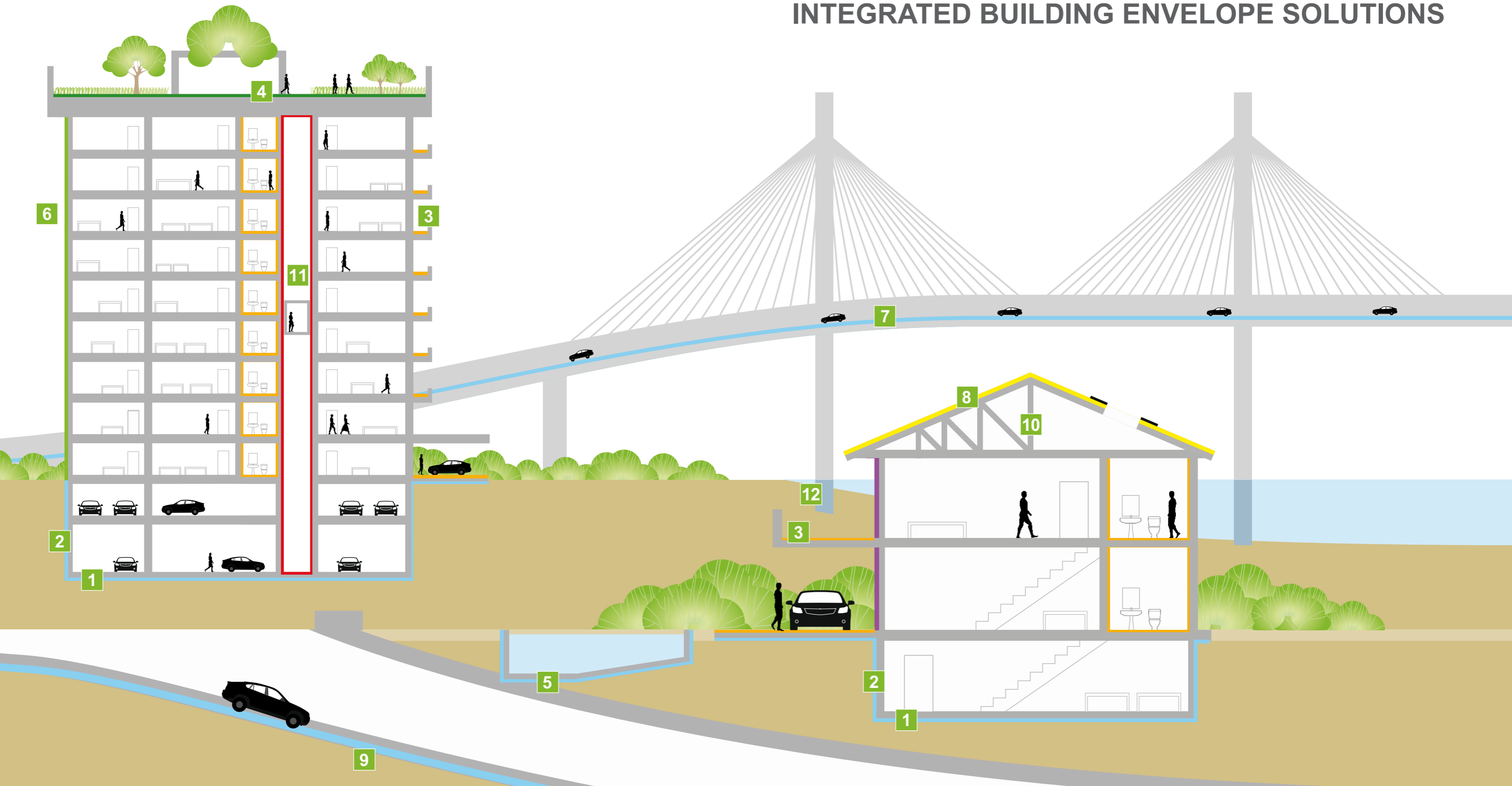
Pre-Contract Support

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.

INTEGRATED BUILDING ENVELOPE SOLUTIONS



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 Waterproofing
 - 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 Underlayment's**
- Grace® Ice And Water Shield

- 9. Waterproofing for Tunnels**
- Preprufe®/ Bituthene® Waterproofing System
 - Silcor® Seamless Waterproofing

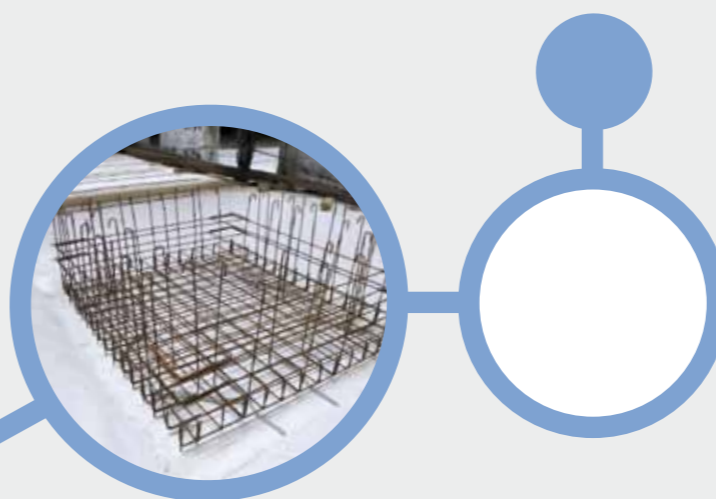
Protection Products

- 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

Forms an intimate bond to placed concrete



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™
- Preprufe® is reliable, practical and highly effective



Preprufe's® intimate bond to concrete shown under a microscope.

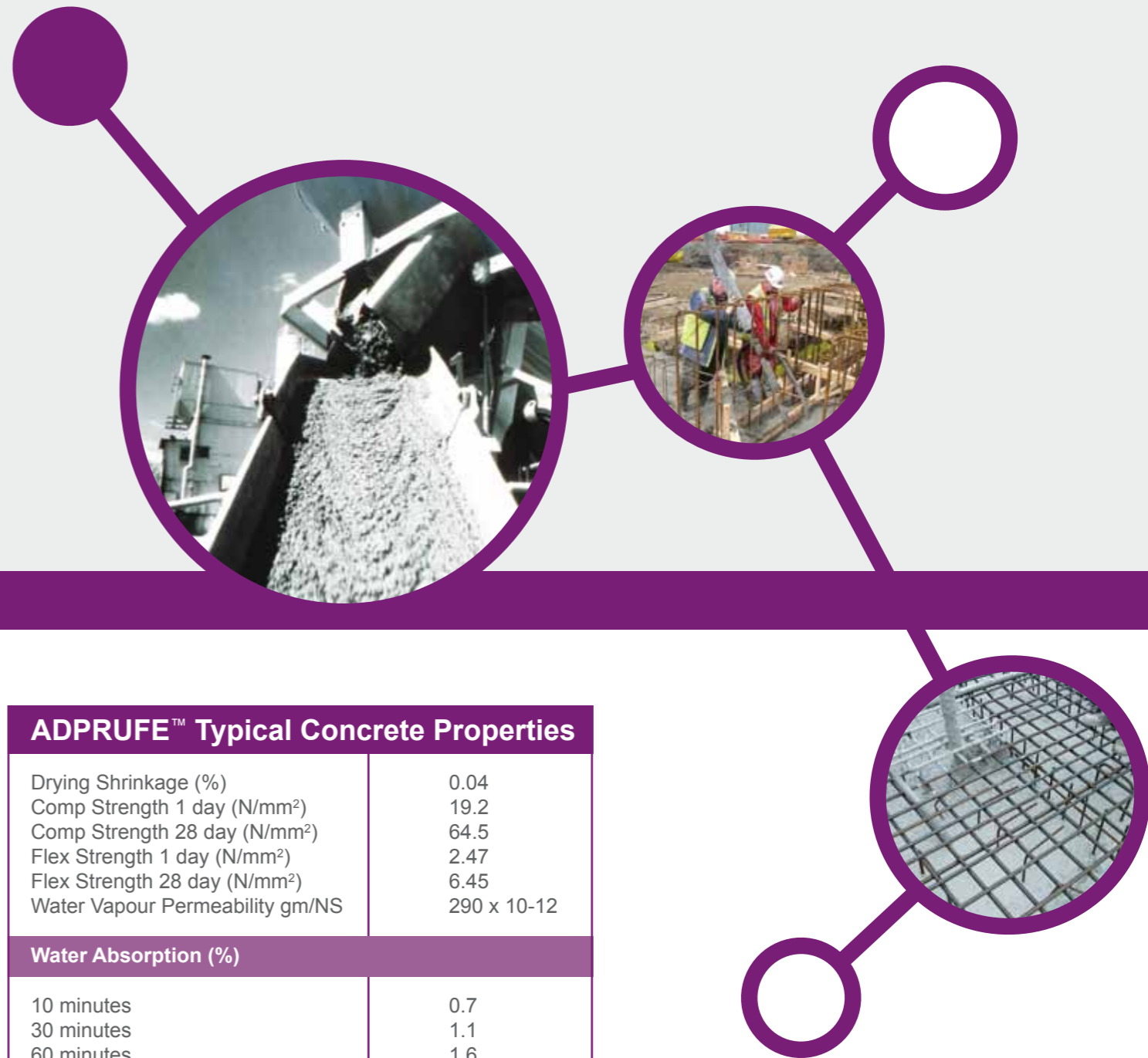
PREPRUFE® SYSTEM	
Membranes	
Preprufe® 300R	Pre-applied waterproof membranes that develop an adhesive bond to poured concrete to prevent water migration. For use below basement slabs
Preprufe® 160R	Pre-applied waterproof membranes that develop an adhesive bond to poured concrete to prevent water migration. For use on basement walls
Preprufe® 160 Flex	Pre-applied flexible waterproof membrane that develops an adhesive bond to poured concrete. For use directly onto various piled structures
Preprufe® 800 PA	Self-adhesive Preprufe® membrane for basement walls in open excavations
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

Advantages

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



Waterproof concrete with excellent workability for ease of placement



ADPRUFE™ WATERPROOF CONCRETE SYSTEM FOR WATERPROOFING BASEMENTS & WATER RETAINING STRUCTURES BS 8102:2009 TYPE B SYSTEM

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.

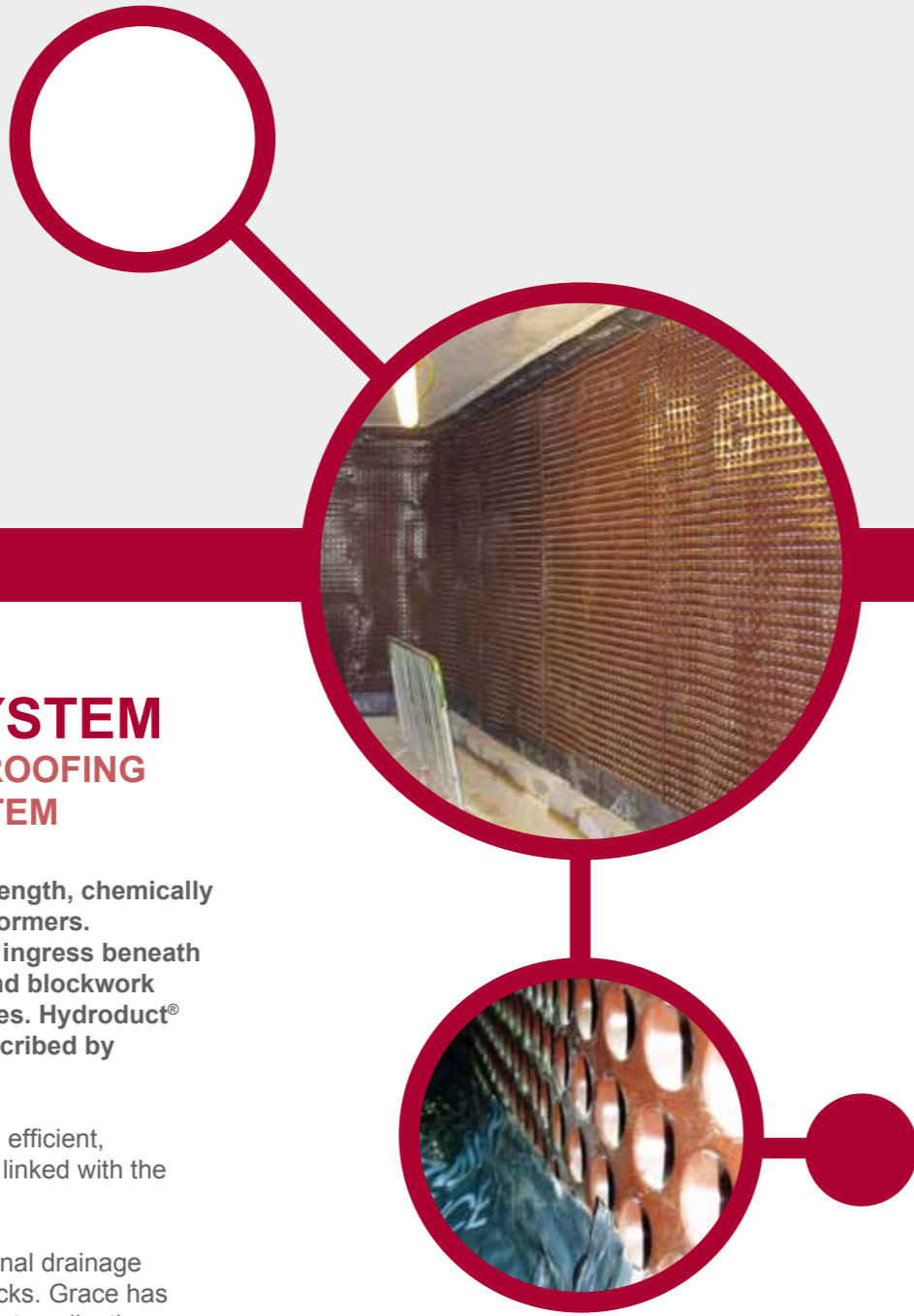
The Adprufe™ System offers design flexibility by combining with Grace Preprufe® waterproofing membranes and Hydroduct® CF drained cavity systems for enhanced protection in critical applications. Suitable for Grades 1, 2, 3 Type 'B' basement construction as defined in BS 8102:2009.

ADPRUFE™ Typical Concrete Properties	
Drying Shrinkage (%)	0.04
Comp Strength 1 day (N/mm ²)	19.2
Comp Strength 28 day (N/mm ²)	64.5
Flex Strength 1 day (N/mm ²)	2.47
Flex Strength 28 day (N/mm ²)	6.45
Water Vapour Permeability gm/NS	290 x 10 ⁻¹²
Water Absorption (%)	
10 minutes	0.7
30 minutes	1.1
60 minutes	1.6
120 minutes	2.1
ISAT (ml/m/s)	
10 minutes	0.094
30 minutes	0.051
60 minutes	0.048

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





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).

HYDRODUCT® Internal cavity formers	
Hydroduct® CF20	20mm Cavity former for walls and below screeds
Hydroduct® CF08	8mm Cavity former for walls

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	
Hydroduct® 401	11mm studded drainage core with a separation geotextile bonded to the other face. For falls >1:80
Hydroduct® 501	25mm studded drainage core with a separation geotextile bonded to the other face. For falls <1:80
Hydroduct® Root Barrier	Heavy-duty polyethylene root barrier for "green" roofs and planter boxes
Hydroduct® 200	11mm studded drainage core with filter fabric to one face for pedestrian & lightly trafficked roof decks
Hydroduct® 220	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
Hydroduct® 650	Suitable for applications of Hydroduct® 220 with the added benefit of vehicular traffic

Advantages

- Chemically resistant to common ground water contaminants
- All weather installation
- Allows for inspection and maintenance

Seamless liquid waterproofing



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.



SILCOR®	
Silcor® 900 MP	A two component resin based spray applied liquid waterproofing system for podium decks and buried roof applications
Silcor® 900 HA	A two component resin based hand applied liquid waterproofing system for podium decks and buried roof applications
Silcor® 500 EM	A single component resin based hand applied liquid waterproofing system for exposed roofing applications - Certified to ETAG005
UV Top Coats	Range of UV stable top coats available
Primers	Range of primers for different substrates available

Advantages

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



Waterproof mortar systems for new & existing structures

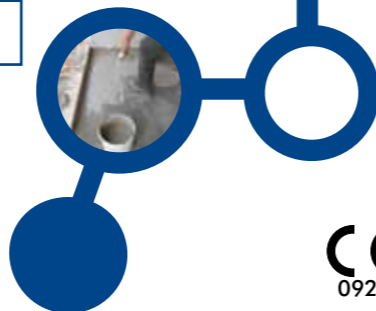


BETEC® CEMENTITIOUS COATINGS FOR BASEMENT WATERPROOFING

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.

BETEC®	
BETEC® Flex	Flexible waterproof cementitious coating for waterproofing masonry structures
BETEC® Seal	Waterproof cementitious coating for waterproofing concrete structures
BETEC® NSM	Cementitious mortar for repair and levelling of substrates prior to the application of Betec® Flex
BETEC® Plug	Quick setting cementitious waterproof plugging compound
BETEC® Mesh	Reinforcing mesh for use where substrate cracking has or is likely to occur



The original self-adhesive membrane

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® 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.

The membrane is specially formulated to allow application to “green concrete” and able to be applied in damp or marginal weather conditions with the use of a moisture tolerant primer system.

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

Guggenheim Museum
Bilbao, Spain

MAXXI
Rome, Italy

Aldar Headquarters,
Al Raha Beach Development
Abu Dhabi, UAE

Qatar National
Convention Centre
Doha, Qatar

Wembley Stadium
London, UK

Morocco Mall
Casablanca, Morocco

Masdar Institute
of Science & Technology
Abu Dhabi, UAE

Zlote Tarasy
Warsaw, Poland

Canary Wharf
Towers
London, UK

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. <ul style="list-style-type: none"> • Protects against water, damp and gas • Seals to the structure, not the substrate • Prevents water tracking between membrane and structure • Simple application, no priming, fillets 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® 160 Flex	Pre-applied flexible waterproof membrane that develops an adhesive bond to poured concrete. <ul style="list-style-type: none"> • Can be used with irregular profiles such as sheet piling • Seals adhesively to concrete – the only technology proven to resist water migration • Lightweight and flexible – easy to handle and install without special corner pieces • Inert – unaffected by groundwater conditions • Remains sealed to structure even if ground settles • Smooth surface – site contamination easily removed • Excellent chemical resistance • Part of the total Preprufe® solution including waterstops for joint protection
Preprufe® 800 PA	Post applied self-adhesive Preprufe® membrane for basement walls in open excavations. <ul style="list-style-type: none"> • 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 • Elastomeric – 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.
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.
Betec® 350	Waterproof cementitious compound for sealing tie-bar holes. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • Cold 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 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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 • 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)
Bituthene® 3000	Self-adhesive rubber/bitumen polyethylene waterproof membrane for basements and substructures. <ul style="list-style-type: none"> • 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 • Flexible – accommodates minor settlement and shrinkage movement • 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. <ul style="list-style-type: none"> • Fully bonded membrane with sealed laps
Bituthene® GP	Self-adhesive rubber/bitumen/HDPE waterproof membrane for low risk applications. <ul style="list-style-type: none"> • 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

SELF-ADHESIVE BITUTHENE® MEMBRANE

Bituthene® MRX	Methane and Radon gas resistant, self-adhesive membrane.
Grace® Ice & Watershield	Self-adhesive roofing underlayment for premium roof leak protection on sloping timber boarded roofs.
Grace® Ultra	Self-adhered roofing underlayment for high temperature applications.
Solarshield® 100	Textured aluminium sheet combined with a self-adhesive rubber/bitumen compound suitable for exposed flashings.
Bitushield®	Single layer self-adhesive reinforced sheet waterproofing membrane, for car park decks and elevated roadways with cementitious finishes. Used in conjunction with other Grace membranes. <ul style="list-style-type: none"> • Robust and flexible • Rubber/bitumen adhesive • Self protecting • Mineralised finish

BITUMINOUS TAPES

Perm-A-Barrier® Detail Membrane	Self-adhesive, rubberized asphalt/polyethylene detail membrane for air and vapour barrier applications. <ul style="list-style-type: none"> • 100, 150, 225, 300mm widths x 22.9m long rolls • Fully bonded – transmits wind loads directly to the substrate • Waterproof and impermeable to moisture – impermeable to the passage of liquid water and water vapour • Cross laminated film – provides dimensional stability, high tear strength, puncture and impact resistance • Cold applied – no flame hazard; self-adhesive overlaps ensure continuity • Flexible – accommodates minor settlement and shrinkage movement • Controlled thickness – factory made sheet ensures constant, non-variable site application • Aggressive, conformable adhesive – allows self-sealing around mechanical fasteners • Wide application window – Perm-A-Barrier Detail Membrane surface and ambient temperatures at -5°C and above
Perm-A-Barrier® Alu Flashing	Self-adhesive, rubberized asphalt detail membrane comprising an aluminium faced film for air and vapour barrier applications. <ul style="list-style-type: none"> • 100, 150, 225, 300mm widths x 15m long rolls • Fully bonded – transmits wind loads directly to the substrate • Waterproof and impermeable to moisture – impermeable to the passage of liquid water and water vapour • Aluminum film – provides extended UV exposure, improved sealant adhesion to film, dimensional stability, high tear strength, puncture and impact resistance • Cold applied – no flame hazard; self-adhesive overlaps ensure continuity • Flexible – accommodates minor settlement and shrinkage movement • Controlled thickness – factory made sheet ensures constant, non-variable site application • Aggressive, conformable adhesive – allows self-sealing around mechanical fasteners • Wide application window – Perm-A-Barrier Aluminum Flashing surface and ambient temperatures at -5°C and above
Bitustik™ 4000/Standard	Double sided self-adhesive tape suitable for various detailing and sealing applications. <ul style="list-style-type: none"> • 150, 225, 240mm widths x 12m long rolls

PRIMERS

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

SEALANTS

Bituthene® Mastic	1 part solvent based bituminous mastic for sheet membrane termination chases.
Servijoint® 1	One part, high modulus polyurethane sealant/adhesive suitable for membrane terminations and joints in building facades.
Servijoint® 2	Two part, cold applied, gun grade polysulphide sealant for sealing vertical movement joints in buildings and civil engineering structures.
Vertiseal® CE	Two part, cold applied, gun grade polysulphide sealant for sealing vertical movement joints in buildings and civil engineering structures.
Paraseal	Two part, cold applied, pouring grade polysulphide sealant for sealing horizontal movement joints in buildings and civil engineering structures.
Primer PS & PU	Two part, cold applied, pouring grade polysulphide sealant for sealing horizontal movement joints in buildings and civil engineering structures.

MOVEMENT JOINTS

Serviband™	Flexible joint system for buried movement joints in concrete decks. <ul style="list-style-type: none"> • Compatible with Grace waterproofing systems • Resists water pressure – up to 20 m • Movement accommodation – up to +12.5% of joint width • Remains elastomeric at low temperatures • On site jointing with hot air gun • Can be applied to damp surfaces • No cleaning required
-------------------	---

DRAINAGE

Hydroduct® CF	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.
Hydroduct® 401	Polypropylene non-woven filter fabric on one face of an 11 mm studded 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.
Hydroduct® 501	Polypropylene non-woven filter fabric on one face of an 25 mm studded 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.
Hydroduct® Root Barrier	Heavy-duty polyethylene root barrier for "green" roofs and planter boxes.
Hydroduct® Horizontal Drainage & Irrigation Sheets	Creep resistant geocomposite drainage sheets, providing highly efficient drainage or irrigation to horizontal roofs and decks. Product Range – Drainage: Hydroduct® 200, 220. Drainage & irrigation: Hydroduct® 650, Hydroduct® 401, Hydroduct® 501, Hydroduct® Root Barrier.
Hydroduct® Vertical Drainage Sheets	Creep resistant geocomposite drainage sheets that provide highly efficient drainage to reduce hydrostatic pressure on basement walls. Product Range – Hydroduct® 200, Hydroduct® 220, Hydroduct® Coil 150.

Product listings

WATERSTOPS	
Adcor® 500S	Solid, hydrophilic rubber jointing strip which swells when exposed to water to prevent leak paths in concrete construction joints. <ul style="list-style-type: none"> • Delay coating to prevent premature swelling • Accommodates complex pours. Simple to fix
Adcor® 550PI	Pre-applied multi-injectable hydrophilic waterstop. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • Proven profile, 5mm thick web • Positive anchorage for tying wires • 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 10mm thick web • Flexible and pliable

JOINT 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. <ul style="list-style-type: none"> • 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.

Product listings

LIQUID MEMBRANE	
Silcor® 900HA (Hand Applied)	High-strength, simple, cold applied seamless waterproofing system for smaller decks, complex areas and detailing. <ul style="list-style-type: none"> • Self-levelling and Fast-cure – for a quick, quality installation and time to traffic • Fully bonded – eliminates water migration to prevent water tracking 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. <ul style="list-style-type: none"> • Rapid-Set – quick self-curing system for fast installation and time to traffic • Fully bonded – eliminates water migration to prevent water tracking 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • Fully compatible with Grace Preprufe® and Bituthene® membrane systems to form an integrated waterproof 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 • Weldable
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.