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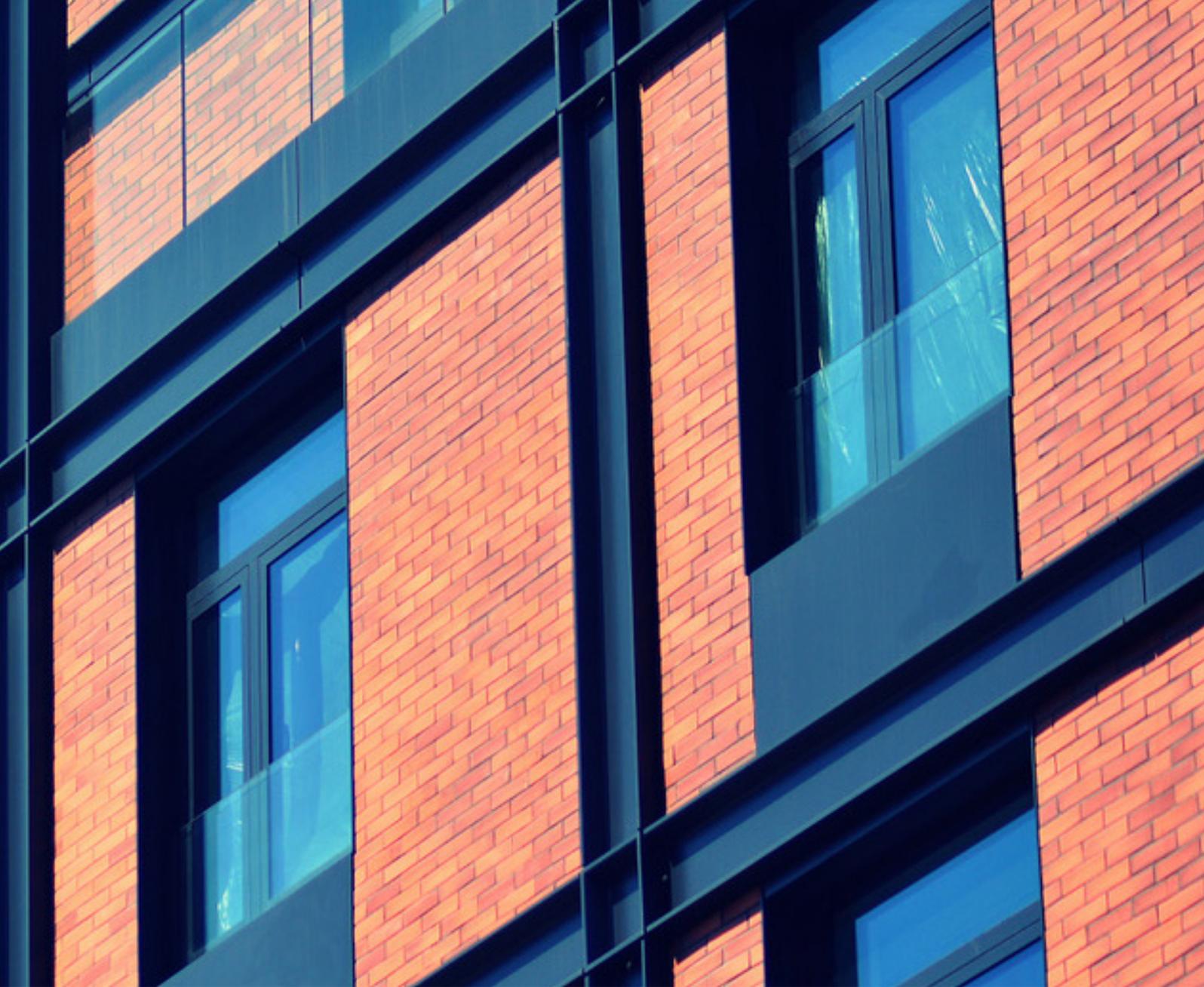


**AXTER**  
Waterproofing Systems



# WE WATERPROOF DIFFERENTLY

We **innovate beyond the ordinary**, re imagine what's possible and endeavour to inspire positive change in the way roofs are designed, waterproofed and used.



## Who we are

We are a vibrant team of creative, dedicated and ambitious professionals all working towards a collective vision: to improve the roovescape and transform the world above our heads. We are inspired by the extraordinary and always seek out more sustainable and innovative ways to waterproof better, making flat roofs that benefit our climate and communities.

## Why choose us

We are driven by our passion for technical detail and design, offering a comprehensive service package and a system portfolio renowned for its quality. We think differently and will always offer our honest, expert advice, adding value through innovative ideas that minimise risk and maximise potential for you.



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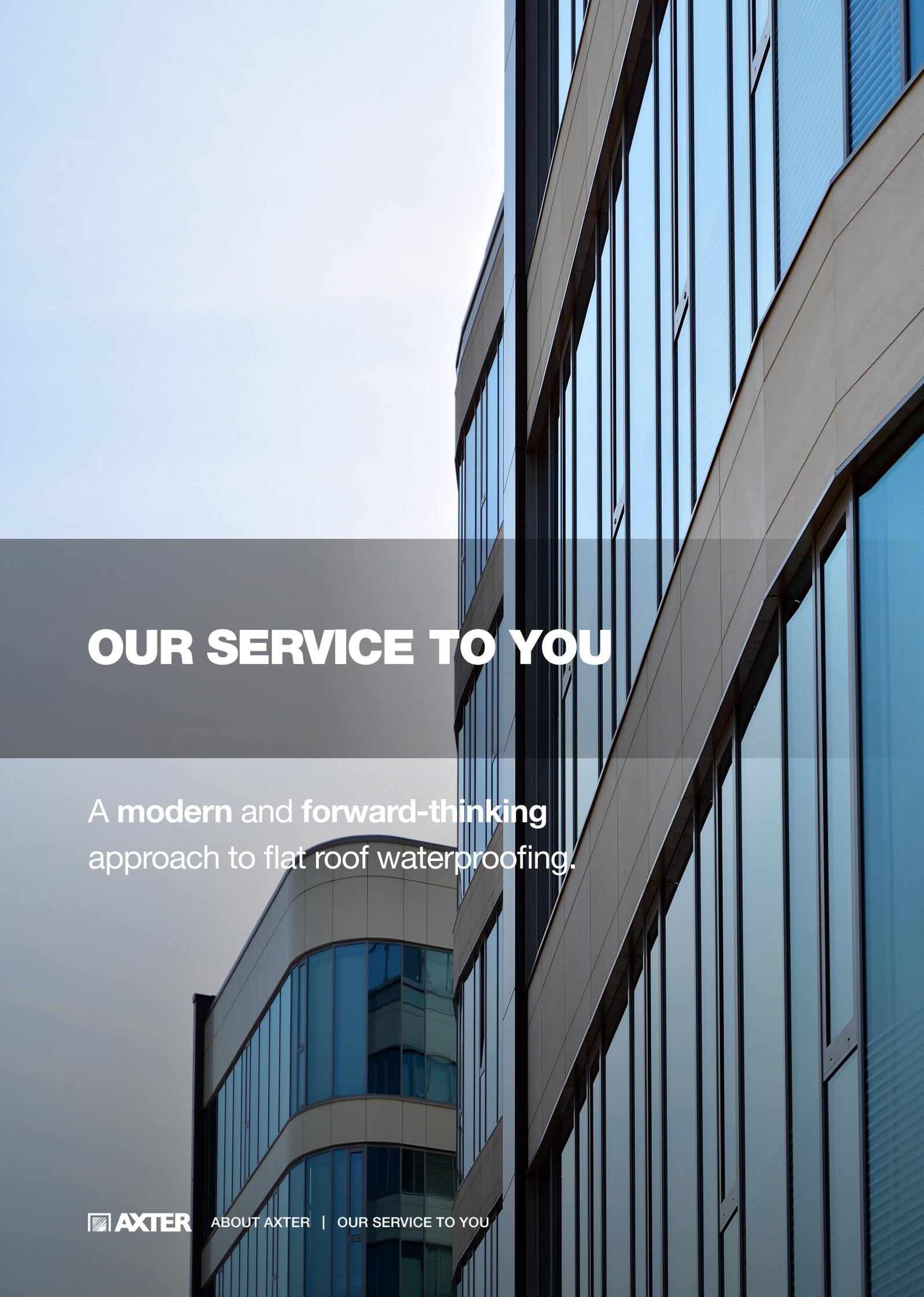
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# OUR SERVICE TO YOU

A modern and forward-thinking  
approach to flat roof waterproofing.



ABOUT AXTER | OUR SERVICE TO YOU



## The Axter Difference

The way we think and the way we work is what sets our service apart. We combine our unique Axter method and intelligence to provide the most sustainable approach to flat roof waterproofing. This approach enables us to go above and beyond, delivering a service that's right for you, whilst respecting our environment, communities, colleagues and partners.

### Method

Our approach to each project is personalised. We listen carefully to both the specifier and the client, gaining valuable insights into their requirements. This allows us to create a clear and thoughtful specification for the project. Our open culture and values of service, integrity, respect and collaboration play a big part in this process.

We're all about customising every aspect of the project to provide a balanced approach that minimises risks, maximises potential and enhances the built environment's fifth façade.

### Intelligence

Our people are our biggest asset: knowledgeable, curious about the world, adaptable and passionate. As a team, we are analytical in all aspects of our business, from how we share data internally, to how we conduct site surveys and collaborate on specifications. Our sustainability pathway plays a big part in this intelligence, as we weave it into every area of the business.

Our people, our digital assets and our sustainability commitment work together in synergy.



# NEW BUILD PROJECTS

Our knowledgeable team provides the **full new build service from start to finish**; from the initial concept and technical design, to the tender and procurement procedure, right through to installation and quality inspections. This ensures successful project guarantee and handover.

We are dedicated to ensuring that our roofs are designed, installed and maintained to last well beyond their service and design life expectations.



## **Concept Design**

Our technical service includes: honest, expert advice; NBS specifications; BIM objects; and detail drawings.

## **Technical Design**

Our design service includes, but is not limited to: design and technical calculations; U-Value calculations, tapered insulation design; wind loading calculations; and rainwater drainage calculations.

## **Tested Certified Systems**

Axter systems are designed and produced in manufacturing facilities, which are ISO 9001 and ISO 14001 accredited. Systems are in full compliance with all relevant British Standard and Building Regulations and major third party insurers, as well as being BBA certified and BRoofT4 tested.

## **Accredited Installer Network**

You'll receive access to our network of trained accredited contractors, who have shown commitment to delivering and installing Axter flat roof waterproofing systems without fault or defect.

## **Quality Assurance**

Our Quality Assurance Team will make regular visits to the site to check the installation is going smoothly and Quality Reports will be shared with all parties.

## **Aftercare and Maintenance**

Our dedicated Quality Assurance Team will be on hand to answer any queries and provide support throughout the entire guarantee period.

Let's breathe new life into the buildings that already exist. By improving drainage, upgrading thermal performance and enhancing energy efficiency we can give the buildings that have upheld our communities another lease of life. And while we're at it, we'll help you to discover new ways to better utilise the roof space. Contact us to find out how we can help.

Phone: 01473 724056

Email: [info@axterltd.co.uk](mailto:info@axterltd.co.uk)

Website: [axterltd.co.uk](http://axterltd.co.uk)

## Concept Design

Our technical service includes: honest, expert advice; NBS specifications; BIM objects; and detail drawings.

## Professional Survey

We provide a detailed on site comprehensive roof survey report to ascertain the condition and expected lifespan of your building asset portfolio, with an options-based approach to refurb system suitability.

This service can typically include one or more of the following: core sampling, moisture map analysis, level survey analysis, thermographic imaging and drone survey.

## Technical Design

Our bespoke design service includes, but is not limited to: design and technical calculations; U-Value calculations, tapered insulation design; wind loading calculations; and rainwater drainage calculations.

## Building Performance

We determine the existing performance of your roof and provide a full assessment for upgrade.

This typically includes: U-Value, drainage and wind uplift calculations; and a tapered design to improve drainage falls.

# REFURBISHMENT PROJECTS

## **Tested Certified Systems**

Axter systems are designed and produced in manufacturing facilities, which are ISO 9001 and ISO 14001 accredited. Systems are in full compliance with all relevant British Standard and Building Regulations, BBA certified and BRoofT4 tested.

## **Accredited Installer Network**

You'll receive access to our network of accredited contractors, who have shown commitment to delivering and installing Axter flat roof waterproofing systems without fault or defect. They are trained in our systems to ensure a smooth and quality application.

## **Quality Assurance**

Our Quality Assurance Team will make regular visits to the site to check the installation is going smoothly and Quality Reports will be shared with all parties.

## **Aftercare and Maintenance**

Our dedicated Quality Assurance Team will be on hand to answer any queries and provide support throughout the entire guarantee period.



# SOCIAL RESPONSIBILITY

Our commitment to a **sustainable and inclusive future** is fully embedded within our business strategy.



### Our Vision

As a business, we understand that we have an important role to play in fighting the climate crisis, by reducing our environmental impact and using all of the tools at our disposal to make positive change.

We also believe in the power of coming together and demanding systemic change from government and industry. We value people over profit, and are determined to protect our community spaces for future generations.

### Climate and Community

We care about our impact on the world and want to do all we can to create positive change. That's why we've partnered with six charities that do just that.



## Axter UK is a Certified B Corporation™

B Corporation is a global movement driving an inclusive, regenerative economy by using business as a force for good.

Achieving B Corporate certification galvanises our commitment to impactful change for people and planet. Through its rigorous assessment and required transparency, it empowers us to measure and enhance our sustainable performance across our entire value chain.

We are proud to be a Certified B Corp, which holds us to a high social and environmental standard and reinforces our drive for positive change in the built environment sector.

As well as undergoing the B Impact Assessment, one of the world's most robust Environment, Social and Governance Assessments, we have also fully measured our scope one, two and three carbon emissions, certified by natural carbon solutions.

Off the back of this, we have designed and built a comprehensive sustainability strategy. We will be guided by our four strategic pillars and recognise the importance of engaging our team and all key stakeholders on our journey. Our four strategic pillars are:

- Transforming our climate impact
- Building a team for the future
- Create resilient roofscapes
- Enriching our communities

To read our full sustainability strategy, click [here](#).





# SUSTAINABILITY

Through strong, dynamic **roofing contractor partnerships** we deliver trust, exceptional service, professionalism and quality workmanship.

# ACCREDITED INSTALLERS



## Our Philosophy

We promote a collaborative approach to waterproofing system manufacture and quality installation. We want to drive up industry standards, eliminate defect and achieve high quality workmanship without compromise.

To do this, we work hand in hand with a qualified and professional network of roofing contractors, that are highly skilled and experienced, and are fully committed to the delivery of Axter waterproofing systems, without fault or need for future remediation.

## Installer Membership Schemes

To reduce risk to both specifier and client, Axter operates two accredited installer schemes: Axtershield and Axter Alliance.

Our accredited installer schemes provide national contractor coverage and are designed to ensure only professional roofing contractors with operatives up-skilled in Axter waterproofing systems are certified to install our roofing materials.

## Application Process

We welcome professional roofing contractors committed to defect-free high quality installation as members of the Axtershield and Axter Alliance approved contractor schemes.

Membership is by application to Axter and dependent upon the roofing contractor's ability to demonstrate professionalism, competency and commitment to health and safety and environmental management standards. For more information about how to become an Axtershield or Axter Alliance Installer please contact us or download an application form.

Phone: 01473 724056

Email: [info@axterltd.co.uk](mailto:info@axterltd.co.uk)

Website: [axterltd.co.uk](http://axterltd.co.uk)

Application form: <https://axter.co.uk/installer-membership>

# GUARANTEES

**We offer reliable roofing with comprehensive guarantees and have supplied long-term insurance backed guarantees for more than 30 years.**

“

Axter total system guarantees are comprehensive and genuinely market leading and this is why we chose to partner with Axter. Axter guarantees are transparent in their offering and are focused upon de-risking the project and indemnifying all associated waterproofing risks of the client and developer, this is quite unique and we value their commitment and honesty.

**Operations Director  
Regal London Ltd**



## Levels of Guarantee

We offer four levels of guarantee and a range of guarantee periods depending on the system specification. Platinum is our most comprehensive guarantee which can be issued for up to 35 years and provides **insurance backed** protection for workmanship, materials, design and installer insolvency.

Only members of the Axtershield installer network can achieve a Platinum guarantee level, and they are duty and legally bound to remedy any fault caused by poor workmanship. For further information, please refer to our Insurance Backed Guarantee brochure, or contact us.

## Platinum

Our most comprehensive insurance backed guarantee covering materials, design, workmanship and insolvency.

## Goldshield

A comprehensive guarantee covering materials, design and workmanship.

## Warranty

The Axter Warranty is a joint liability guarantee most often used for Axter products sold to a roofing contractor via a merchant. Up to 20 years' cover can be offered with an Axter Warranty.

## Silvershield

A comprehensive guarantee covering materials and workmanship.

## Bronzeshield

A comprehensive guarantee covering materials and professional advice.

Phone: 01473 724056

Email: [info@axterltd.co.uk](mailto:info@axterltd.co.uk)

Website: [axterltd.co.uk](http://axterltd.co.uk)

We believe in the power of **coming together to create positive change** within the industry. We contribute to working groups, and we partner with leading industry bodies, trade associations and organisations to ensure industry standards are met. We are driving for change across all areas of our business.





**INDUSTRY PARTNERS**

## Axter Table of Components

As a waterproofing systems company, we only specify complete systems that are tested and guaranteed as a whole.

Each system is made up of multiple components. To simplify this, we've grouped the components into the following categories:

- Primers, Sealants & Adhesives
- Air & Vapour Control Layers
- Insulation 07 Base & Underlayers
- Reinforcements & Tape
- Self Adhesive Membranes
- Capsheets & Top Layers
- Synthetic Membranes
- Liquid Membranes
- Roof Finishes
- Living Roofs
- Accessories
- Separation & Filter layers
- Walkway & Protection
- Geomembranes
- Roof System Assemblies

Only fully tested and certified systems are brought forward into the market, so that we can guarantee the system as a whole and provide you with peace of mind.

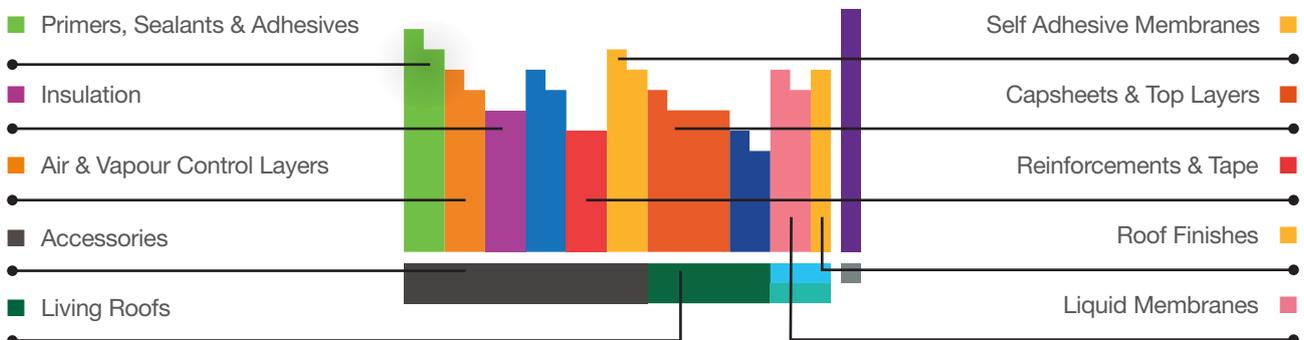
Each component is meticulously selected for its functionality, durability, reliability, cost efficiency and sustainability characteristics, and manufactured to the highest United Kingdom, European and international quality standards. If we do not manufacture the component directly, we partner with carefully chosen suppliers to ensure the best component is sourced, produced and delivered in accordance with our precise requirements and ethics.

To help you navigate our components with ease, we have put together the [Axter Table of Components](#), a tabular display of all core components that make up our product portfolio.

We believe in transparency and appreciate that our clients, specifiers, designers and contractors all require quick and immediate access to our specialist information. The component table provides this, but if you cannot find what you are looking for, please [contact us](#) and we will be happy to help.

\* **Component** /kəm 'pəʊnənt/ **noun**;  
 An individual material element designed to perform a specific function on its own or as part of an Axter specified roof system assembly.

# SYSTEM COMPONENTS



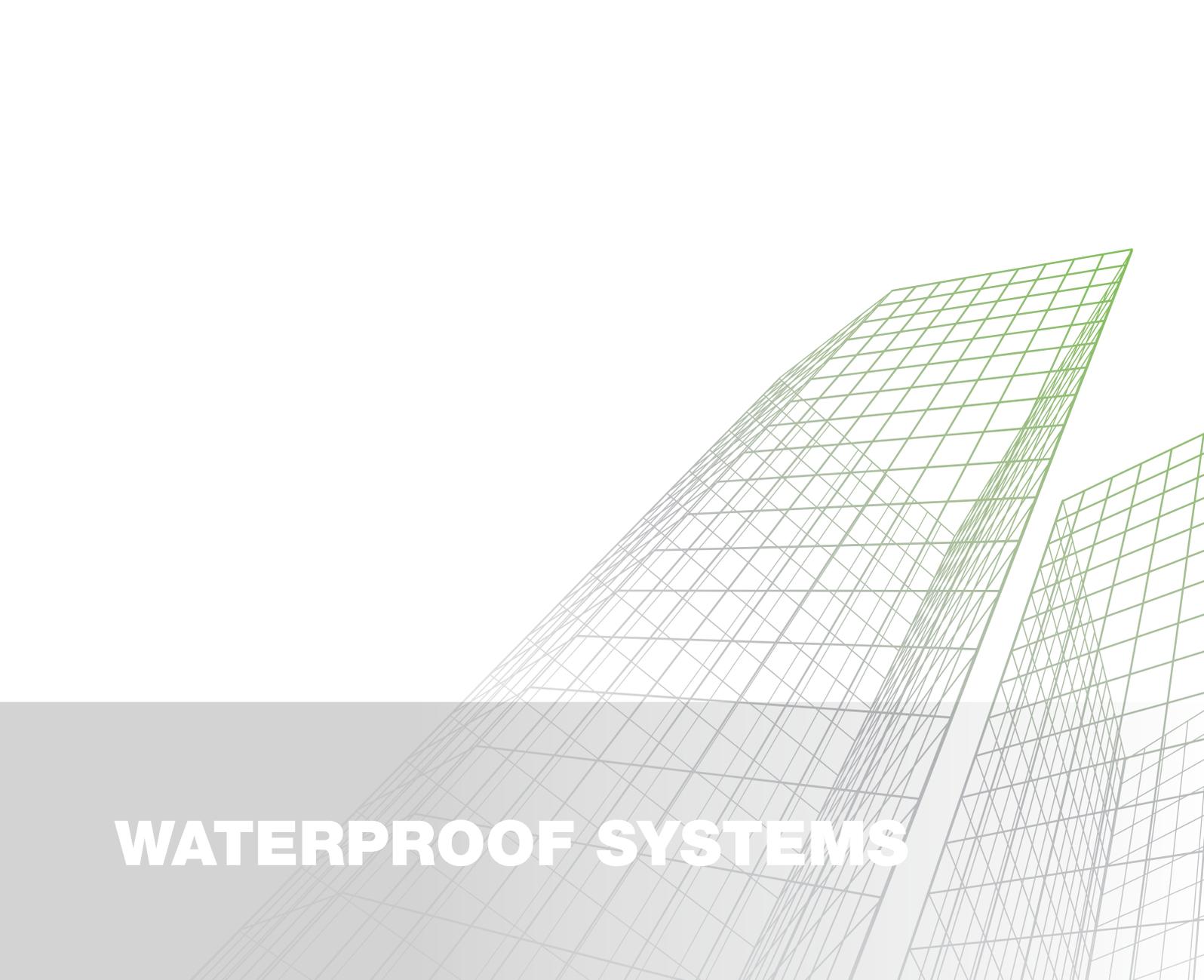
“

Axter have always been proactive in their approach to ensure the correct roof coverings are specified to suit all design brief parameters, and once designed, all details are communicated efficiently throughout the construction team.

Senior Project Manager, Bouygues UK



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# WATERPROOF SYSTEMS

**0.1**

Bitumen

**0.2**

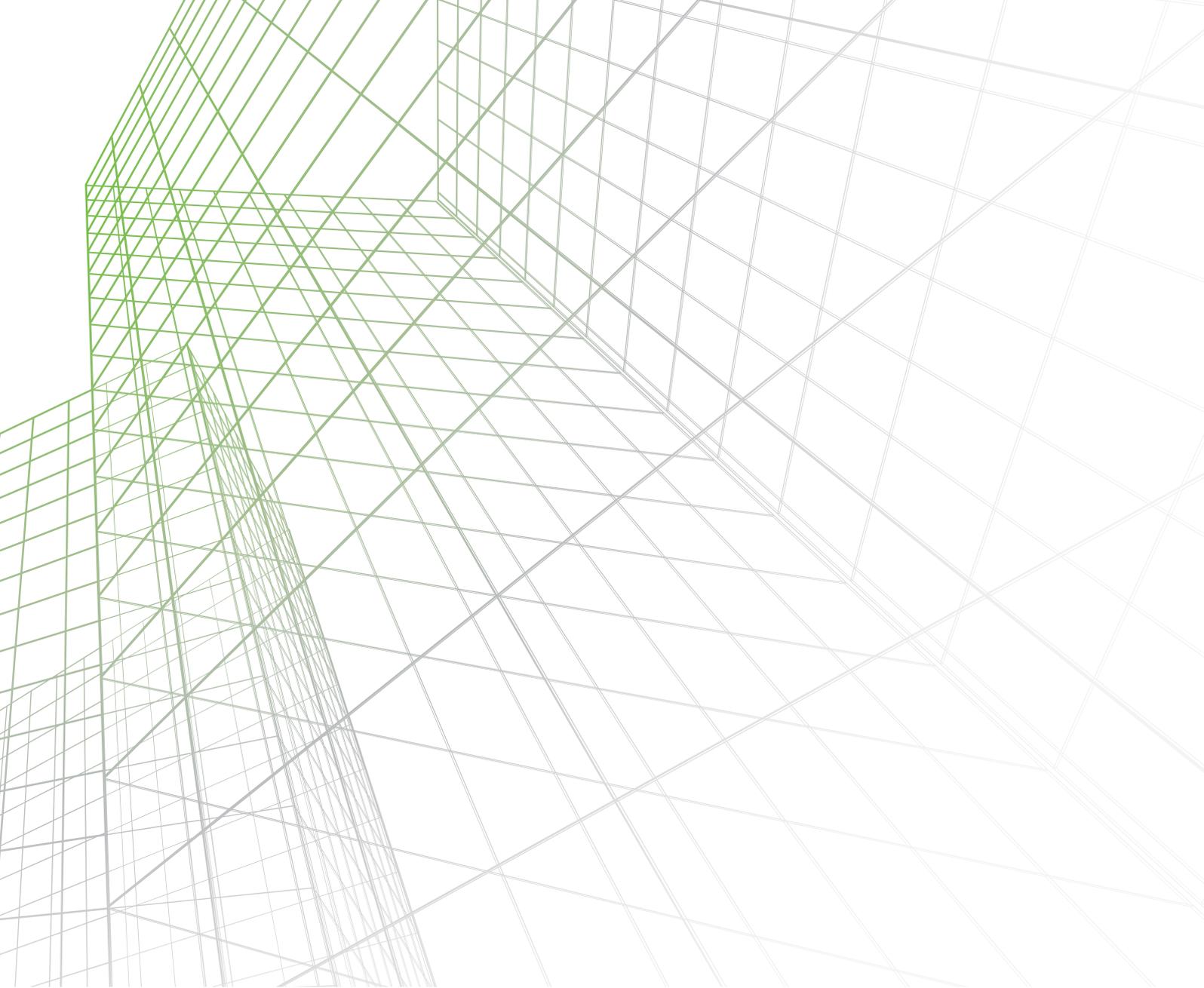
Hot Melt

**0.3**

Single Ply

**0.4**

Cold Liquid



**0.5**

**Flame Free**

**0.6**

**Green Roof**

**0.7**

**Blue Roof**

**0.8**

**Solar PV**

# 0.1 BITUMEN

Excel®

Force®

Hyranger®

Force Dalle™

Cityflor™



## Systems

Our range of high-performance Reinforced Bitumen Membranes (RBM) combine strength with longevity to provide a durable waterproofing solution. Suitable for all roof applications, with a variety of options to meet all build and cost requirements, our broad range of RBM systems include Excel, Force, Hyranger, Force Dalle and Cityflor. We have a long tradition of manufacturing bitumen membranes, and our portfolio has been carefully honed by our expertise to ensure every system performs to the highest standards in order to meet the ever-growing demand for increased life cycle.

## Characteristics

Bitumen is an ancient material continually evolving to provide versatile and robust waterproofing. RBMs have seen a significant increase in popularity due to the technical demand for a high performance, durable and long-lasting roof waterproofing system. A naturally occurring material and a byproduct of oil refining, bitumen is primarily derived from a simple distillation process that extracts lighter commercially significant petrochemical components such as petrol and diesel, leaving behind the heavier bitumen “waste”, which is then combined with other materials to form a versatile waterproofing construction product. Reinforced bitumen membranes can accommodate extreme stresses from thermal movement and wind load, whilst withstanding a higher degree of construction and maintenance traffic, making it an ideal choice for new build and refurbishment projects.



# 0.1 EXCEL®

## Single or multi-layer ALPA® polymer modified RBM System

This is a premium range of high performance reinforced bitumen waterproofing membranes, manufactured with the unique Alpa polymeric binder, making it our most technologically advanced RBM system.

The polymer contains an olefinic co-polymer associated with the synthetic rubber Styrene-Butadiene-

Styrene (SBS). This combination of components creates the unique Alpa formulation manufactured through precise mixing and strict quality control procedures in accordance with ISO 9001. Excel has demonstrated exceptional ageing characteristics with laboratory accelerated ageing tests determining a service life in excess of 50 years.

The Excel range includes Air and Vapour Control Layers (AVCLs), tapered or flat board thermal insulation, underlayers and heavy-duty capsheets self finished in a choice of colours providing a versatile and robust finish to suit roof designs of differing complexity.



WATERPROOFING SYSTEMS | BITUMEN | EXCEL



## 30-Year Guarantee

Excel achieves a 30-year insured system guarantee covering materials, design and workmanship, and has durability in excess of 50 years. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Excel is British Board of Agrément (BBA) certified, accepted by all third party building warranty providers such as LABC and NHBC, and complies in full with the Building Regulations and all relevant British and harmonised European standards.

## Benefits

- BBA approved - certificate number 94/3037 PS1
- Fire Classification Broof(t4): The highest classification for external fire testing in compliance with Approved Document B, when tested as part of an Excel flat roof waterproofing system assembly. This information can be found in the system Fire Test Report available from Axter Ltd.
- Application flexibility - fully or partially bonded, mechanically fixed and completely flame free
- Unique Alpa™ binder providing bond strength flexibility and durability
- Zero fall accredited
- Durability in excess of 50 years
- Multi or single-layer application
- Suitable for use with Solar PV as part of Excel Solar PV Flex system
- Manufactured within ISO 9001 and 14001 certified management systems

# 0.1 EXCEL®

## Performance

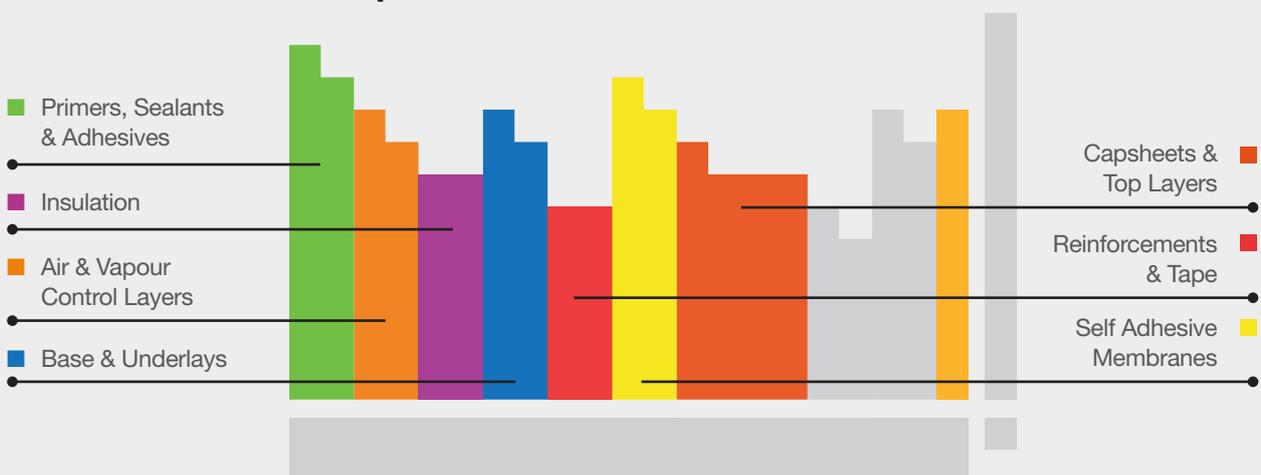
BS 8747 states in Durability Clause 4.9.6 “Most polymer-modified and polyester-reinforced bitumen membranes are expected to have a service life in excess of 50 years.” Properly designed and installed, Excel Alpha polymer modified systems will continue to protect buildings for more than 60 years providing lifetime cost benefits. When products become worn, an overlay will often extend the life of the roof without the need for a costly strip and renew programme.

Excel’s exceptional longevity and performance characteristics can be used on all construction types. All Excel build ups comply with British and European standards and have been approved by the British Board of Agrément under certificate number 94/3037. Excel is classified unrestricted by the requirements of the National Building Regulations and deemed Broof(t4) in accordance with BS EN 13501-5 fire classification of construction products and building elements.

## Installation

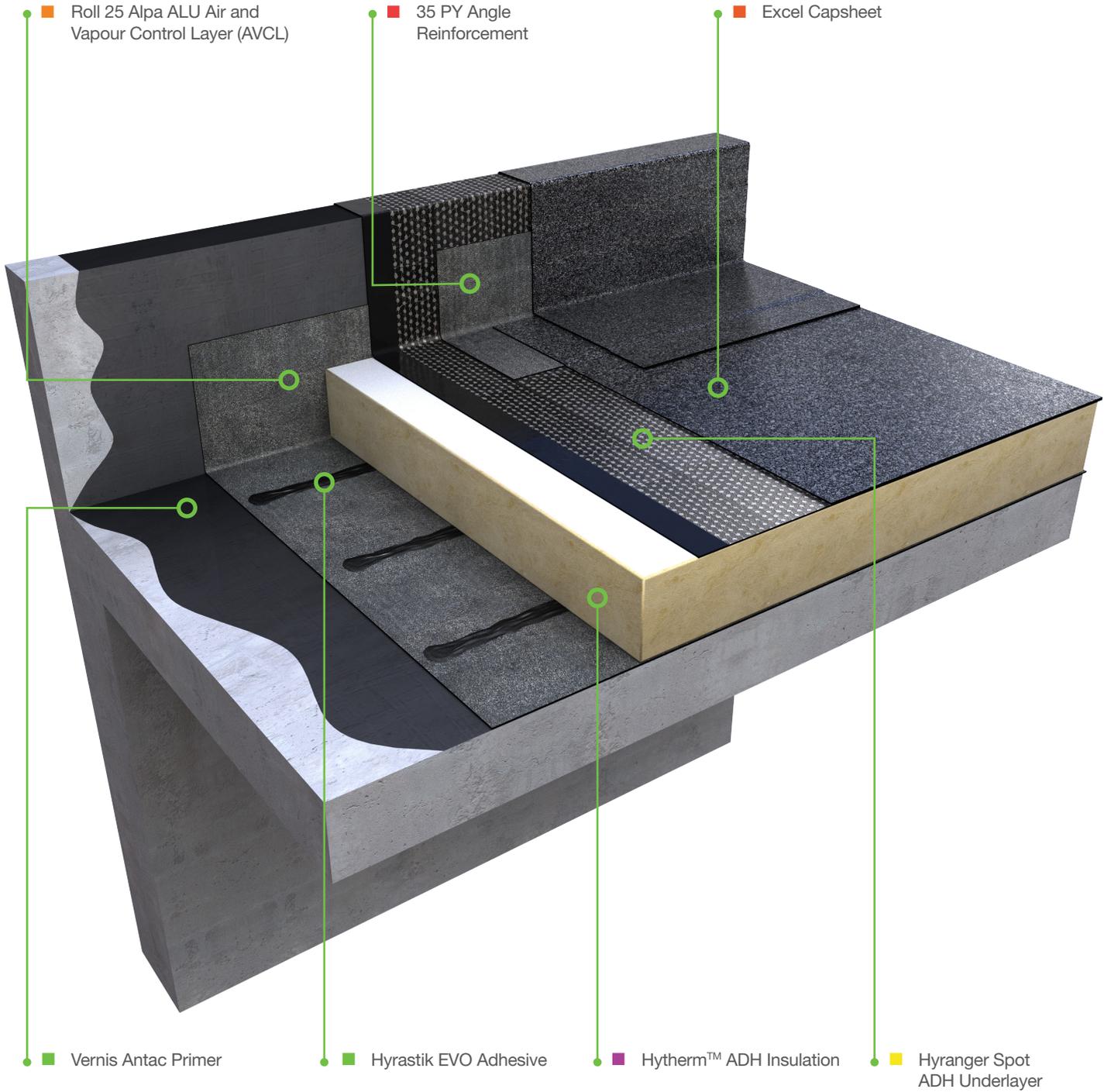
Installation of Excel waterproofing systems is carried out by accredited installers. Excel can be installed on all support structures fully or partially bonded in a flame free, hot air welded, mechanically fixed, or torch applied application on flat, zero fall and pitched roof specifications. All system components are specified and installed to be fully compatible with consistent detailing, in full compliance with the NFRC Safe2Torch guidance.

## Excel - Table of Components

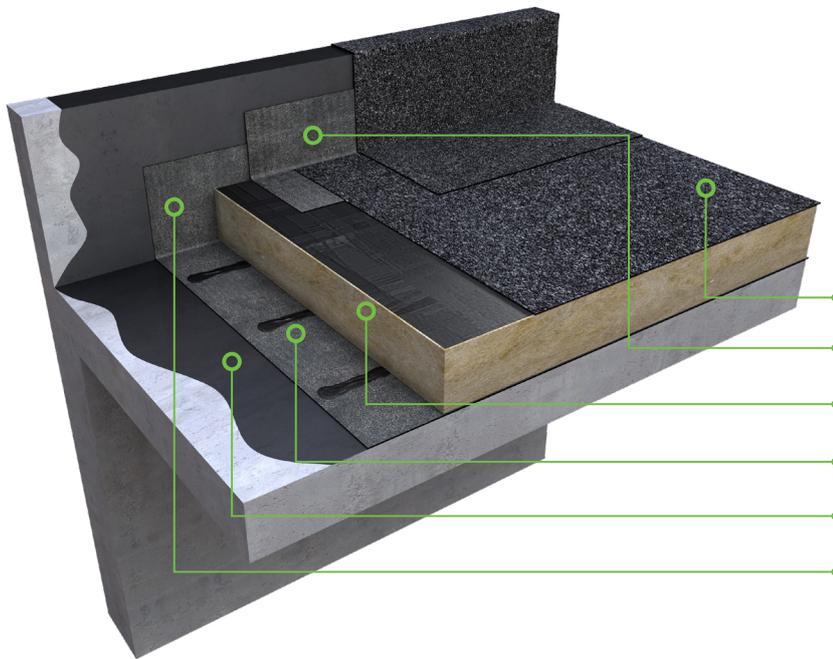


# Excel Warm Roof Multi-Layer

A technologically advanced system including AVCL, thermal insulation and underlayer that can be adapted to suit specific project requirements.



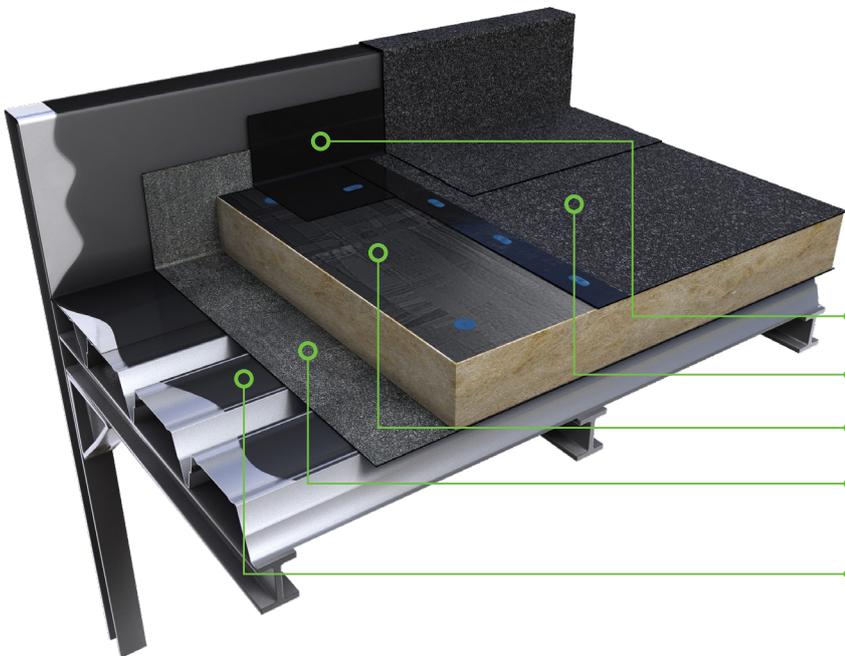
# 0.1 EXCEL<sup>®</sup> (PRODUCTS CONTINUED)



## Excel Warm Roof Single-Layer

A fast track single-layer system suitable for new build and refurbishment projects combining heavy duty capsheet, underlayer and AVCL.

- Excel Capsheet
- 35 PY Angle Reinforcement
- Hytherm BF Insulation
- Hyrastik EVO Adhesive
- Vernis Antac Primer
- Roll 25 Alpa Alu Air and Vapour Control Layer (AVCL)



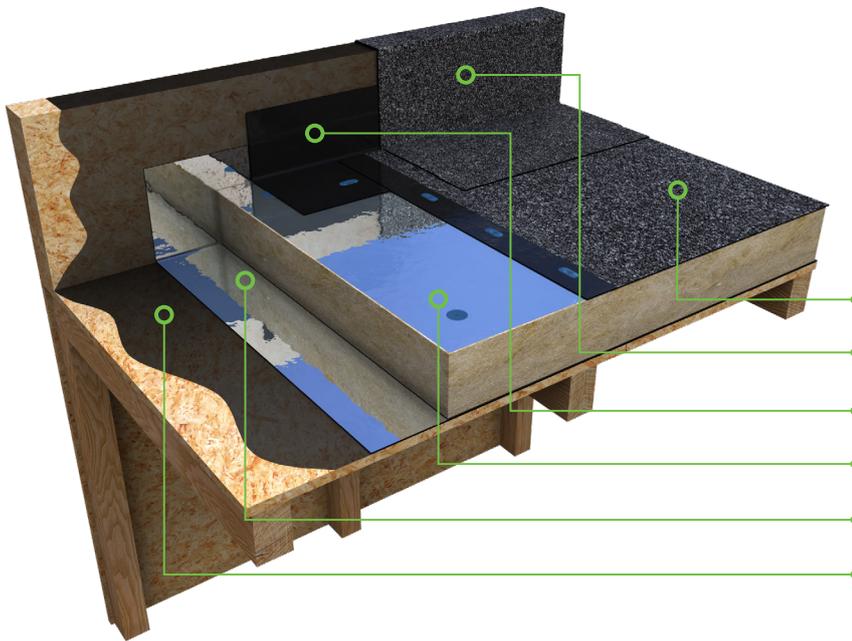
## Excel FM Warm Roof Mechanically Fixed Single-Layer

When speed and durability is required, the Excel Single-Layer mechanically fixed build up is an ideal robust alternative to single ply on large span structures.

- Stickflex PY Angle Reinforcement
- Excel FM Capsheet
- Hytherm BF Insulation
- VAP Alu ADH Air & Vapour Control Layer (AVCL)
- Vernis SA Primer

## Excel FM Warm Roof Flame Free Mechanically Fixed Single-Layer

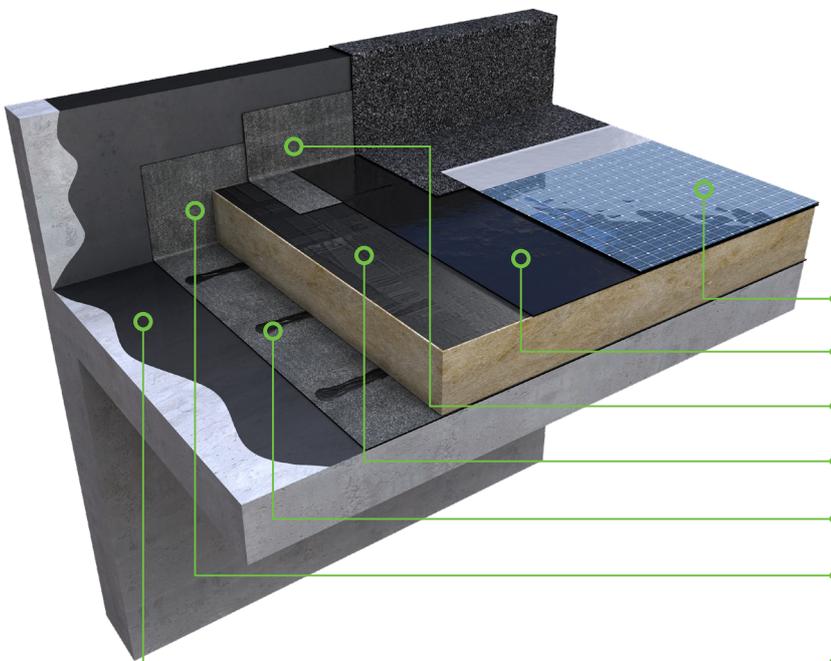
A completely flame free, mechanically fixed, fire safe system with Neo-Bitumen flame free detailing for constructions where naked flame is prohibited.



- Excel FM Capsheet
- Force 4000 Capsheet
- Stickflex PY Angle Reinforcement
- Hytherm FM Insulation
- SK VAP Air and Vapour Control Layer (AVCL)
- Vernis SA primer

## Excel Solar PV Flex Warm Roof Single-Layer

A unique single-layer waterproofing system with an integrated and lightweight photovoltaic module finish. Maximising roof use whilst minimising risk.



- Excel Solar PV Flex
- Excel Capsheet
- 35 PY Angle Reinforcement
- Hytherm BF Insulation
- Hyrastik EVO Adhesive
- Roll 25 Alu Alu Air and Vapour Control Layer (AVCL)
- Vernis Antac Primer

This is a superior range of high performance SBS polymer modified reinforced bitumen membranes. Engineered to guarantee durability, Force self protected systems have exceptional ageing characteristics and a proven track record of excellent performance.

As the name suggests, Force has been developed to be strong and long lasting, and is designed to withstand the rigours of the modern construction environment. The membranes have been manufactured to incorporate enhanced polymer content and high strength reinforcements that provide outstanding material durability, flexibility and workability.

Force systems guarantee a complete specification solution comprising Air and Vapour Control Layers (AVCLs), tapered or flat board thermal insulation, underlayers and robust capsheets self finished in a choice of colours. This provides a versatile and robust finish to suit both new construction and refurbishment projects.

## 25-Year Guarantee

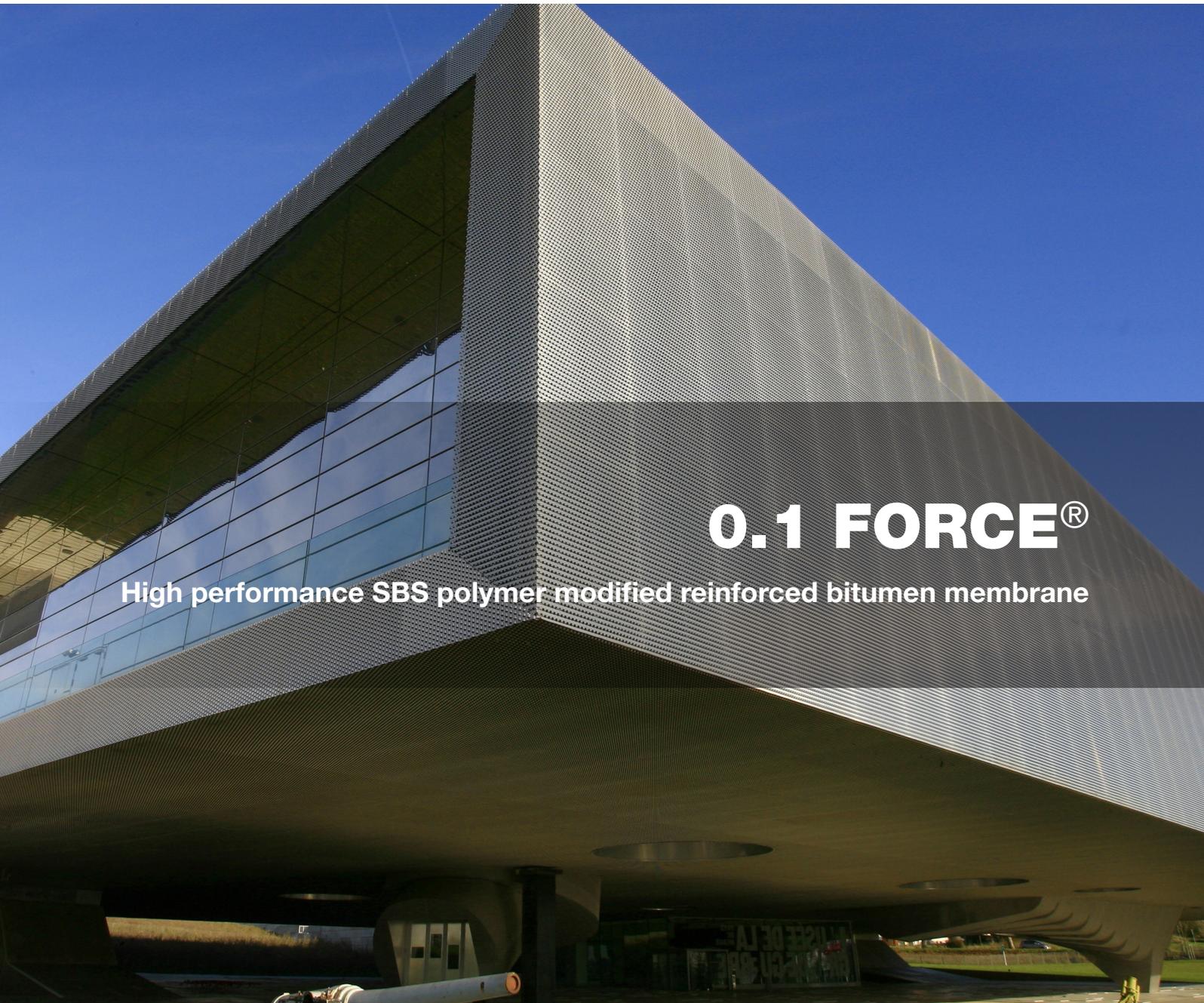
Force achieves a 25-year insured guarantee covering materials, design, and workmanship, and has a service life in excess of 50 years. Additional

independent insurance backed insolvency protection, for Axter's materials, and the workmanship of the accredited roofing contractor is also available for 10 years in respect to Platinum Guarantees.

## Benefits

- BBA approved - certificate number 15/5222
- Fire Classification Broof(t4): The highest classification for external fire testing in compliance with Approved Document B, when tested as part of a Force flat roof waterproofing system assembly. This information can be found in the system Fire Test Report available from Axter Ltd.
- Application versatility – flame free, hot air welded, cold bonded and torch applied
- Advanced polymer content and high strength reinforcement
- Durability in excess of 30 years
- Excellent bond strength
- Designed for multi or single-layer applications
- Approved for all structural deck types (concrete, metal and timber)
- Manufactured within ISO 9001 and 14001 certified management systems





# 0.1 FORCE®

High performance SBS polymer modified reinforced bitumen membrane

## Accreditations

Force is British Board of Agrément (BBA) certified, accepted by all third party building warranty providers such as LABC and NHBC, and complies in

full with the Building Regulations and all relevant British and harmonised European standards.

# 0.1 FORCE®

## Performance

The Force system is extremely versatile and can be adapted to suit the exact requirements of the roof, ensuring the best, most appropriate system is specified. Application flexibility and performance characteristics make Force ideal for use on all construction types as well as an overlay system for cost-effective roof renewal.

All Force system assemblies comply with British and European standards and have been approved by the British Board of Agrément under certificate number 15/5222 PS3. Force is classified as unrestricted by the requirements of the Building

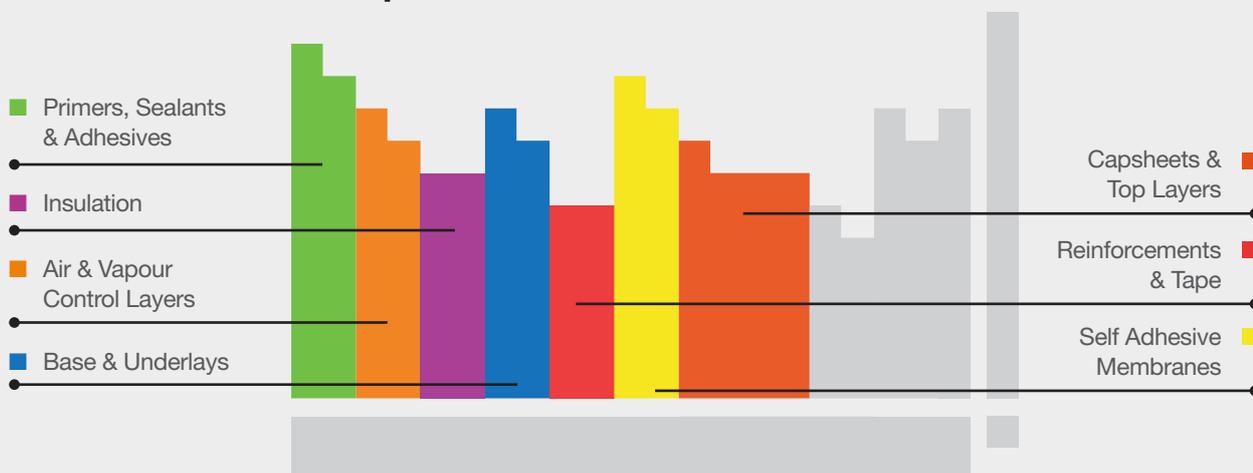
Regulations Approved Document B: Fire Safety and certified Broof(t4) in accordance with BS EN 13501-5:2005 fire classification of construction products and building elements. Force systems have also proven themselves to meet the performance standards set out in Building Bulletin 93 Acoustic Design of Schools when combined with Hytherm MF non-combustible insulation.

## Installation

Installation of Force waterproofing systems is carried out by accredited installers whose operatives have successfully attended Axter's RBM upskilling course. Force systems can be installed in a single or multi-layer

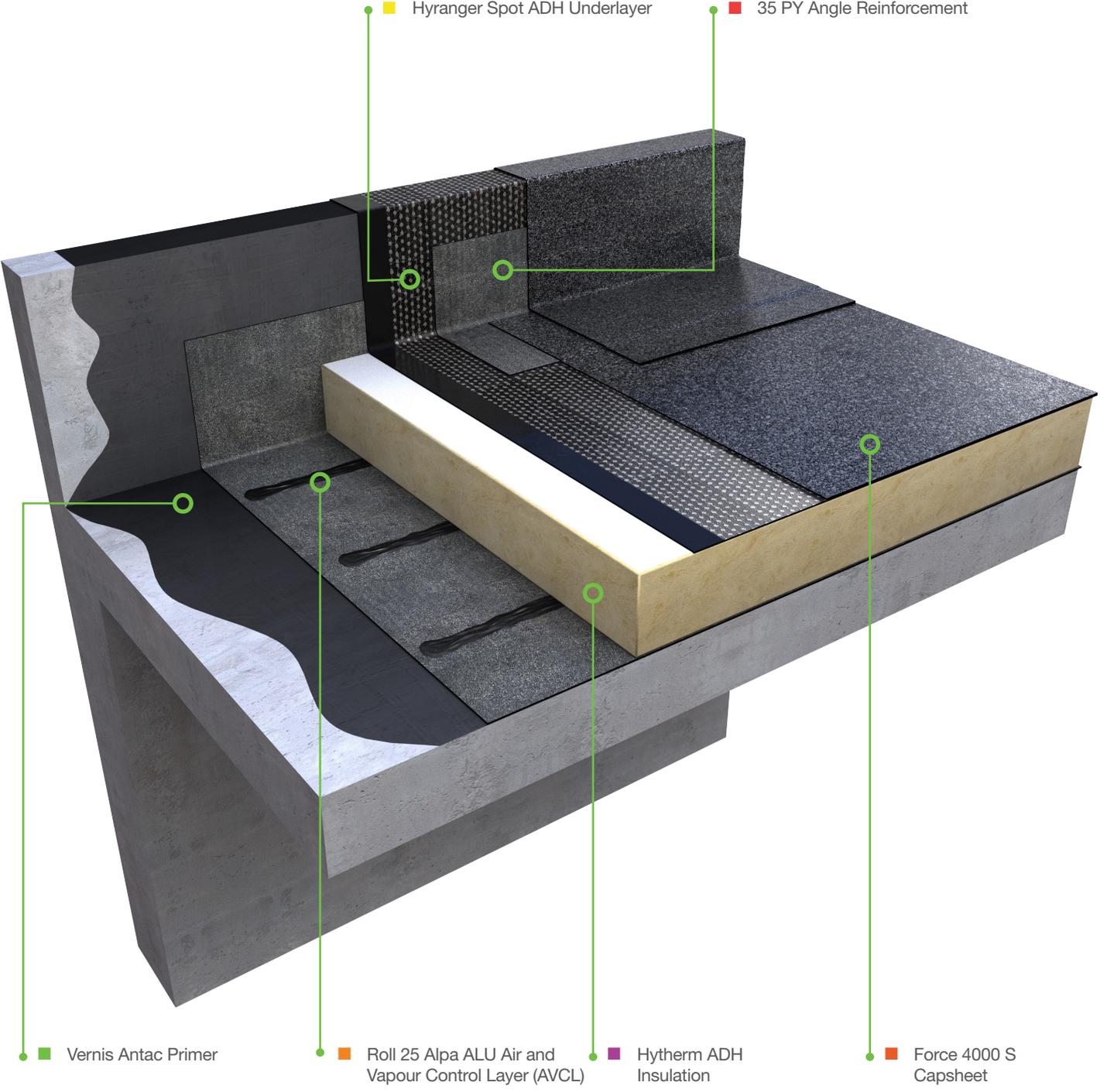
application on all support structures, and can be fully or partially bonded in a flame free, hot air welded, cold bonded or torch applied application on flat and pitched roof specifications. All system components are specified and installed to ensure compatibility and single source responsibility, and detailing is completed in full compliance with Axter recommendations and the NFRC Safe2Torch guidance.

## Force - Table of Components



# Force Warm Roof Multi-Layer

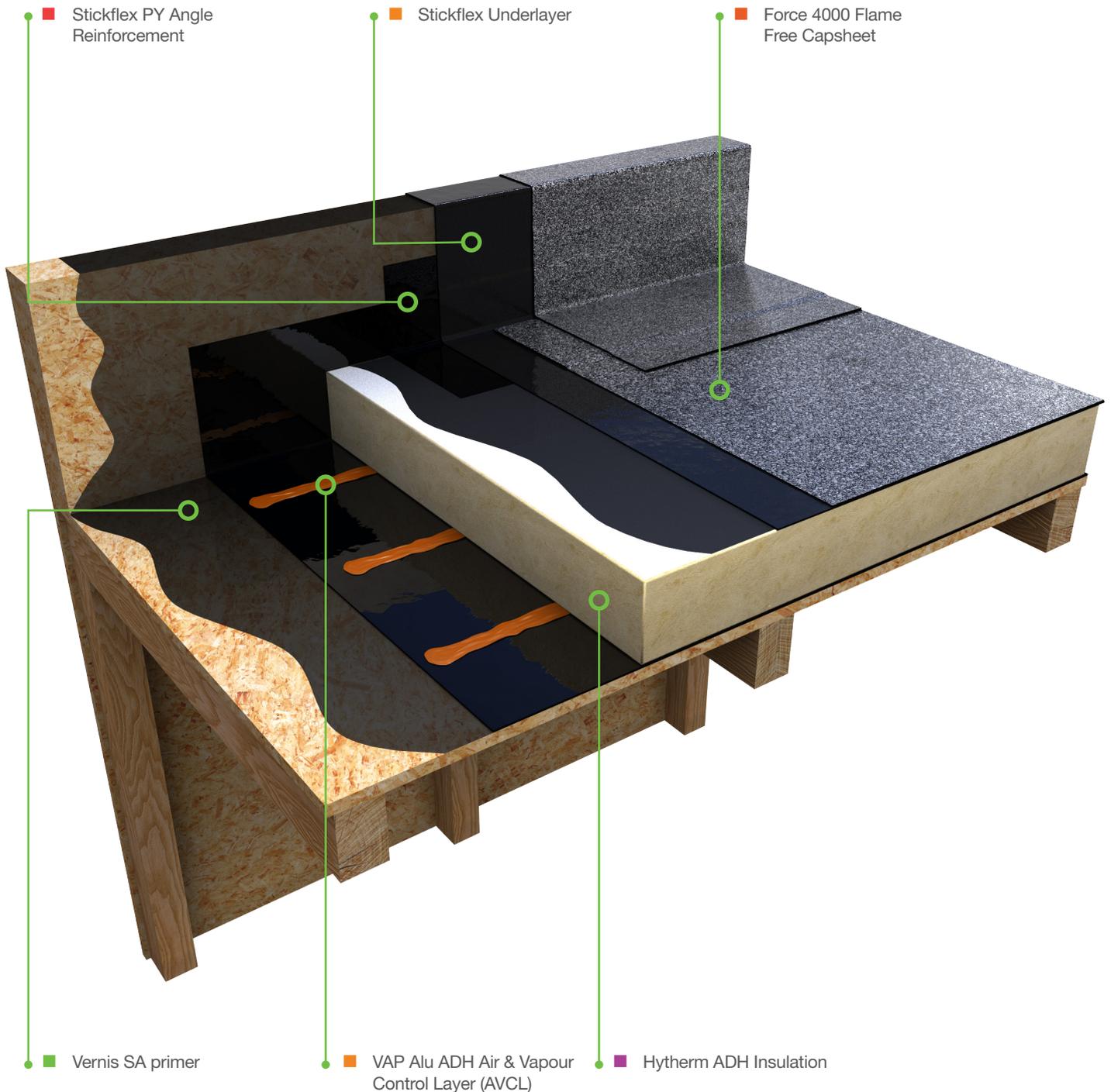
A superior RBM system incorporating AVCL, thermal insulation and underlayer that can be adapted to suit specific project requirements.



# 0.1 FORCE® (PRODUCTS CONTINUED)

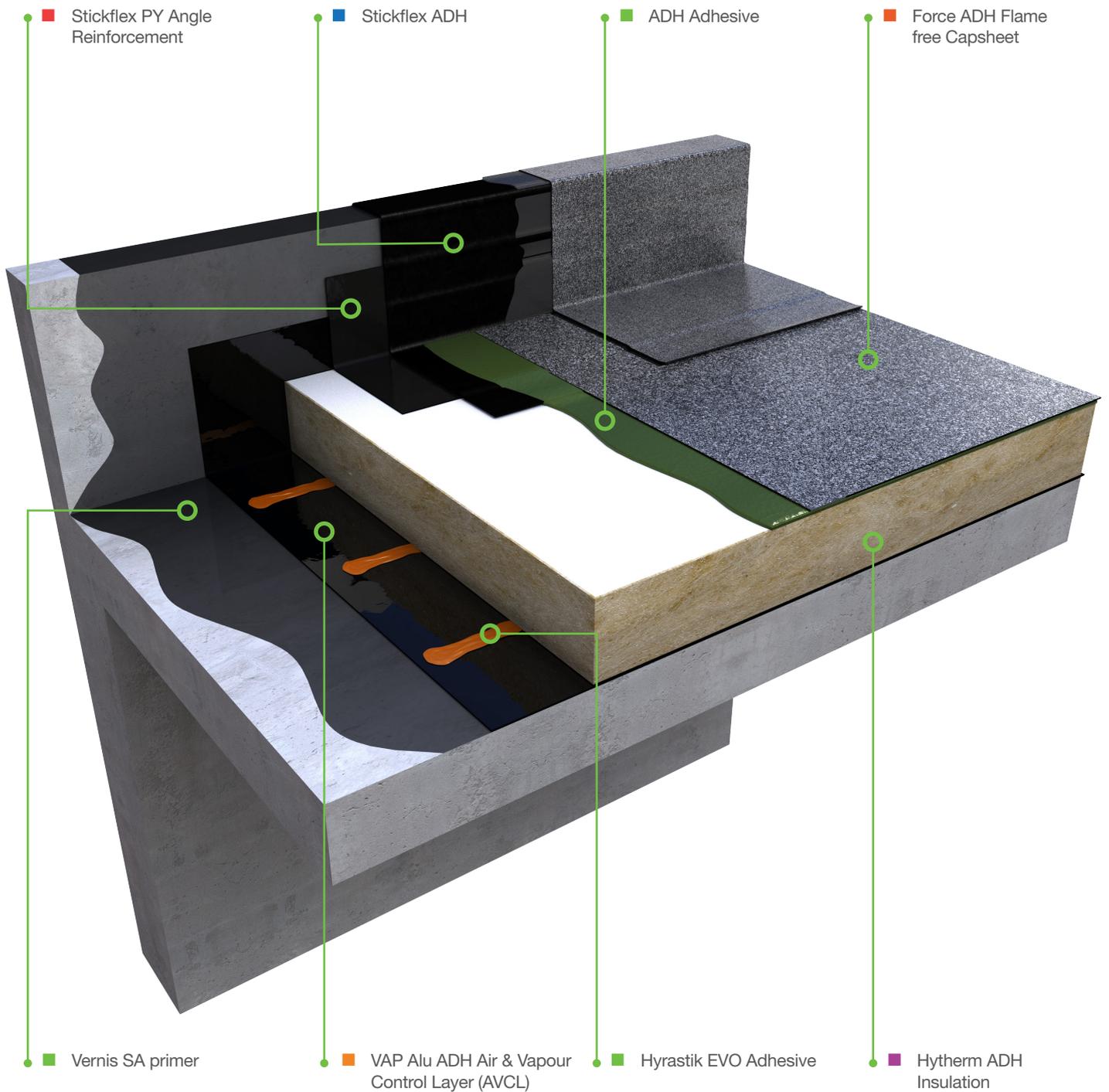
## Force Neo-Bitumen Flame Free Warm Roof Multi-Layer

A superior RBM system incorporating AVCL, thermal insulation and underlayer that can be adapted to suit specific project requirements.



## Force ADH Flame Free Warm Roof Single or Multi-Layer

A superior RBM system incorporating AVCL, thermal insulation and underlayer that can be adapted to suit specific project requirements.





# 0.1 HYRANGER®

Multi-layer SBS polymer modified RBM system

Hyranger is a well established and trusted flat roof waterproofing system, comprising polyester reinforced SBS polymer modified bitumen membranes, developed to guarantee strength, stability, performance and cost efficiency.

The system has been specified by professionals for over 40 years, has a proven performance track record and is suitable for use on all new build and refurbishment projects.

Hyranger systems guarantee a complete specification solution comprising Air and Vapour Control Layers (AVCLs), tapered or flat board thermal insulation, underlayers and robust capsheets self finished in a choice of colours, providing a versatile and robust finish.



WATERPROOFING SYSTEMS | BITUMEN | HYRANGER



## 20-Year Guarantee

Hyranger achieves a 20-year insured system guarantee covering materials, design and workmanship, and has a service life in excess of 50 years. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Hyranger is British Board of Agrément (BBA) certified, accepted by all third party building warranty providers such as LABC and NHBC, and complies in full with the Building Regulations and all relevant British and harmonised European standards.

## Benefits

- BBA approved - certificate number 15/5222 PS3
- Approved Document B: Fire Safety compliant
- Durable, reliable, cost-effective system
- Excellent performance characteristics, including elasticity, fatigue resistance and flexibility at low temperatures
- Membrane resists impact and tearing
- Stable in extreme weather conditions
- Suitable for a variety of applications on both new build and refurbishment
- Has a comprehensive range of rooftop accessory components to ensure compatibility and single source responsibility for the roof system assembly
- Manufactured within ISO 9001 and 14001 certified management systems

# 0.1 HYRANGER®

## Performance

Hyranger incorporates elastomeric membrane technology providing a durable and flexible waterproofing system. The system is versatile with a variety of self finished capsheets providing different aesthetic finishes. All Hyranger system assemblies comply with British and European standards and have been approved by the British Board of Agrément under certificate number 15/5222 PS3. Hyranger is classified as unrestricted by the requirements of the Building Regulations Approved

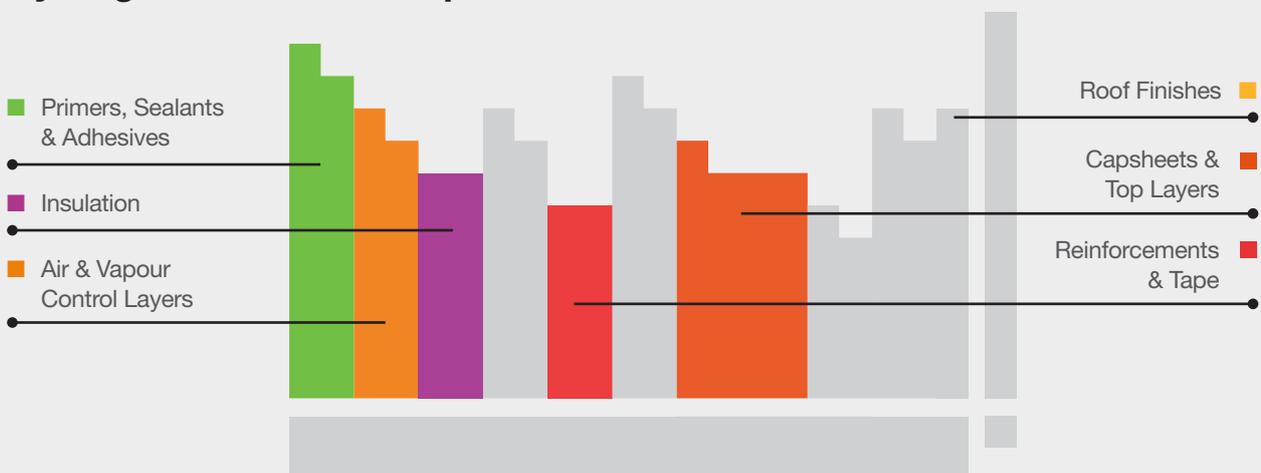
Document B: Fire Safety and certified Broof(t4) in accordance with BS EN 13501-5:2005 fire classification of construction products and building elements. Hyranger is also available with advanced graphite fire resistant technology (Hyranger 40 FR) with self-extinguishing properties.

## Installation

Installation of Hyranger waterproofing systems is carried out by accredited Axtershield installers whose operatives have successfully attended Axters RBM upskilling course. Hyranger

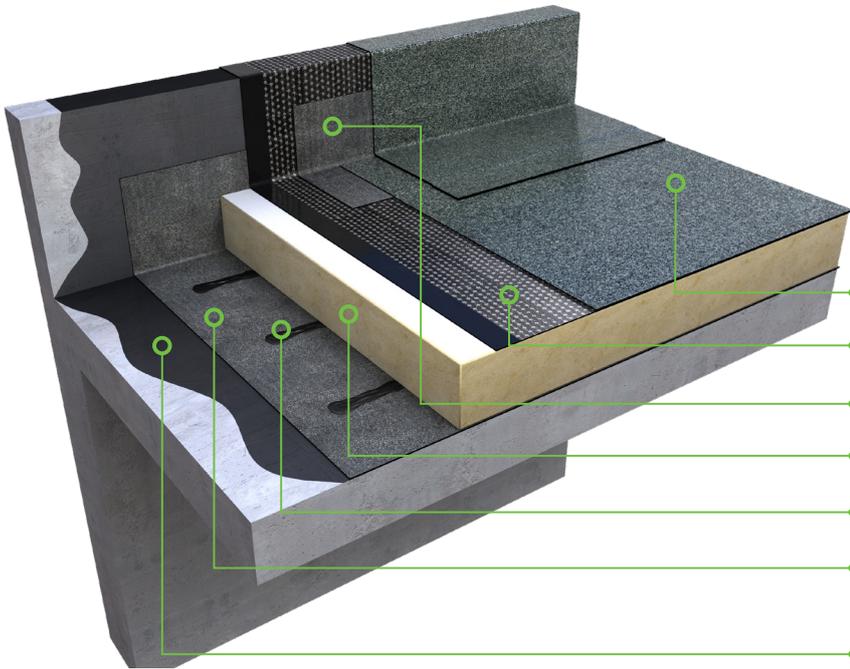
systems are installed in a multi-layer application on all deck types, and can be fully or partially bonded in a completely flame free, hot air welded or torch applied application on flat and pitched roof specifications. All system components are specified and installed to ensure compatibility and single source responsibility, and detailing is completed in full compliance with Axters recommendations and the NFRC Safe2Torch guidance.

## Hyranger - Table of Components



## Hyranger Warm Roof Multi-Layer

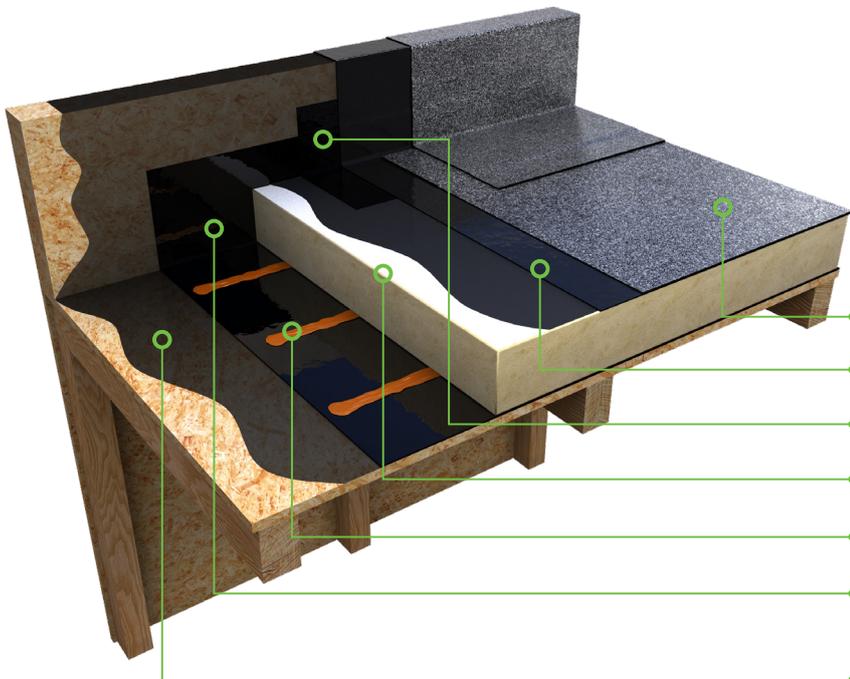
A reliable warm roof multi-layer system combining a torch bonded capsheet and self adhesive/heat activated underlayer membrane technology.



- Hyranger 40 PY FY Capsheet
- Stickflex Sanded Underlayer
- 35 PY Angle Reinforcement
- Hytherm ADH Insulation
- Hyrastik EVO Adhesive
- Roll 25 Alpa ALU Air and Vapour Control Layer (AVCL)
- Vernis Antac Primer

## Hyranger Neo-Bitumen Flame Free Warm Roof Multi-Layer

A completely flame free multi-layer specification providing fire safety whilst delivering durability and reliability.



- Excel Capsheet
- Stickflex Underlayer
- Stickflex PY Angle Reinforcement
- Hytherm ADH Insulation
- Hyrastik EVO Adhesive
- Roll 25 Alpa ALU Air and Vapour Control Layer (AVCL)
- Vernis Antac Primer

The first of its kind, Force Dalle is an innovative hybrid waterproofing system that combines the benefits of hot melt systems and advanced polymer modified bitumen membrane technology to create a unique and highly durable system that is a cost-effective alternative to traditional hot melt.

Force Dalle is engineered for use on all warm, inverted and cold roof types in accordance with BS 6229:2018 and in conjunction with all roof finishes. It is specifically developed to provide risk-free added value and speed to the construction programme due to its ultra-fast minimal component installation process.

# 0.1 Force Dalle™

Hybrid structural waterproofing and blue roof system combining the benefits of hot melt with advanced bitumen membrane technology



## 20-Year Guarantee

Force Dalle achieves a 20-year insured system guarantee covering materials, design and workmanship, and has a service life in excess of 50 years. A 25-year guarantee will be achieved when installed in a multi-layer system assembly. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Force Dalle is British Board of Agrément (BBA) certified, accepted by all third party building warranty providers such as LABC and NHBC, and complies in full with the Building Regulations and all relevant British and harmonised European standards.

## Benefits

- BBA approved - certificate number 15/5222 PS1
- Approved Document B: Fire Safety compliant
- Robust and ultra-fast installation
- BBA accredited for use in zero fall cold, warm and inverted roof applications - See Agrément Certificate No. 15/5222 PS1 or contact technical support [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk) for further information.
- BBA accredited for use in Aquamodul blue roof systems - See Agrément Certificate No. 15/5222 PS1 or contact technical support [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk) for further information.
- Resistant to root penetration – BBA accredited for use in extensive, intensive and biodiverse green roofs. See Agrément Certificate No. 15/5222 PS1 or contact technical support [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk) for further information.
- Application versatility - can be used on warm roofs, inverted roofs, cold roofs and completely flame free roofs
- Cost-effective alternative to hot melt
- Manufactured within ISO 9001 and 14001 certified management systems



# 0.1 FORCE Dalle™

## Performance

Force Dalle is a single or multi-layer waterproofing system suitable for a variety of applications including blue roofs and living roofs, which has exceptional durability and performance characteristics and can be used on all construction types. All Force Dalle system assemblies comply with British and European standards and have been approved by the British Board of Agrément under certificate number 15/5222 PS1 including zero fall application. Force

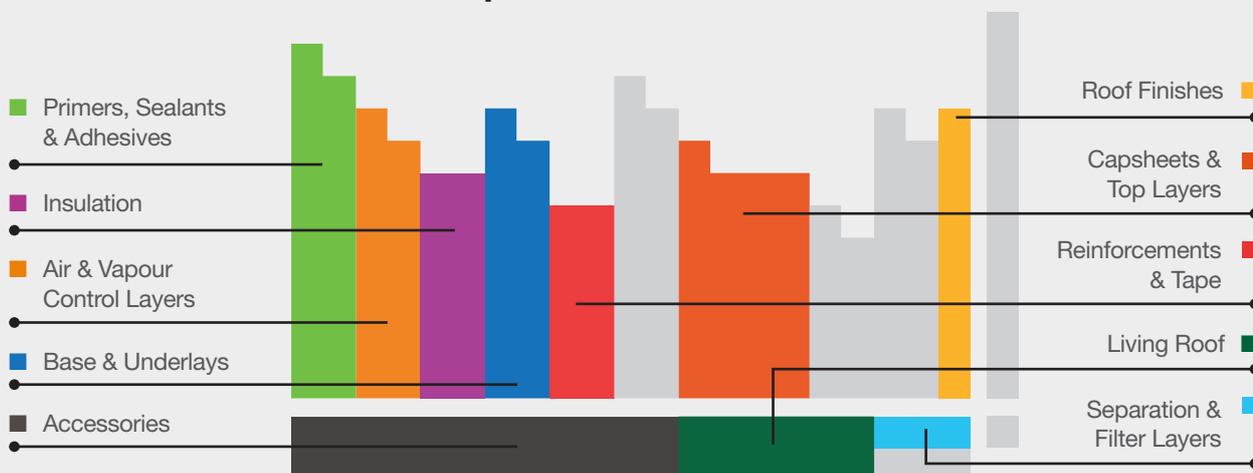
Dalle is classified unrestricted by the requirements of the National Building Regulations and deemed Broof(t4) in accordance with BS EN 13501-5:2005 fire classification of construction products and building elements.

## Installation

Installation of Force Dalle waterproofing systems is carried out by accredited Axtershield installers whose operatives have successfully attended Axters RBM upskilling course. Force Dalle systems can

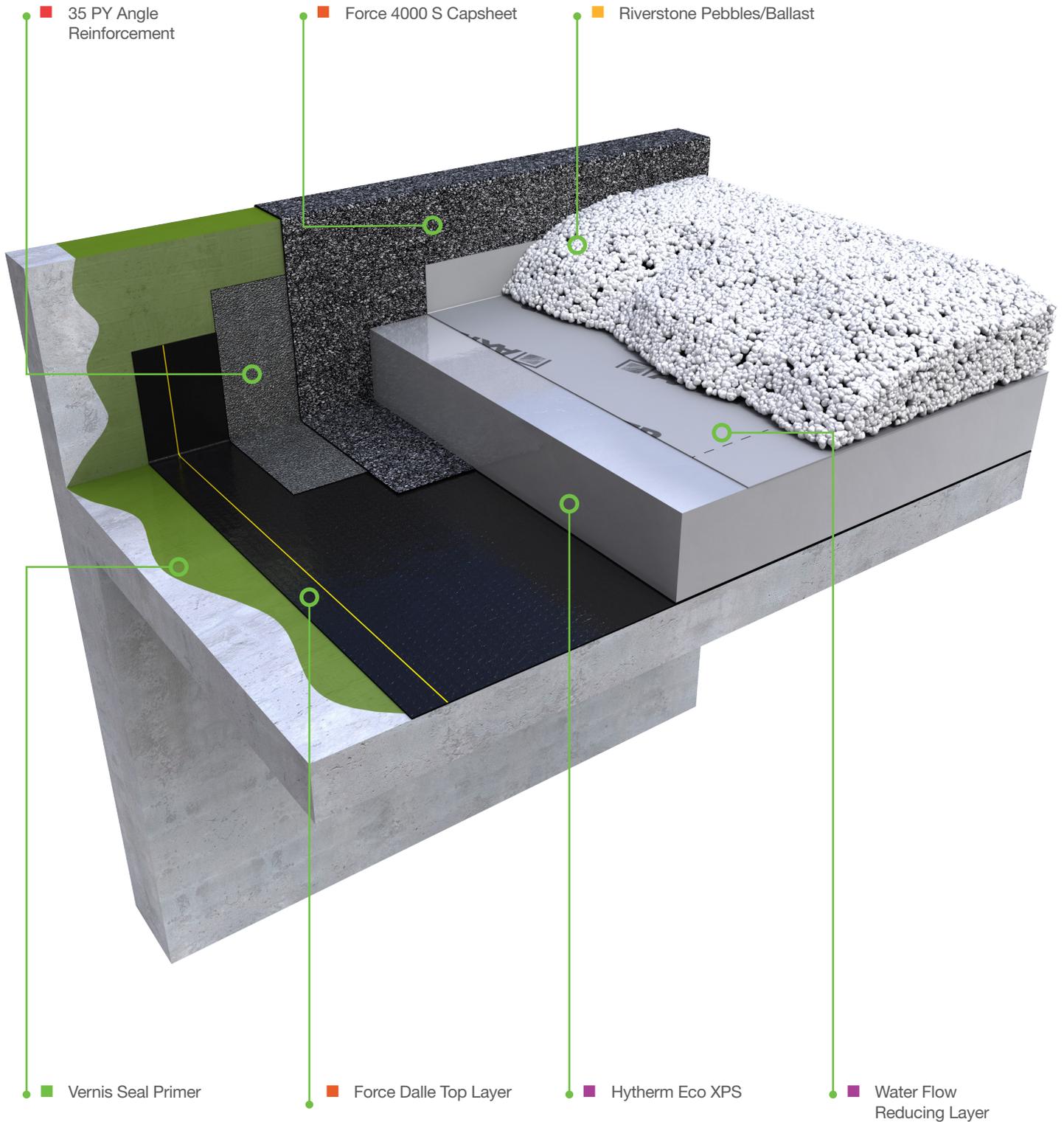
be installed on all deck types and can be fully or partially bonded in a completely flame free, hot air welded or torch applied application on flat roofs, terraces, balconies and podium decks. All system components are specified and installed to ensure compatibility and single source responsibility, and detailing is completed in full compliance with Axters recommendations and the NFRC Safe2Torch guidance.

## Force Dalle - Table of Components



# Force Dalle Inverted Roof Single-Layer

A single-layer hybrid waterproofing system providing durable protection, BBA approved for zero falls.

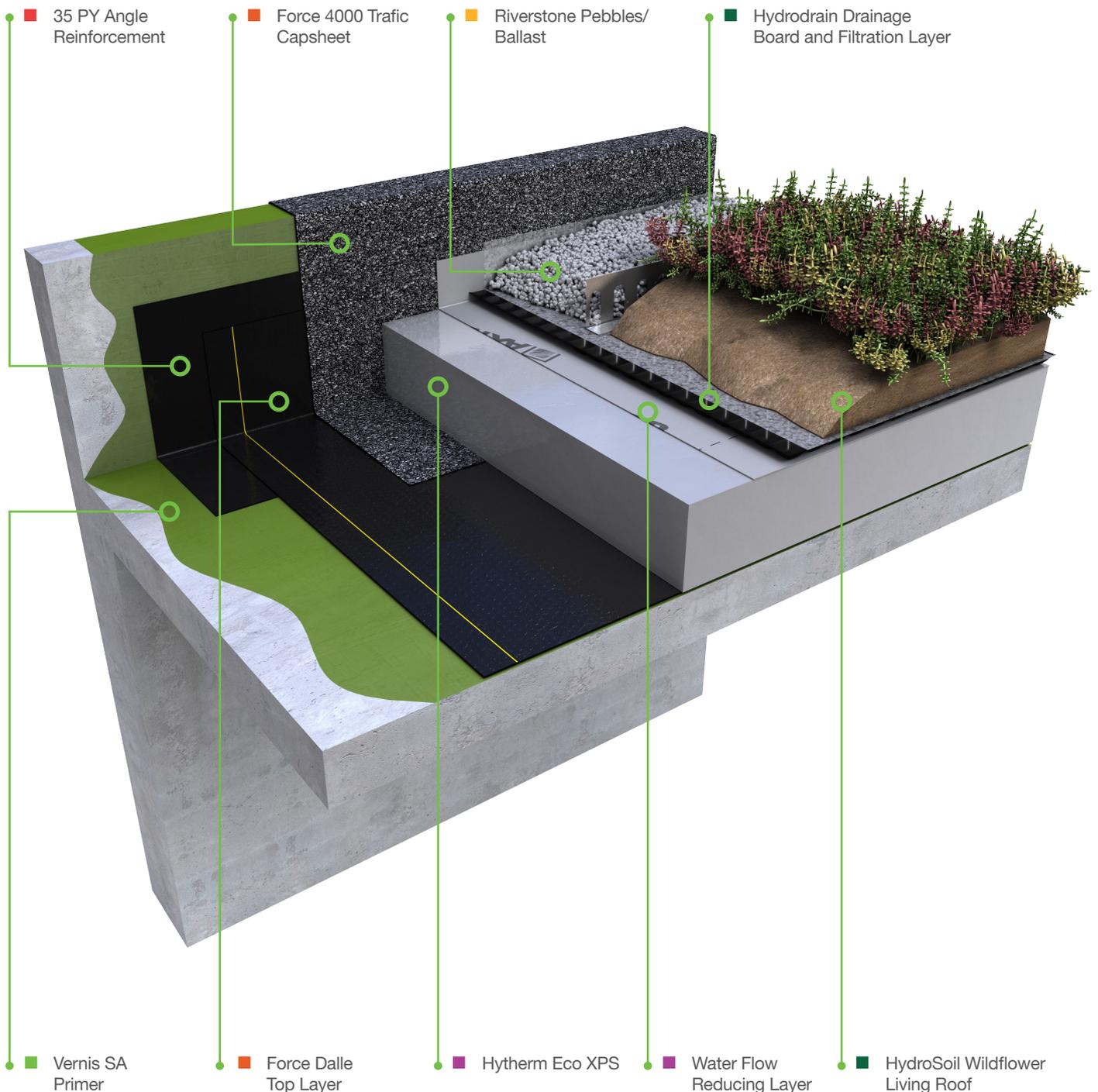


# 0.1 Force Dalle™

(PRODUCTS CONTINUED)

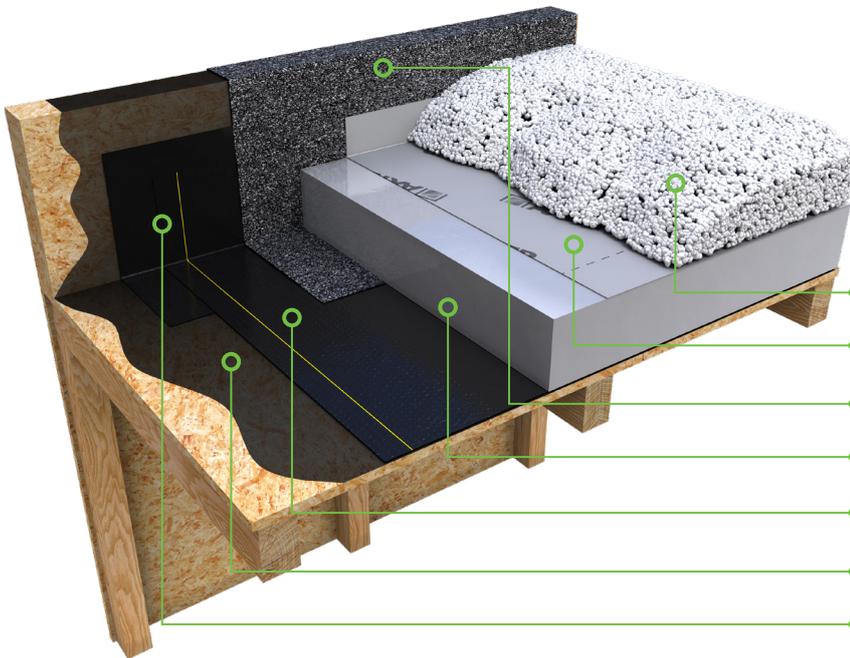
## Force Dalle Inverted Roof Single-Layer Living Roof

A single-layer hybrid waterproofing system providing durable protection, BBA approved for zero falls and living roofs.



## Force Dalle Neo-Bitumen® Flame Free Inverted Roof Single-Layer

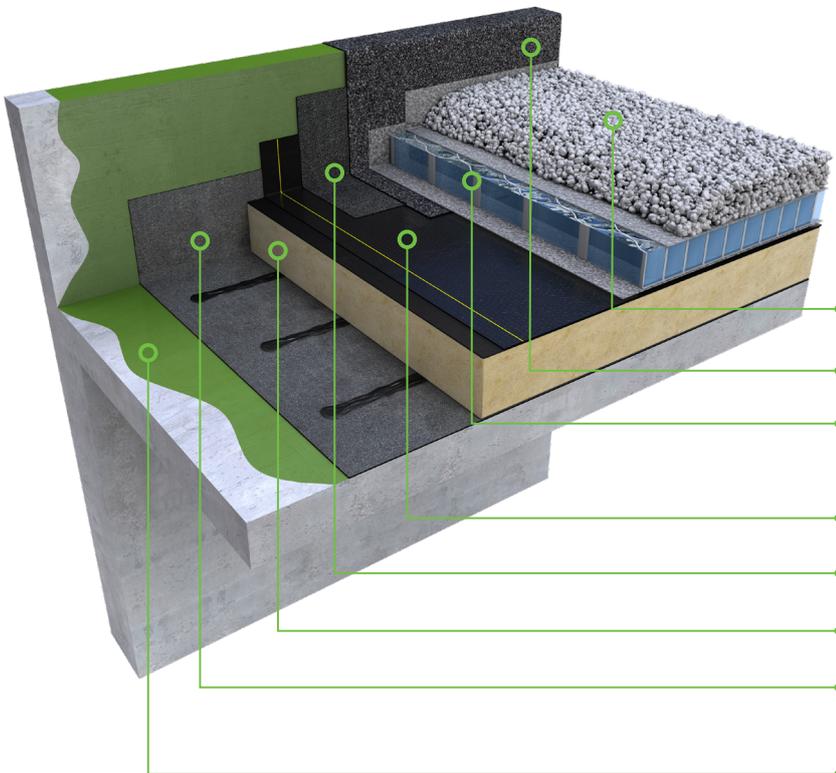
A completely flame free, mechanically fixed, fire safe system with Neo-Bitumen flame free detailing for constructions where naked flame is prohibited.



- Riverstone Pebbles/Ballast
- Water Flow Reducing Layer
- Force 4000 Traffic Capsheet
- Hytherm Eco XPS
- Force Dalle Top Layer
- Vernis SA Primer
- Stickflex PY Angle Reinforcement

## Force Dalle Warm Roof Single-Layer with Aquamodul® Blue Roof

When speed and durability is required, the Excel single-layer mechanically fixed build up is an ideal robust alternative to single ply on large span structures.



- Riverstone Pebbles/Ballast
- Force 4000 S Capsheet
- Aquamodul Blue Roof With Geotextile Filter Layer
- Force Dalle Top Layer
- 35 PY Angle Reinforcement
- Hytherm BF
- Hyranger TS CPV Air and Vapour Control Layer (AVCL)
- Vernis Seal Primer

Cityflor warm roof living roof systems are robust SBS polymer modified bitumen membranes for use in extensive and intensive green, biodiverse brown and modular green roofs, as well as protected terrace, podium and balcony applications.

The anti-root technology has proven long-term resistance to root penetration, fertilisers and insecticides, and is specifically designed to withstand the application of intensive landscaping finishes during and post construction.

## 25-Year Guarantee

Cityflor achieves up to a 25-year insured system guarantee covering materials, design and workmanship, and has a service life in excess of 50 years. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Benefits

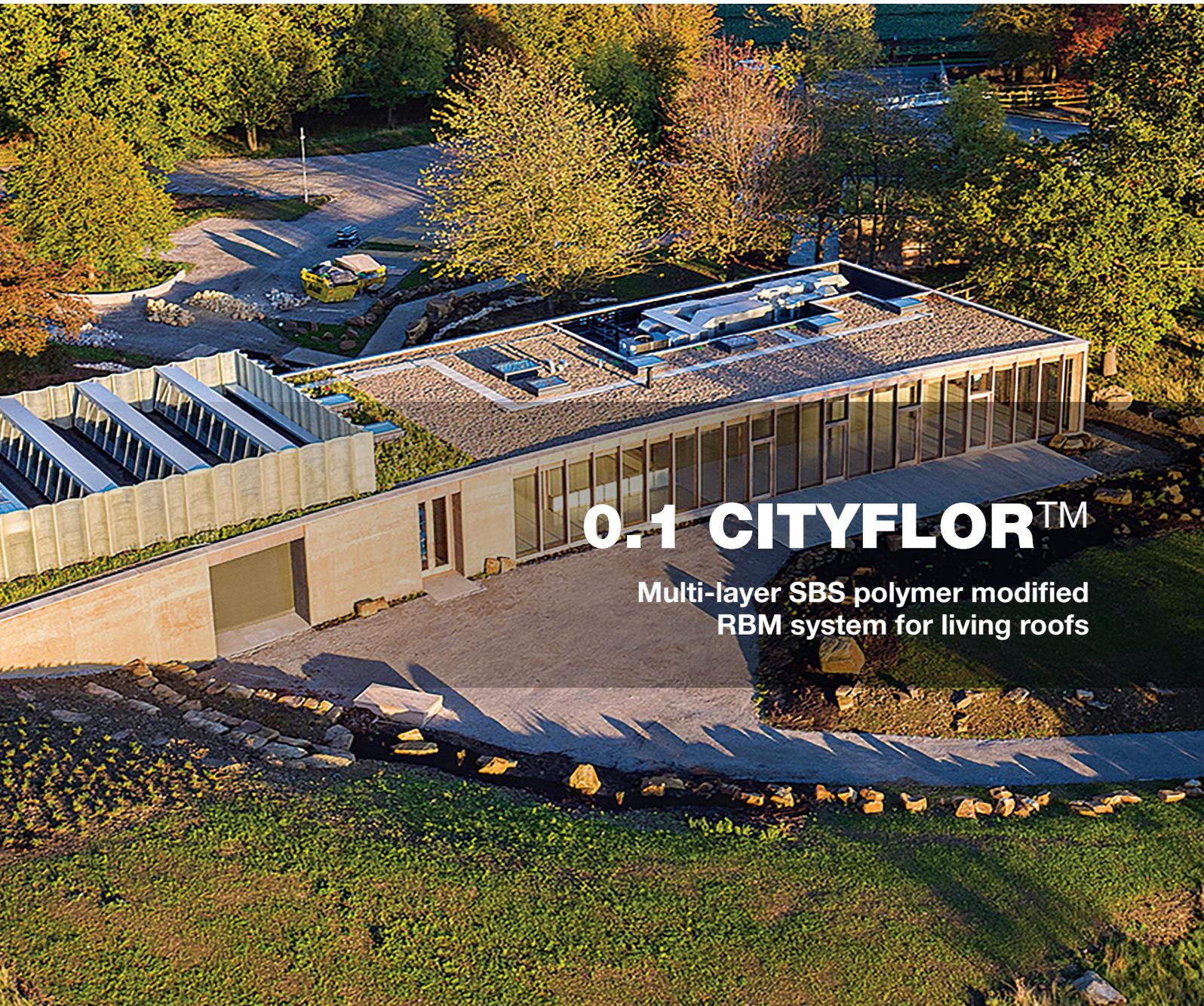
- BBA approved - certificate number 15/5222 PS2
- Fire Classification Broof(t4): The highest classification for external fire testing in compliance with

Cityflor systems guarantee a complete specification solution comprising Air and Vapour Control Layers (AVCLs), tapered or flat board thermal insulation, underlayers and robust capsheets self finished in a choice of colours, providing a versatile and robust finish for both new build and refurbishment projects.

Approved Document B, when tested as part of a Cityflor flat roof waterproofing system assembly. This information can be found in the system Fire Test Report available from Axter Ltd.

- Resistant to root penetration (FLL and EN 13948 compliant)
- Service life in excess of 50 years
- Robust trafficable surface
- Ideal for new build and roof refurbishment
- Includes torch-on, self-adhesive and completely flame free systems
- Manufactured within ISO 9001 and 14001 certified management systems





# 0.1 CITYFLOR™

Multi-layer SBS polymer modified  
RBM system for living roofs

## Accreditations

Cityflor carries a BBA certificate and is accepted by all third party building warranty providers such as LABC and NHBC, and is in full compliance with all building regulations.



# 0.1 CITYFLOR™

## Performance

Cityflor multi-layer waterproofing systems are perfectly adapted to the needs of inaccessible and accessible living roofs. Cityflor is extremely versatile and can be adapted to suit the exact biodiversity and landscaping requirements of the roof, ensuring the best, most appropriate system is specified.

All Cityflor system assemblies comply with British and European standards and have been approved by the British Board of Agrément under

certificate number 15/5222 PS2.

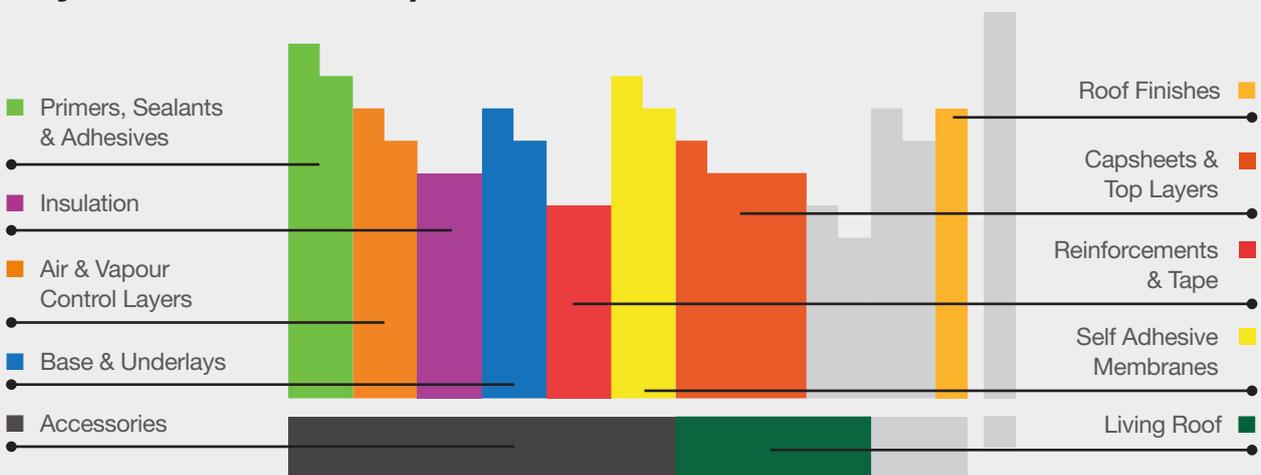
Cityflor is classified as unrestricted by the requirements of the Building Regulations Approved Document B: Fire Safety and certified Broof(t4) in accordance with BS EN 13501-5:2005 fire classification of construction products and building elements.

## Installation

Installation of Cityflor living roof waterproofing systems is carried out by accredited installers whose operatives have successfully attended Axter's RBM upskilling course.

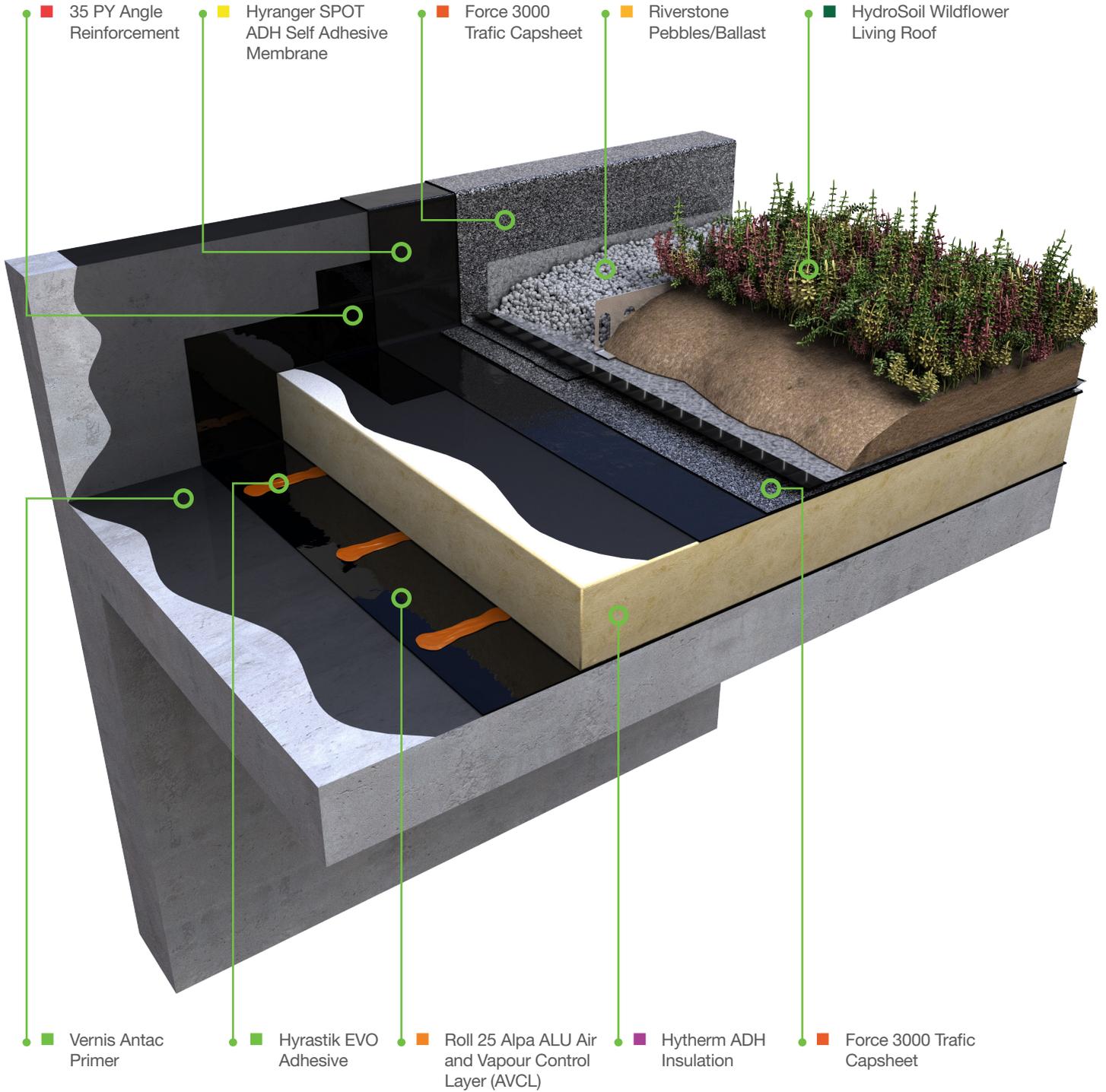
Cityflor systems can be installed in a multi-layer application on all deck types, and can be fully or partially bonded in a completely flame free, hot air welded or torch applied application on flat and pitched roof specifications. All system components are specified and installed to ensure compatibility and single source responsibility, and detailing is completed in full compliance with Axter recommendations and the NFRC Safe2Torch guidance, and the Green Roof Organisation (GRO) Code of Practice.

## Cityflor - Table of Components



# Cityflor Warm Roof Multi-Layer Living Roof (Force 3000)

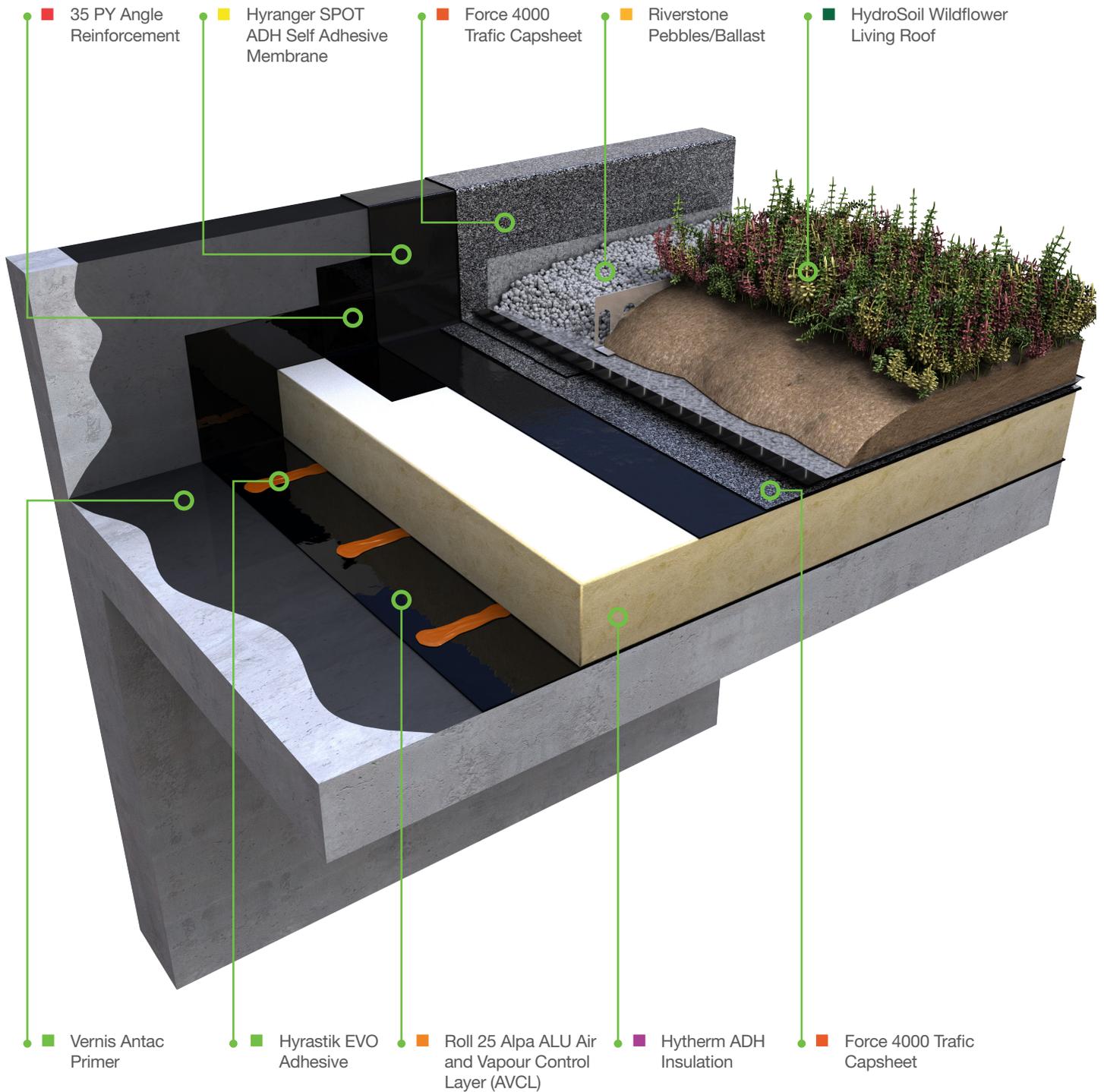
A reliable BBA approved living roof waterproofing system, providing durable protection and a 20-year guarantee.



# 0.1 CITYFLOR™ (PRODUCTS CONTINUED)

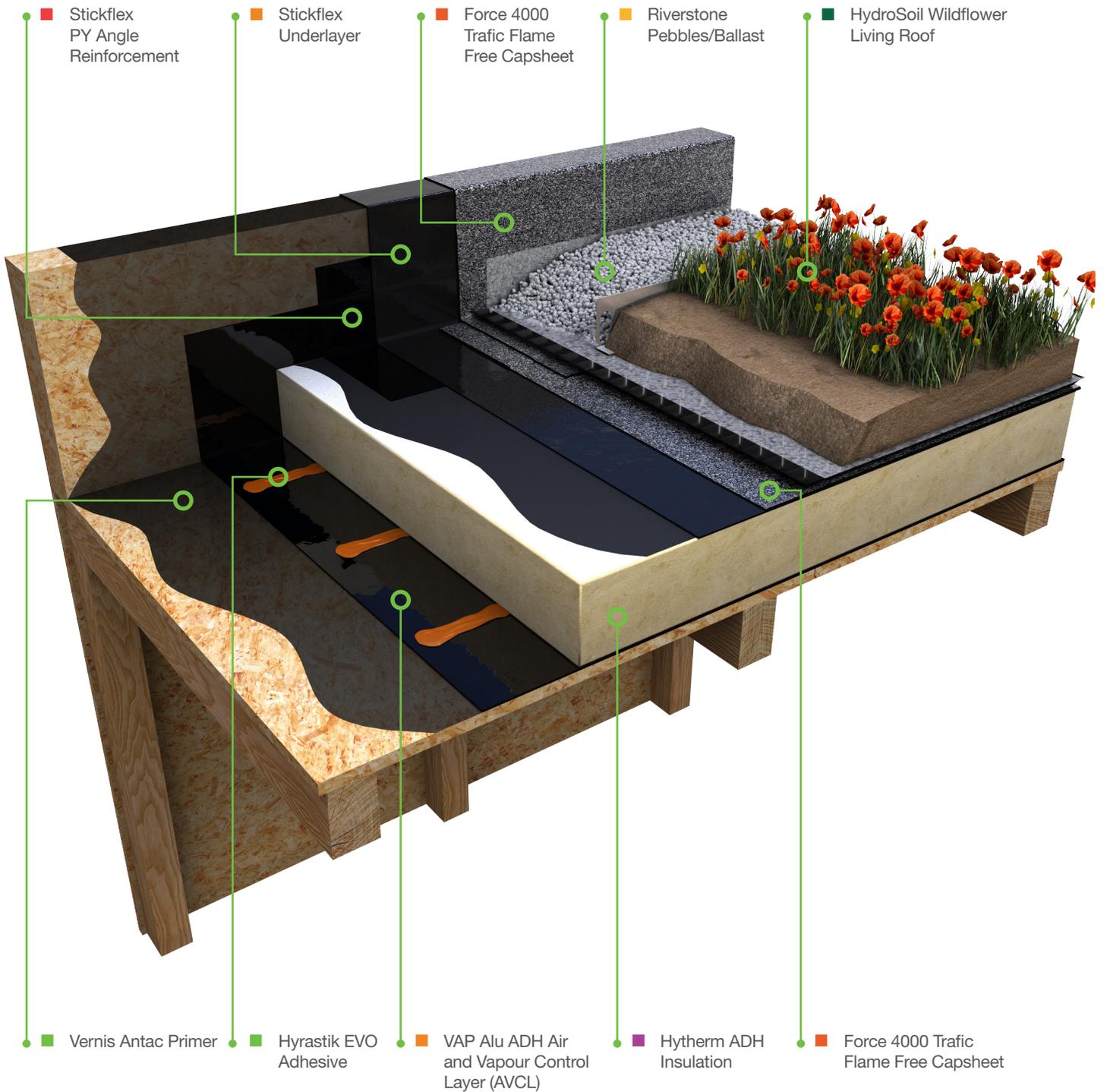
## Cityflor Warm Roof Multi-Layer Living Roof (Force 4000)

A reliable BBA approved living roof waterproofing system, providing enhanced durability and a longer guarantee of 25 years.



# Cityflor Neo-Bitumen Flame Free Warm Roof Multi-Layer Living Roof

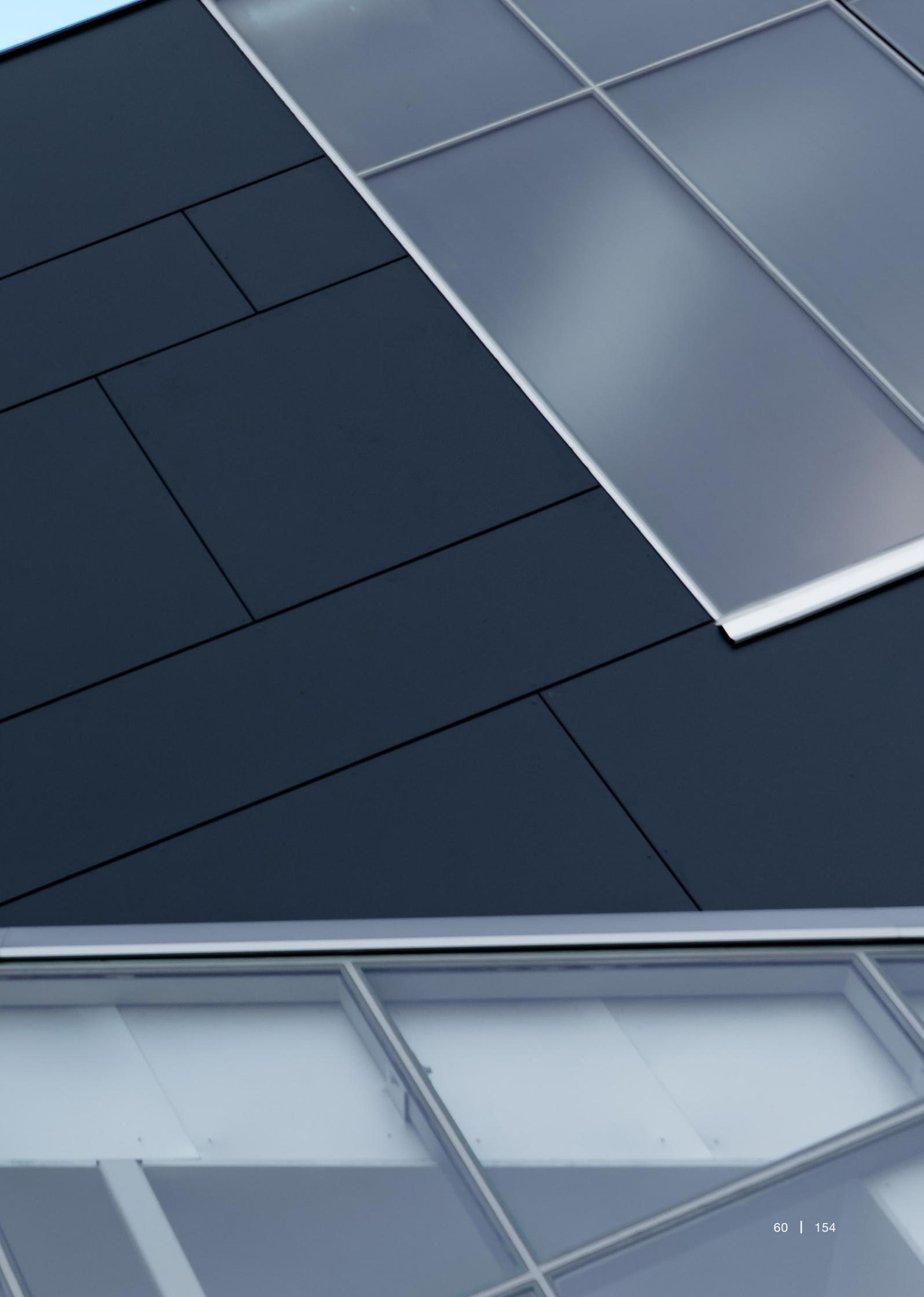
A completely flame free BBA approved living roof waterproofing system providing fire safety whilst delivering durability and reliability with a 25-year guarantee.



“

The team at Axter are all knowledgeable and experts in their field, so it makes good sense to involve them as early as possible in a project. They're happy to investigate a number of different options, design innovative solutions and look after any technical detailing that may be required to ensure the most appropriate roof system is specified. This 'right first time' principle reaps benefits as the overall project moves forward, saving time and eliminating potential pitfalls before they occur.”

Technical Director, Berkeley Homes



# 0.2 HOT MELT

Wilotekt®-Plus

## Systems

High performance, robust and reliable, hot melt structural waterproofing systems are engineered to exceed the lifetime of the building, and are specifically manufactured to provide durable waterproofing for high traffic roof areas. With the ability to be laid at zero falls, these systems are ideal for inverted roofs, podium decks, terraces, living roofs, car parks and civil engineering structures.

The strength and longevity of our hot melt structural waterproofing systems makes them a risk-free waterproofing solution eliminating future replacement costs and ensuring a leak-free roof for as long as the building stands.

## Characteristics

Hot melt systems are chosen for their ease and speed of application and indestructible performance characteristics. They create seamless, monolithic waterproofing, eliminating lap failure and the possibility of water tracking beneath the system. The flexible liquid application of hot melt systems allows for complex detailing to be completed quickly and effectively, guaranteeing secure protection across all areas.

Axter has developed unique, progressive, second generation polymer modified hot melt bitumen compounds that provide tough, seamless, self-healing, flexible waterproofing capable of withstanding construction traffic and heavy duty finishes. Our advanced second generation hot melt systems provide unrivalled benefits against competitors.

This is the original and industry renowned second generation hot melt system.

The unique structural waterproofing is designed and manufactured for use on all inverted roofs, podium decks, living roofs, blue roofs and car park decks.

A pure polymer modified bitumen compound formulation, combined with reinforcement mesh and high strength protection membrane, results in a tough, seamless, flexible, self-healing monolithic waterproofing system, with incredibly fast installation speeds, that will last the lifetime of the building.

The Wilotekt-Plus range includes inverted thermal insulation, water flow reducing layers (WFRL), drainage membranes and inverted roof finishes to ensure compatibility and single source responsibility for the roof system.

# 0.2 WILOTEKT®-PLUS

Second generation hot melt structural waterproofing system



## 35-Year Guarantee

Wilotekt-Plus achieves a minimum 25-year guarantee up to a ground-breaking 35-year insured system guarantee covering materials, design and workmanship. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Wilotekt-Plus is British Board of Agrément (BBA) certified, carries third party certification in the form of an ETA, is accepted by all third party building warranty providers such as LABC and NHBC, and complies in full with the Building Regulations and all relevant British and harmonised European standards. Wilotekt-Plus is CCPI accredited.

## Benefits

- BBA approved - certificate number 22/6518 PS1
- ETA approved for zero fall applications - certificate number 03/0049
- Fire Classification Broof(t4): The highest classification for external fire testing in compliance with

Approved Document B, when tested as part of a Wilotekt-Plus flat roof waterproofing system assembly. This information can be found in the system Fire Test Report available from Axter Ltd.

- High performance 7mm thick system
- Improved application, faster than traditional hot melt
- Engineered to last the lifetime of the building
- Seamless monolithic waterproofing with zero tracking
- Fully adhered with self-healing properties
- Advanced QA procedure over traditional hot melt systems
- Approved for use beneath a variety of hard and soft landscape finishes
- Immediately trafficable after installation
- Root resistant without need for environmentally harmful chemical additives; See Agrément Certificate No. 22/6518 PS1 or contact technical support [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk) for further information.
- Manufactured within ISO 9001 and 14001 certified management systems



# 0.2 WILOTEKT®-PLUS

## Performance

Wilotekt-Plus complies with British and European standards, is accredited for zero fall applications, has been tested and approved in accordance with the European Technical Assessment and awarded ETA-03/0049.

Wilotekt-Plus is approved for use in a variety of applications including inverted roofs, living roofs, podium decks and car parks without the requirement for system modification. Designed to bond directly to the deck without any gaps, the system provides tough, seamless monolithic waterproofing. The unique formulation of Wilotekt polymer modified bitumen

compound enables a self-healing, fast, phased construction.

Wilotekt-Plus complies with the latest edition of Approved Document B – Fire Safety, and is classified as unrestricted without further testing in accordance with European Commission Decision 2000/553/EC and DCLG Fire Performance of Green Roofs and Walls documentation.

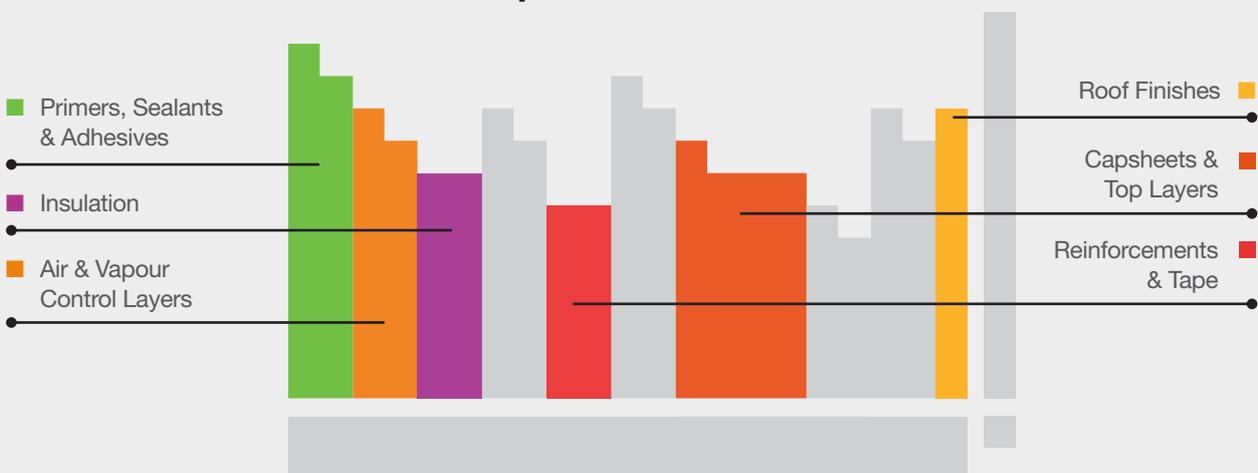
## Installation

The simplified system results in a safer and faster installation without compromising on performance. Wilotekt-Plus is laid in one easy application, significantly reducing installation times when compared with multi-layer systems. Independent

roofing contractor testing has proven Wilotekt-Plus achieves 30% quicker installation speeds over traditional hot melt systems. On site quality control is improved and easy to monitor as once the distinctive purple reinforcing mesh is fully immersed in the compound and can no longer be seen, the optimal thickness has been achieved.

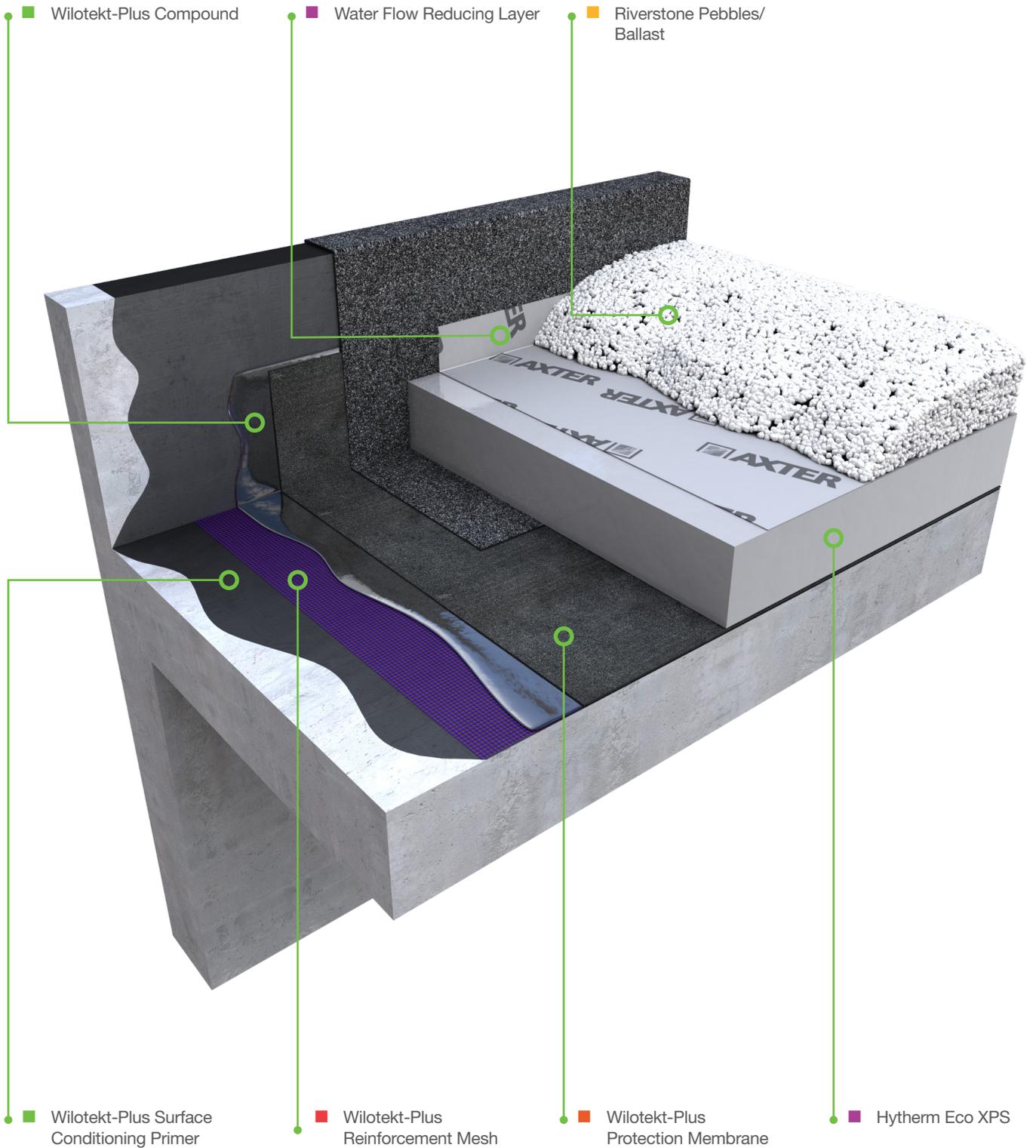
General detailing is completed using self protected membranes produced in our factory to specific ISO quality and environmental standards. Complex details are completed using pitch pockets ensuring a watertight performance, and a wide variety of inverted roof finishes can then be installed to complete the system.

## Wilotekt-Plus - Table of Components



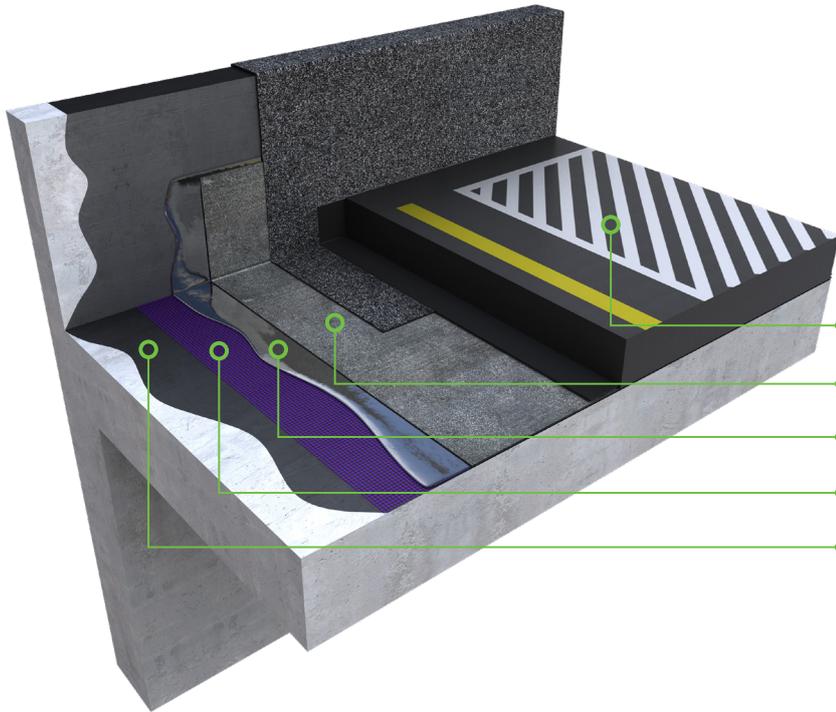
# Wilotekt-Plus Inverted Roof System

A robust second generation hot melt structural waterproofing system, unique in application and performance.



# 0.2 WILOTEKT®-PLUS

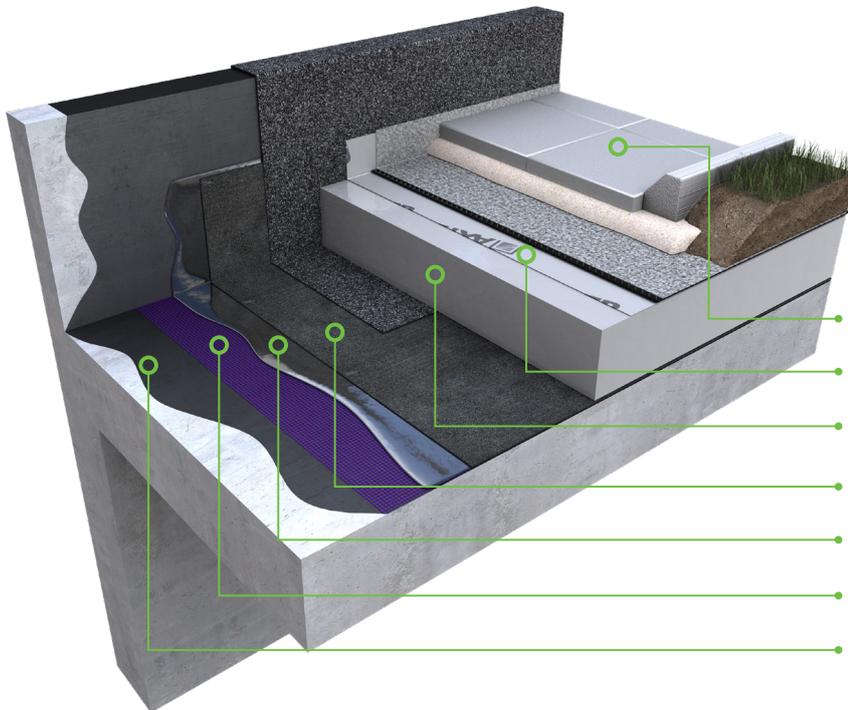
(PRODUCTS CONTINUED)



## Wilotekt-Plus Inverted Roof System - Car Park

A robust second generation hot melt structural waterproofing system accredited for waterproofing car parks.

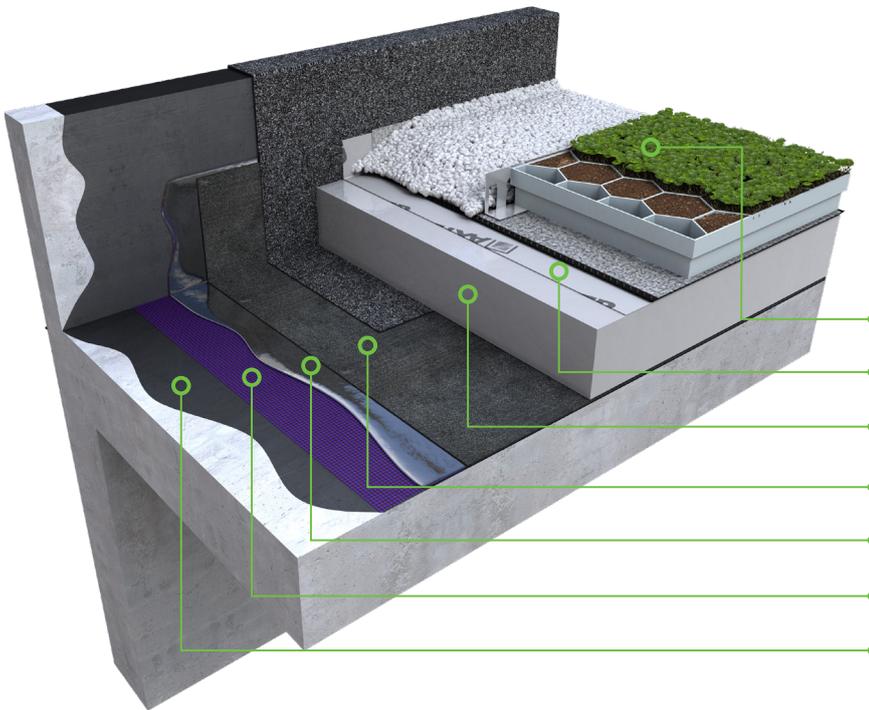
- Inverted Roof Finishes
- Wilotekt-Plus Protection Membrane
- Wilotekt-Plus Compound
- Wilotekt-Plus Reinforcement Mesh
- Wilotekt-Plus Surface Conditioning Primer



## Wilotekt-Plus Inverted Roof System - Podium

A robust second generation hot melt structural waterproofing system accredited for waterproofing podium decks.

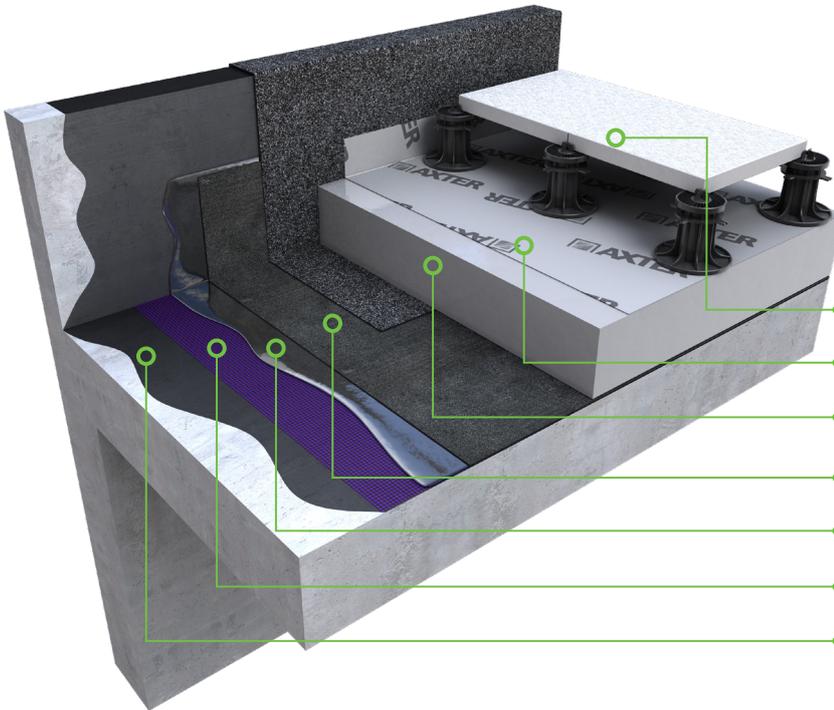
- Inverted Roof Finishes
- Water Flow Reducing Layer
- Hytherm Eco XPS
- Wilotekt-Plus Protection Membrane
- Wilotekt-Plus Compound
- Wilotekt-Plus Reinforcement Mesh
- Wilotekt-Plus Surface Conditioning Primer



### Wilotekt-Plus Inverted Roof System - Living Roof

A robust second generation hot melt structural waterproofing system accredited for living roofs.

- Inverted Roof Finishes
- Water Flow Reducing Layer
- Hytherm Eco XPS
- Wilotekt-Plus Protection Membrane
- Wilotekt-Plus Compound
- Wilotekt-Plus Reinforcement Mesh
- Wilotekt-Plus Surface Conditioning Primer



### Wilotekt-Plus Inverted Roof System - Terrace

A robust second generation hot melt structural waterproofing system accredited for waterproofing roof terraces and balconies.

- Inverted Roof Finishes
- Water Flow Reducing Layer
- Hytherm Eco XPS
- Wilotekt-Plus Protection Membrane
- Wilotekt-Plus Compound
- Wilotekt-Plus Reinforcement Mesh
- Wilotekt-Plus Surface Conditioning Primer

“

I've used Axter products on two or three schemes now with Berkeley. It's a relationship that's developed. They provide good product support and we use their approved installers as we know what we get from them in terms of achieving the required quality of installation.”

Project Manager, Berkeley Homes



# 0.3 SINGLE PLY

Ecoflex®

## Systems

Durable, aesthetically versatile and lightweight, Axter's single ply waterproofing systems offer fast installation, design flexibility and flame free installation without any need for hot works. The Single Ply membranes are made from flexible PVC-p (polyvinyl chloride) that offer strong resistance to tears and punctures and can withstand extreme weather conditions, whilst providing a cost-effective solution to waterproofing all roof types.

## Characteristics

Single Ply waterproofing systems are one of the most popular flat roofing materials and have been in use for over three decades. They have proven to be a reliable flat roofing solution for many projects. Providing excellent performance characteristics and yet incredibly lightweight, Axter's Single Ply membranes are fast to install, provide design freedom and are suitable for buildings of differing scale and complexity. Membranes are available in a wide choice of colours, offer architectural freedom and are a cost-effective solution.

# 0.3 ECOFLEX®

## Adhered or mechanically fixed Single-Layer PVC-p waterproofing system

Ecoflex Single Ply waterproofing membranes are a lightweight, flexible PVC-p synthetic membrane manufactured with recycled polymers and has been specifically designed for widespread use on all roofing projects including domestic, commercial and industrial structures. Ecoflex systems provide excellent performance

characteristics such as strength and flexibility and are fully reinforced with polyester or glass mesh, providing a robust system that delivers specifier and installer confidence in both performance and design freedom.

The Ecoflex system range includes Air and Vapour Control Layers (AVCLs), tapered or flat board thermal insulation, Single Ply membranes available in a choice of colours and a full range of accessories to ensure compatibility and single source responsibility.





## 20-Year Guarantee

Ecoflex achieves a 20-year insured system guarantee covering materials, design and workmanship, and has a service life in excess of 35 years. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Ecoflex is British Board of Agrément (BBA) certified, is accepted by all third party building warranty providers such as LABC and NHBC, and complies in full with the Building Regulations and all relevant British and harmonised European standards.

## Benefits

- BBA approved - certificate number 21/5984 PS1 / PS2
- Approved Document B: Fire Safety compliant
- 100% flame free application
- Lightweight and cost-effective solution for flat roofing
- Mechanically fixed (Ecoflex FM) and adhered (Ecoflex ADH) options available
- Fast application and detailing
- Superior weld characteristics
- Versatile - designed for widespread use
- Manufactured within ISO 9001 and 14001 certified management systems
- Resistant to root penetration – BBA accredited for use in extensive, intensive and biodiverse green roofs. See Agrément Certificate No. 21/5984 PS1 / PS2 or contact technical support [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk) for further information.

# 0.3 ECOFLEX®

## Performance

Ecoflex systems are incredibly lightweight, typically 2-3kg per m<sup>2</sup>, making them ideal for lightweight structures. Ecoflex systems are strong and flexible, are fully reinforced and available for mechanically fixed and adhered applications. Ecoflex is extremely durable and has a proven service life to be in excess of 35 years.

Ecoflex system assemblies comply with British and European standards and have been approved by the British Board of Agrément under certificate number 21/5964 PS1 & PS2.

Ecoflex is classified as unrestricted by the requirements of the Building Regulations Approved Document B: Fire Safety and certified Broof(t4) in accordance with BS EN 13501-5:2005 fire classification of construction products and building elements.

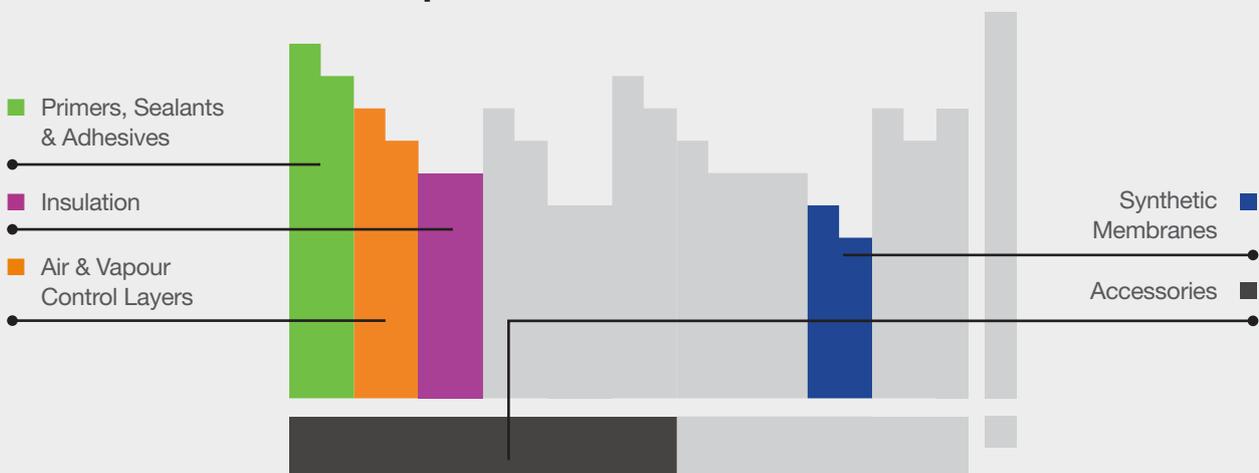
## Installation

Ecoflex waterproofing systems can only be installed by accredited Axtershield Installers whose operatives have successfully attended Axter's Ecoflex upskilling course audited by the Single Ply Roofing Association (SPRA). Ecoflex systems are installed

completely flame free using hot air welding techniques, with membranes either mechanically fixed or cold adhered.

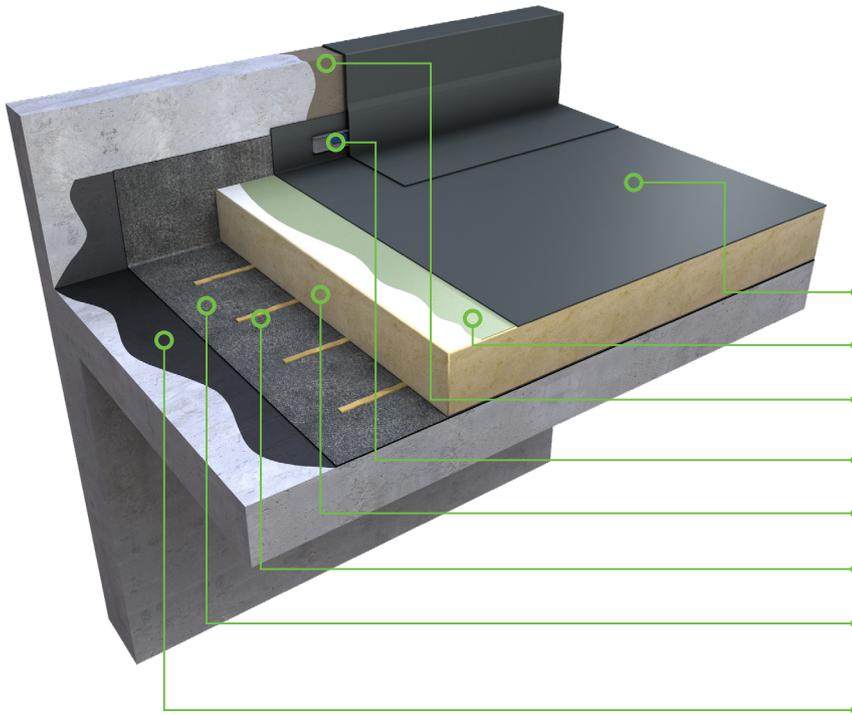
Ecoflex systems are installed in single-layer application and can be installed on all deck types. All system components are specified and installed to ensure compatibility and single source responsibility, and detailing is completed in full compliance with Axter recommendations and the SPRA design guide.

## Eco flex - Table of Components



## Ecoflex ADH Warm Roof Adhered Single Ply

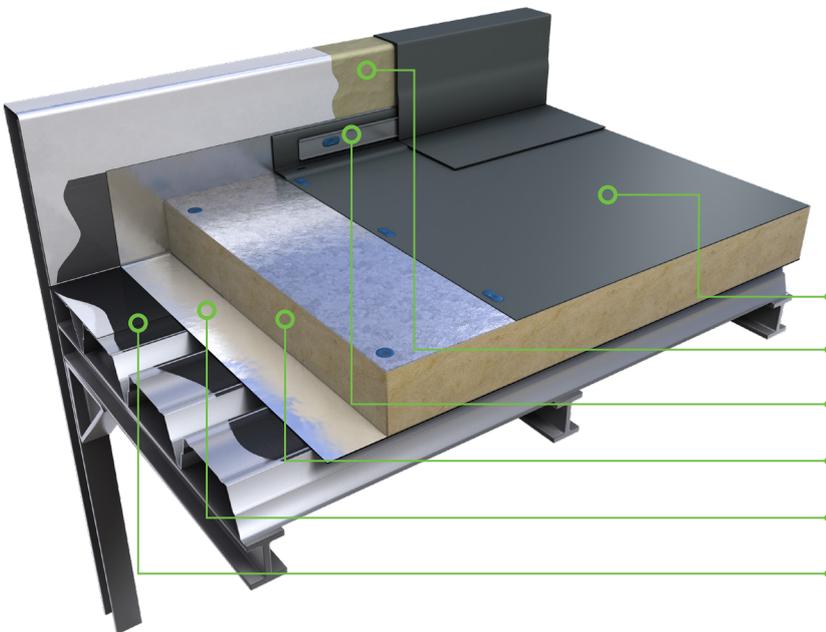
A durable and lightweight adhered Single Ply PVC system.



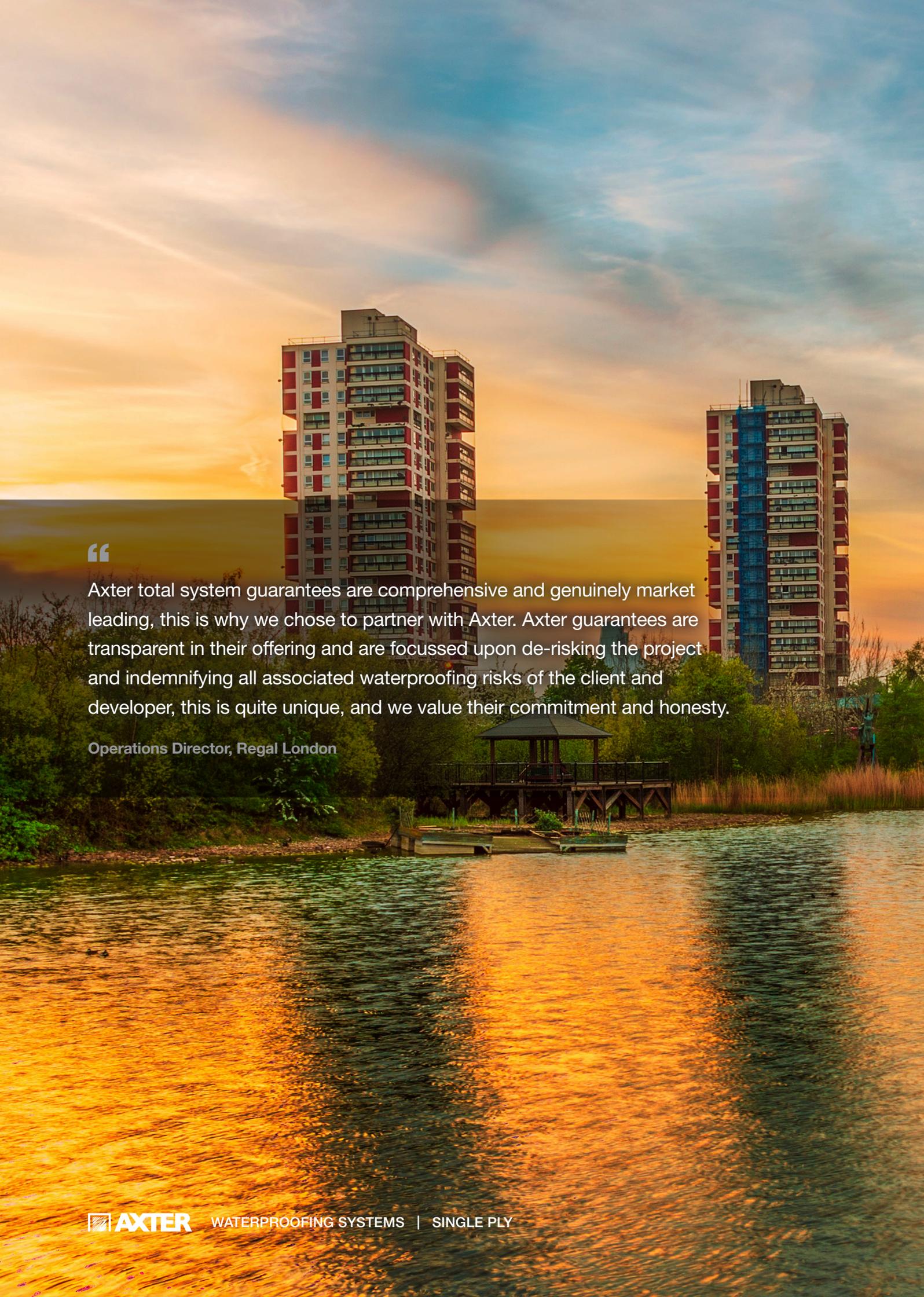
- Ecoflex 1.5 ADH
- ADH Adhesive
- FM/D Contact Adhesive
- Restraint Bar
- Hytherm ADH Insulation
- Hyrastik EVO Adhesive
- Roll 25 Alpa ALU Air and Vapour Control Layer (AVCL)
- Vernis Antac Primer

## Ecoflex FM Warm Roof Mechanically Fixed Single Ply

A durable and lightweight mechanically fixed Single Ply PVC system.



- Ecoflex 1.5 FM
- FM/D Contact Adhesive
- Restraint Bar
- Hytherm FM Insulation
- SK Vap Air and Vapour Control Layer (AVCL)
- Vernis SA Primer

The image features a sunset scene with two tall, modern apartment buildings. The building on the left is white with red accents, while the one on the right is white with blue accents. The sky is a mix of orange, yellow, and blue. In the foreground, there is a body of water reflecting the sunset, and a wooden gazebo on a small pier. The overall mood is serene and professional.

“

Axter total system guarantees are comprehensive and genuinely market leading, this is why we chose to partner with Axter. Axter guarantees are transparent in their offering and are focussed upon de-risking the project and indemnifying all associated waterproofing risks of the client and developer, this is quite unique, and we value their commitment and honesty.

**Operations Director, Regal London**



# 0.4 COLD LIQUID

Starcoat™ PMMA

Starcoat™ QC

Starcoat™ R

## Systems

Cold liquid waterproofing systems have become a popular choice due to the simplicity of installation and versatility of the systems. Axter's range of cold liquid waterproofing systems are fast curing and have a long lifespan. The systems are completely flame free and offer a highly durable and safe waterproofing solution for roofs, terraces, balconies, walkways and car parks as well as a practical option for intricate detailing.

Axter's cold liquid waterproofing system range incorporates polyurethane, Starcoat QC and methacrylate and Starcoat PMMA resins suitable for both new build applications and the refurbishment of existing roofs. Cold liquid bitumen resin, Starcoat R, is also available for detailing use with Axter RBM systems.

## Characteristics

Axter Starcoat cold applied liquid waterproofing systems are engineered to provide a fast curing, flexible, elastomeric waterproof membrane capable of following the contours of any roof shape and intricate detail. Starcoat liquid membranes are installed fully bonded to the substrate with no need for mechanical restraint, welding or torching, and are extremely safe for use, particularly on projects where naked flame is prohibited. Once cured, Starcoat liquid membranes achieve a seamless finish with no joints or breaks.

Starcoat liquid waterproofing is a lightweight option with great elasticity, meaning that it will absorb structural movements and compensate for shrinkage or expansion due to changes in temperature. The ease and speed of application makes Starcoat liquid waterproofing perfect for complex roofing projects.

This is a flame free and rapid cure, two component polymethyl methacrylate (PMMA) resin waterproofing system that provides a fully adhered waterproofing layer.

Manufactured for new build and refurbishment projects and BBA certified for zero fall applications, Starcoat PMMA is hard wearing and will withstand significant load bearing and mechanical stresses. It is ideally suited to complex detailing and areas

where traditional waterproofing is difficult or impossible to apply.

The Starcoat PMMA system range includes Air and Vapour Control Layers (AVCLs), tapered or flat board thermal insulation, PMMA liquid waterproofing membranes available in a choice of colours, traffic and anti-slip layers and a full range of accessories to ensure compatibility and single source responsibility.

## 20-Year Guarantee

Starcoat PMMA achieves a 20-year insured system guarantee covering materials, design and workmanship, and has a service life in excess of 25 years. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Benefits

- BBA accredited - certificate number 16/5322 PS1
- Approved Document B: Fire Safety compliant
- Flame free application
- Excellent adhesion to all types of surfaces
- Rapid curing
- Rainproof after 30 minutes at 20°C
- Zero fall accredited
- Variety of colours and wearing finishes available
- Solvent free, chemical resistant and root resistant





# 0.4 STARCOAT™ PMMA

Cold applied polymethyl methacrylate-based liquid system

## Accreditations

Starcoat PMMA is British Board of Agrément (BBA) certified, accepted by all third party building warranty providers such as LABC and NHBC,

and complies in full with the Building Regulations and all relevant British and harmonised European standards.

# 0.4 STARCOAT™ PMMA

## Performance

Starcoat PMMA is an extremely versatile waterproofing system suitable for use in all trafficable and non-trafficable construction types, providing durable waterproofing protection even when exposed to the most extreme weather and environmental conditions. Starcoat PMMA is suitable for both refurbishment and new build projects.

Starcoat PMMA system assemblies have a service life in excess of 25 years, comply with British and

European standards and have been approved by the British Board of Agrément under certificate number 16/5322 PS1. Starcoat PMMA is classified as unrestricted by the requirements of the Building Regulations Approved Document B: Fire Safety and certified Broof(t4) in accordance with BS EN 13501-5:2005 fire classification of construction products and building elements.

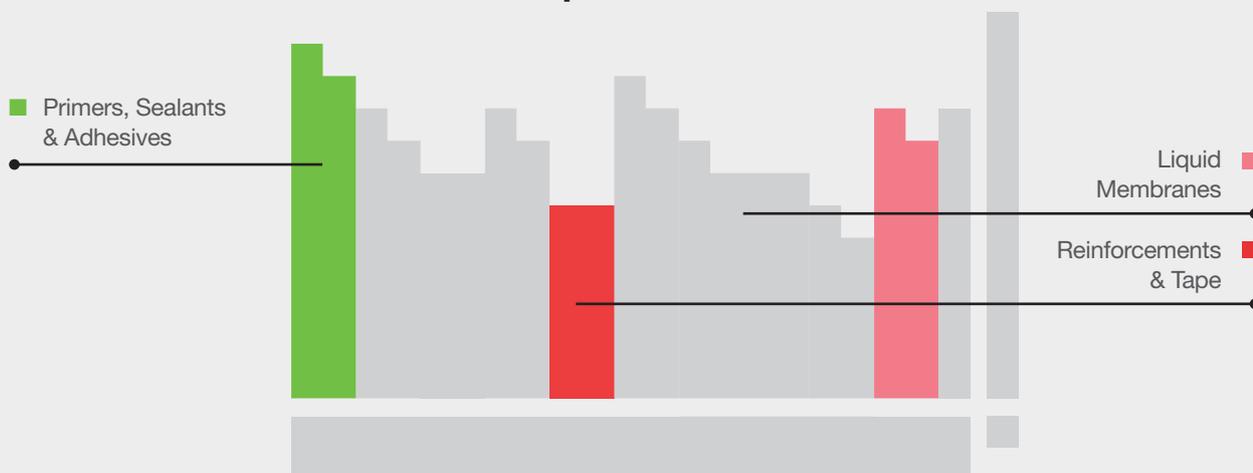
## Installation

Starcoat PMMA is a rapid curing liquid waterproofing system, has a

fast and simple application process with no waiting time required between system layers. Difficult to access areas on all construction projects can be waterproofed simply and safely using Starcoat PMMA, and will be fully trafficable in less than one hour, even when installed at low temperatures.

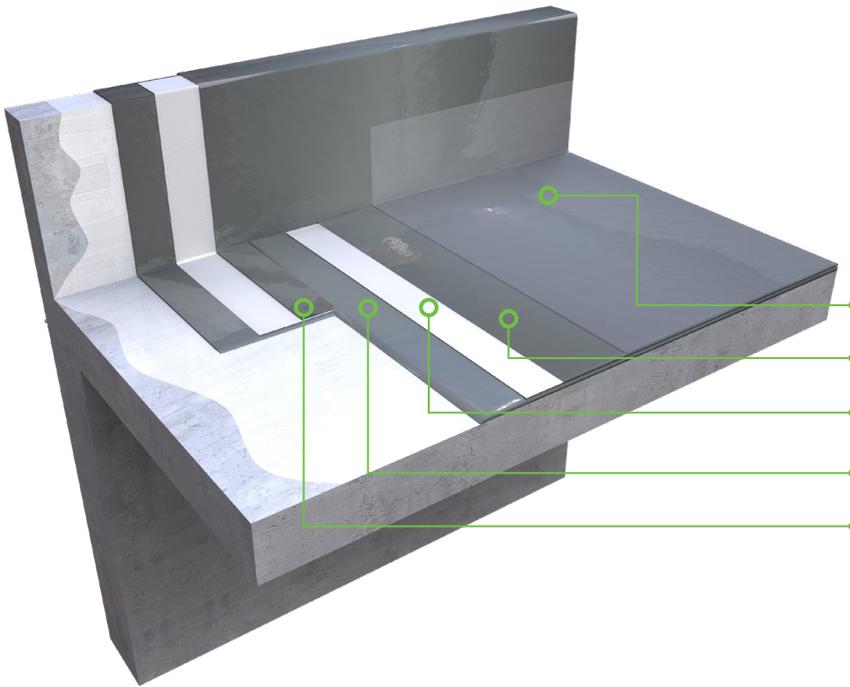
The Starcoat PMMA system must be installed by Axter accredited installers who have completed an upskilling course in this system.

## Starcoat PMMA - Table of Components



## Starcoat PMMA

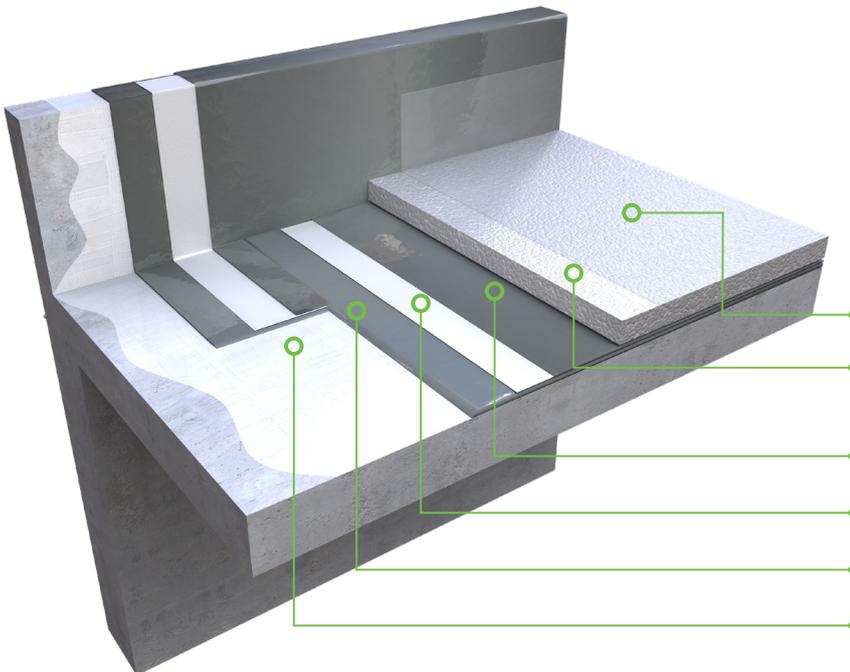
Cold applied rapid cure liquid waterproofing system.



- Starcoat Clear/Coloured Sealer
- Starcoat PMMA Liquid Membrane
- Starcoat Fleece
- Starcoat PMMA Liquid Membrane
- Starcoat Primer

## Starcoat PMMA Traffic

Cold applied rapid cure liquid waterproofing system with trafficable surfacing.



- Starcoat PMMA Clear/Coloured Sealer
- Starcoat PMMA Self Levelling Mortar/Aggregate
- Starcoat PMMA Liquid Membrane
- Starcoat PMMA Fleece
- Starcoat PMMA Liquid Membrane
- Starcoat PMMA Primer

# 0.4 STARCOAT™ QC

Quick curing single component, cold applied liquid system

This is a flame free and quick cure, single component polyurethane (PU) resin waterproofing system that provides a fully adhered waterproofing layer. Starcoat QC is manufactured for new build and refurbishment projects, is CE Marked and British Board of Agrément (BBA) approved.

The Starcoat QC system range includes Air and Vapour Control Layers (AVCLs), tapered or flat board thermal insulation, QC liquid waterproofing membranes available in a choice of colours, decorative surfacing layers and a full range of accessories to ensure compatibility and single source responsibility.





## 20-Year Guarantee

Starcoat QC achieves a 20-year insured system guarantee covering materials, design and workmanship, and has a service life in excess of 25 years. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Starcoat QC is British Board of Agrément (BBA) certified, accepted by all third party building warranty providers such as LABC and NHBC, and complies in full with the Building Regulations and all relevant British and harmonised European standards.

## Benefits

- BBA accredited - certificate number 13/5031 PS1
- Approved Document B: Fire Safety compliant
- Flame free application
- Single component system
- Tough, elastomeric membrane capable of withstanding structural and thermal movement
- Quick curing time of 4-8 hours
- Rainproof after 3-4 hours at ambient temp of 20 °C
- Range of colours and wearing courses available
- Solvent free, chemical resistant and root resistant

# 0.4 STARCOAT™ QC

## Performance

Starcoat QC is flexible, hard-wearing and will withstand significant load bearing and mechanical stresses. It is ideally suited to complex detailing and areas where torch applied membrane waterproofing is difficult or impossible to apply.

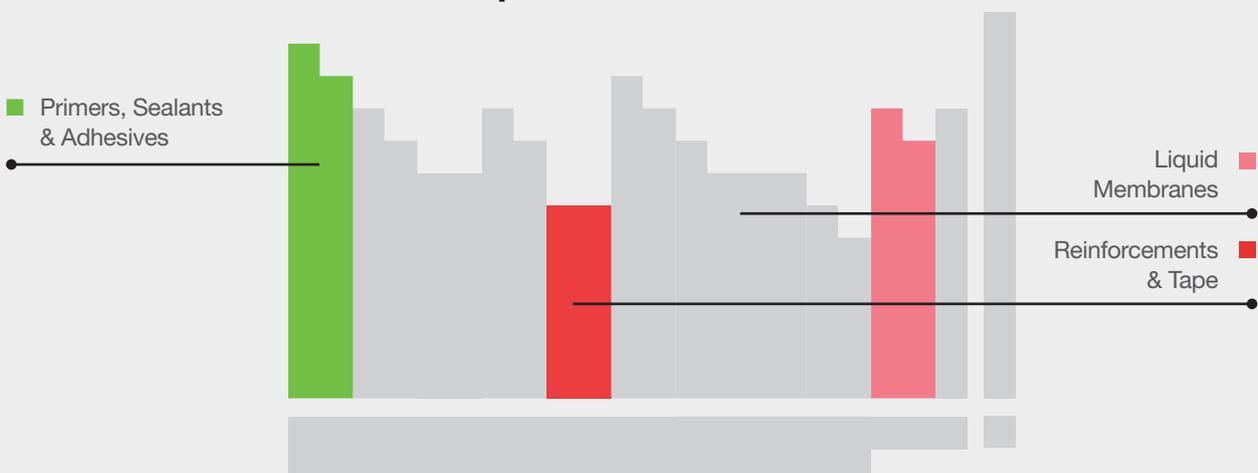
Starcoat QC system assemblies have a service life in excess of 25 years,

comply with British and European standards and have been approved by the British Board of Agrément under certificate number 13/5031 PS1. Starcoat QC is classified as unrestricted by the requirements of the Building Regulations Approved Document B: Fire Safety and certified Broof(t4) in accordance with BS EN 13501-5:2005 fire classification of construction products and building elements.

## Installation

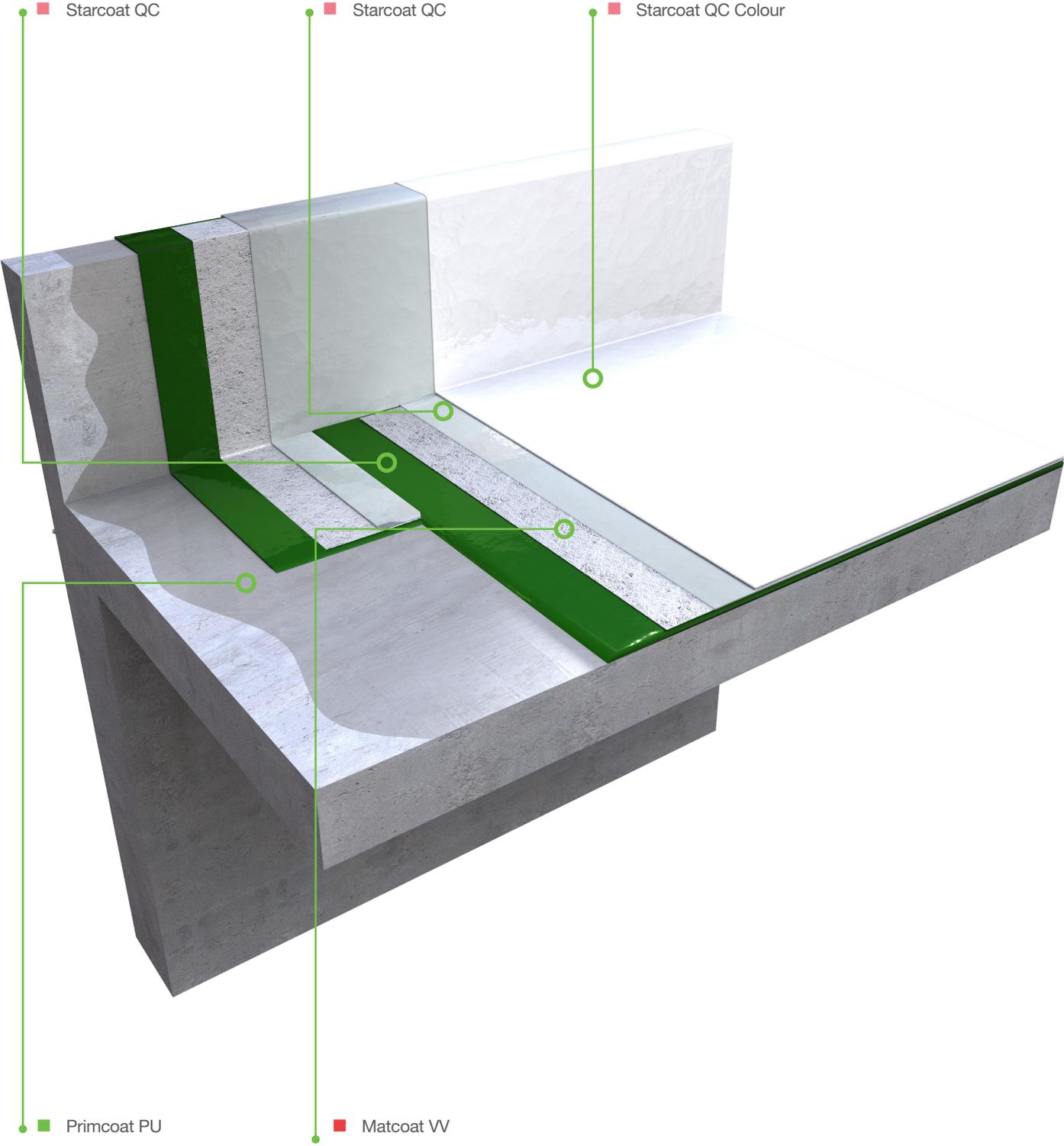
Starcoat QC quick curing liquid waterproofing system has a simple application process that ensures reduced waiting time between system layers. Occupied areas can be waterproofed quickly, simply and safely using Starcoat QC, and will be fully accessible within 4-8 hours, even when installed at low temperatures.

## Starcoat QC - Table of Components



# Starcoat QC

Cold applied quick cure polyurethane (PU) liquid waterproofing system.



Reliable and ready to use, Starcoat R is a unique, single component polyurethane bitumen resin, with integrated anti-root protection.

Starcoat R is the ideal waterproofing solution for complex detailing, localised repairs to new and old bitumen membranes and areas where use of a naked flame is prohibited.

Starcoat R can also be used as an adhesive with Hytherm CG (cellular glass) non-combustible insulation.



## **0.4 STARCOAT™ R**

Cold applied reinforced liquid detailing system



## 20-Year Guarantee

Starcoat R achieves a 20-year insured system guarantee when installed as part of a complete Axter waterproofing system, covering materials, design and workmanship, and has a service life in excess of 25 years. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Starcoat R is compliant with the National Federation of Roofing Contractors (NFRC) Safe2Torch Guidance, accepted by all third party building warranty providers such as LABC and NHBC, and complies in full with the Building Regulations and all relevant British and harmonised European standards.

## Benefits

- Compatible with all bituminous waterproofing products
- Ready to use with no mixing
- No torching required
- Rapid installation and no primer required
- Brush or roller applied
- Single component system
- Reduced disruption
- Reduced labour costs
- Cost effective
- UV stable



# 0.4 STARCOAT™ R

## Performance

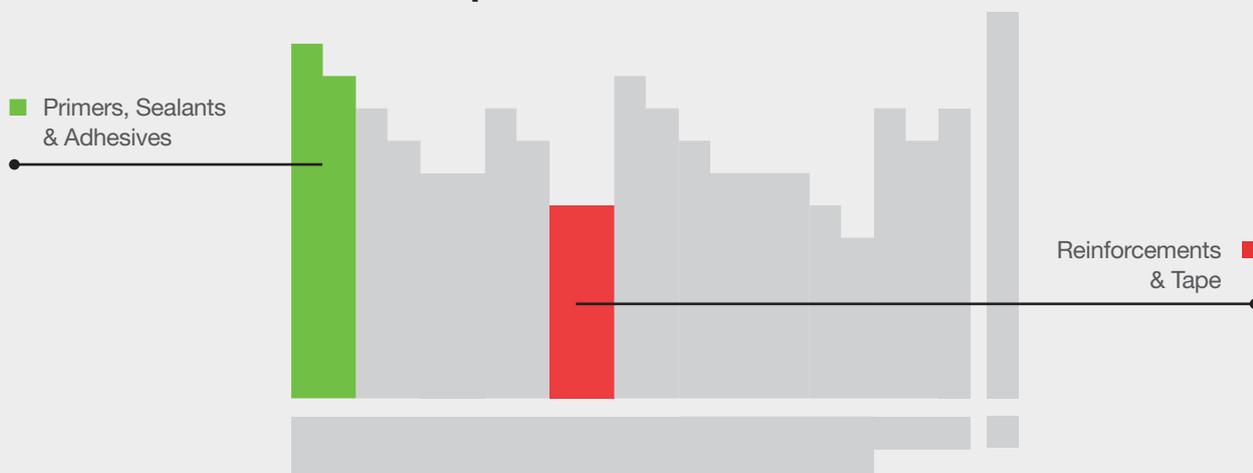
Eliminating risks and fire safety during installation of the waterproofing system is of paramount importance to Axter. Starcoat R flame free cold applied liquid detailing eliminates the need for naked flame gas torches. It is ideal for use on combustible materials and in high risk detail and perimeter zones on new build and refurbishment projects.

## Installation

Application is easy with no primer required. Starcoat R waterproofs roof penetrations, columns, upstands, balustrade posts, curbs, perimeters, pipes, and all other irregular penetrations. Used in combination with Axter Matcoat R reinforcement, Starcoat R achieves a watertight, durable, UV and puncture resistant cold applied liquid

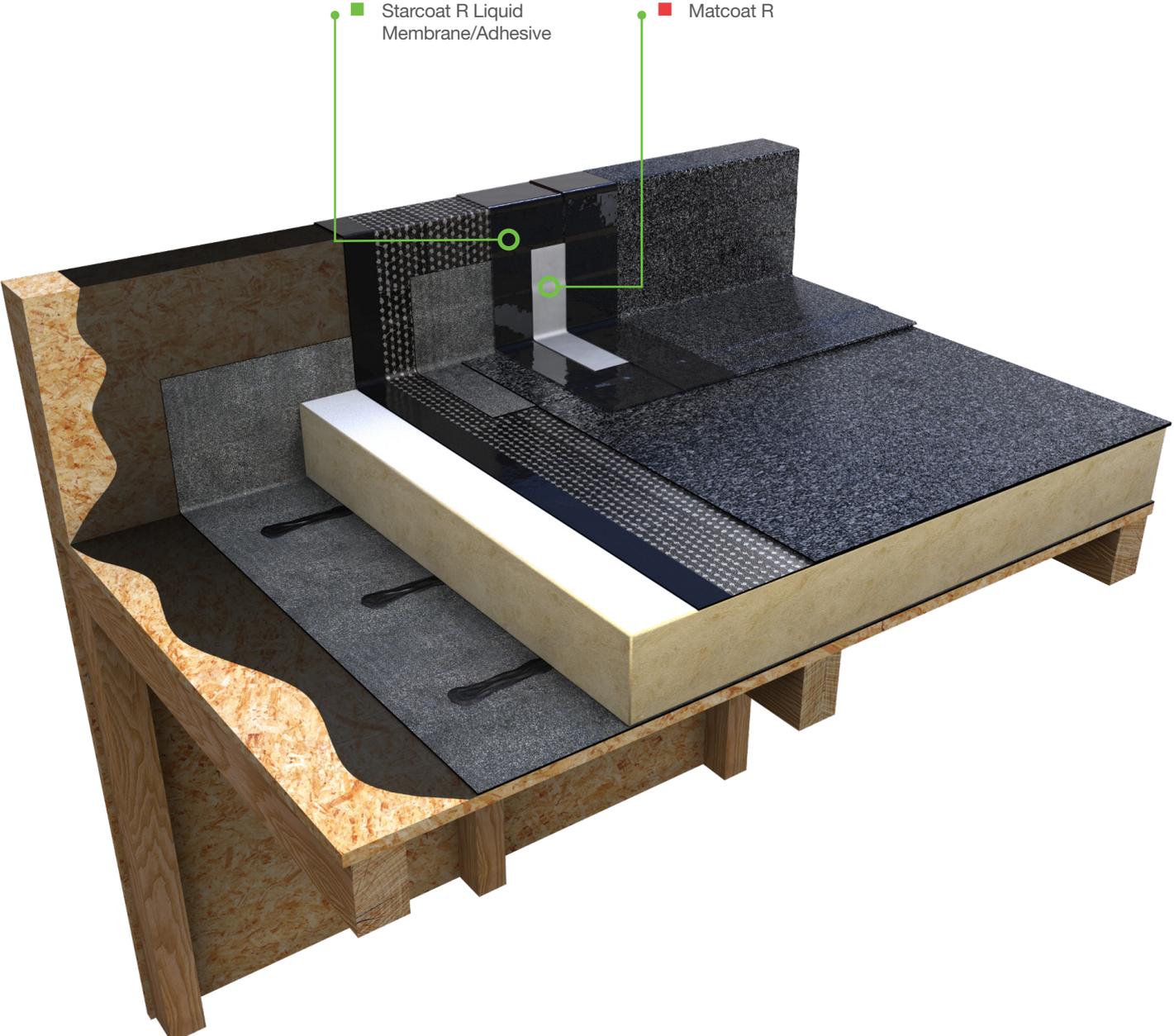
detailing solution, and can be treated with mineral granules in order to seamlessly compliment the existing or new waterproofing. When used in combination with Axter Matcoat JD reinforcement, Starcoat R can be used to waterproof complex movement joints that traditional membrane waterproofing systems would find impossible to detail.

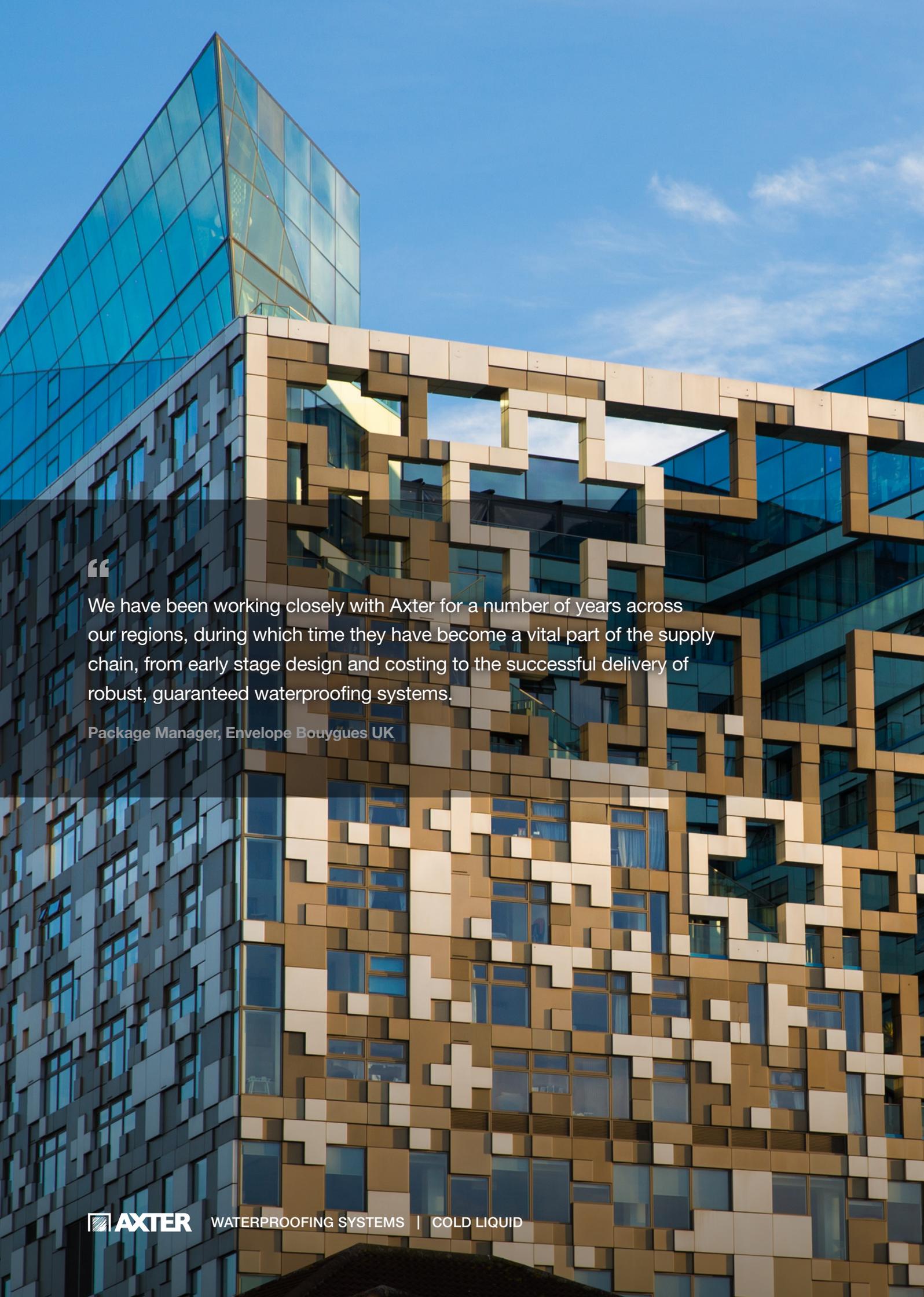
## Starcoat R - Table of Components



# Starcoat R

Cold applied, anti-root liquid waterproofing, ideal for complex roof details, localised repairs and as an adhesive.





“

We have been working closely with Axter for a number of years across our regions, during which time they have become a vital part of the supply chain, from early stage design and costing to the successful delivery of robust, guaranteed waterproofing systems.

Package Manager, Envelope Bouygues UK



# 0.5 BITUMEN FLAME FREE

Excel® FM Flame Free

Neo-Bitumen® Flame Free

Force® ADH Flame Free

## Systems

Axter's innovative range of flame free waterproofing systems eliminate the use of naked flame torch-on application techniques, in favour of Neo-Bitumen self-adhesive, cold bonded, mechanically fixed and hot air welded waterproofing solutions. Flame free waterproofing systems provide those responsible for fire safety with the confidence to specify flat roof waterproofing systems in accordance with the latest edition of Approved Document B: Fire Safety, whilst significantly reducing fire risk during installation.

## Characteristics

Axter is an active contributor to fire safety industry guidance and an advocate of recommendations outlined in the National Federation of Roofing Contractors (NFRC) 'Safe2Torch' publication. Good practice and the 'Safe2Torch' initiative are focused upon the safe execution of hot works including the application of torch-on RBM systems. Axter's flame free systems have been developed to eradicate the need for hot works, specifically the use of gas torches, and when combined with no flame drying techniques, the potential hazard of fire is completely removed.

Excel FM Flame Free is a robust fast track Single-Layer mechanically fixed warm roof bitumen waterproofing system, engineered for completely flame free installation for constructions where naked flame is prohibited.

Excel FM Flame Free establishes an advancement in Single-Layer mechanically fixed Alpha polymer modified bitumen technology, combining the durability performance benefits of polymer modified bitumen

with the speed and cost efficiency of single ply synthetic membranes.

# 0.5 EXCEL<sup>®</sup> FM FLAME FREE

A robust fast-track single-layer mechanically fixed warm roof bitumen waterproofing system

## 30-Year Guarantee

Excel FM Flame Free waterproofing system has been developed to safeguard client and contractor confidence through the reassurance of long-term 30-year Axter insured system guarantees, indemnifying the building owner's liability in the unlikely event of failure arising from material, design and workmanship. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Excel FM Flame Free waterproofing system has achieved independent BBA Agrément Certification as documented in certificate 94/3037, is certified Broof(t4) in accordance with BS EN 13501-5: 2005 fire classification of construction products and building elements and has a durability and service life expectancy in excess of 50 years.

## Benefits

- 100% flame free
- A robust and cost-effective alternative to single ply
- Fast, clean and safe installation method
- Classified Broof(t4) in accordance with BS EN 13501-5: 2005 fire classification of construction products and building elements
- Durability and service life expectancy of more than 60 years (BS 8747: 2007)
- Single-layer application
- Excellent mechanical strength and dimensional stability even at low temperatures
- Suitable for new build and refurbishment projects
- Comprehensive range of system accessories ensuring compatibility and single source responsibility
- Manufactured within ISO 9001 and 14001 certified management systems
- BBA Agrément Certification - certificate number 94/3037 PS 1



# 0.5 EXCEL<sup>®</sup> FM FLAME FREE

## Performance

Excel FM is a high-performance Single-Layer mechanically fixed Alpa polymer modified bitumen waterproofing system. The Excel FM capsheet provides exceptional age resistance characteristics, mechanical strength, point load resistance and dimensional stability due to its composite reinforced core and unique Alpa binder. Technological development and advanced polymer modification create a highly flexible

robust material, with a safe and secure response to hot air welding methods at laps and joints.

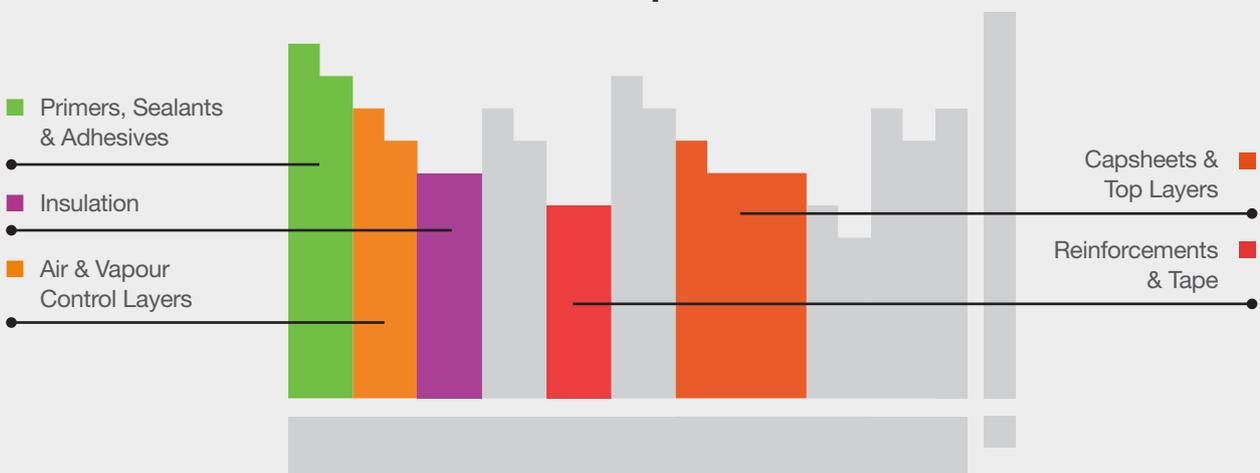
## Installation

Engineered for fast track mechanically fixed installation without the need for torch-on installation, the Excel FM Flame Free polymer modified bitumen capsheet provides an enhanced performance alternative to single ply synthetic membranes. All laps and joints are sealed by hot air welding

method to ensure a visible 2mm bead of bitumen is achieved in accordance with BS 8217 reinforced bitumen membranes for roofing – Code of Practice. Detailing is also completed using Neo-Bitumen flame free underlayer technology using hot-air welding techniques.

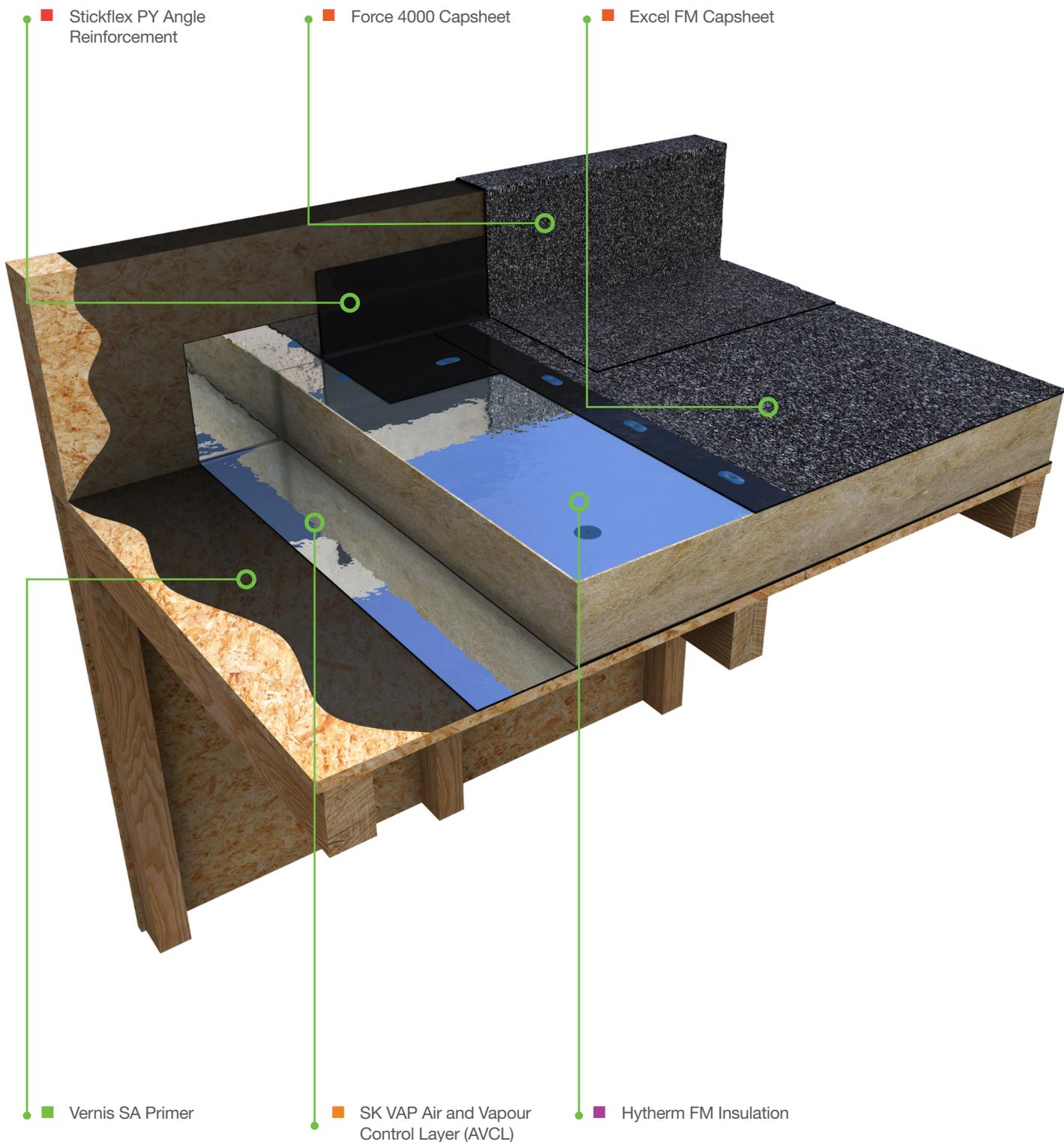
The system must be installed by an accredited installer that has successfully completed Axter's Flame Free System upskilling course.

## Excel FM Flame Free - Table of Components



## Excel FM Warm Roof Flame Free Mechanically Fixed Single-Layer

A completely flame free, mechanically fixed, fire safe system with Neo-Bitumen flame free detailing for constructions where naked flame is prohibited.



A new bitumen material with unrivalled flame free installation performance. Neo-Bitumen waterproofing systems include built-up multi-layer warm roofs and multi and single-layer inverted

roofs. They can also be combined with living roof, blue roof, solar PV and sustainable roof system finishes, and are all installed 100% flame free without the risk of hot works.

## 25-Year Guarantee

Long-term 20 to 25-year Axter insured system guarantees are offered with Neo-Bitumen systems. These indemnify the building owner's liability in the unlikely event of failure arising from material, design and workmanship. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Benefits

- Flame free application
- No hot works reduces insurance cost
- Durability and service life expectancy of more than 50 years (BS 8217)

- Excellent mechanical strength and dimensional stability even at low temperatures
- Suitable for new build and refurbishment projects
- Accredited for use under living roof, blue roof and sustainable roof systems
- Comprehensive range of system accessories ensuring compatibility and single source responsibility
- Manufactured within ISO 9001 and 14001 certified management systems





# 0.5 NEO-BITUMEN® FLAME FREE

Flame free waterproofing system range, including multi and single-layer warm and inverted roof assemblies

## Accreditations

Neo-Bitumen waterproofing systems have all achieved independent BBA Agrément Certification, are certified Broof(t4) in accordance with BS EN

13501-5: 2005 and have a durability and service life expectancy in excess of 50 years (BS 8217:2005).

# 0.5 NEO-BITUMEN<sup>®</sup> FLAME FREE

## Performance

Equally suited to new construction and refurbishment projects, with or without heightened fire safety criteria, Neo-Bitumen waterproofing systems offer a completely flame free specification option and deliver

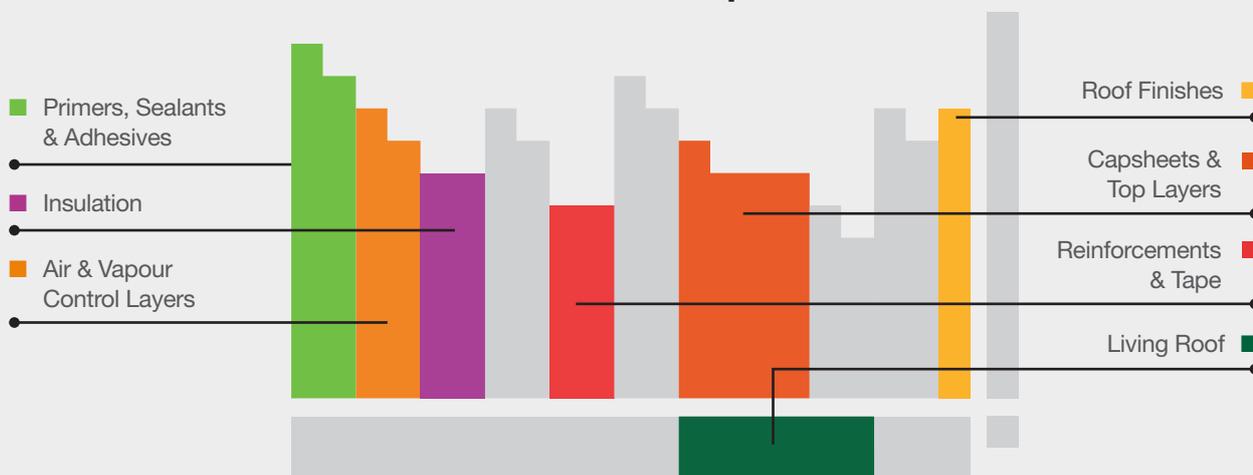
outstanding durability, high flexibility and workability in the toughest conditions.

## Installation

Engineered for fully bonded installation without requirement for gas torches, Neo-Bitumen Flame Free polymer

modified bitumen binders are highly elastic and provide outstanding bond strength to concrete slabs, metal and timber roof decks. Axter Flame Free waterproofing systems are installed by an accredited installer that has successfully completed Axter's Flame Free System upskilling course.

## Neo-Bitumen Flame Free - Table of Components



## Force Line Neo-Bitumen Flame Free Warm Roof Multi-Layer

Utilising Axter's unique Neo-Bitumen technology, this durable self adhesive, flame free system provides the hard wearing characteristics of Force Line 4.0 capsheet but with a self adhesive underlayer and capsheet. This makes it a flame free system, and installed by Axter Alliance (AAi) installers, it achieves a 20-year insured system warranty.

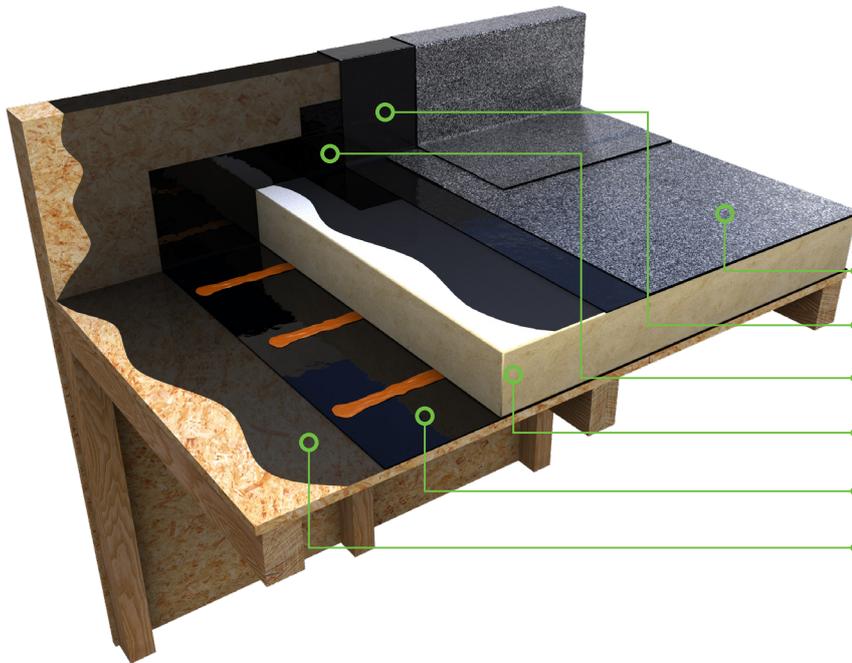


# 0.5 NEO-BITUMEN® FLAME FREE

(PRODUCTS CONTINUED)

## Force Neo-Bitumen Flame Free Warm Roof Multi-Layer

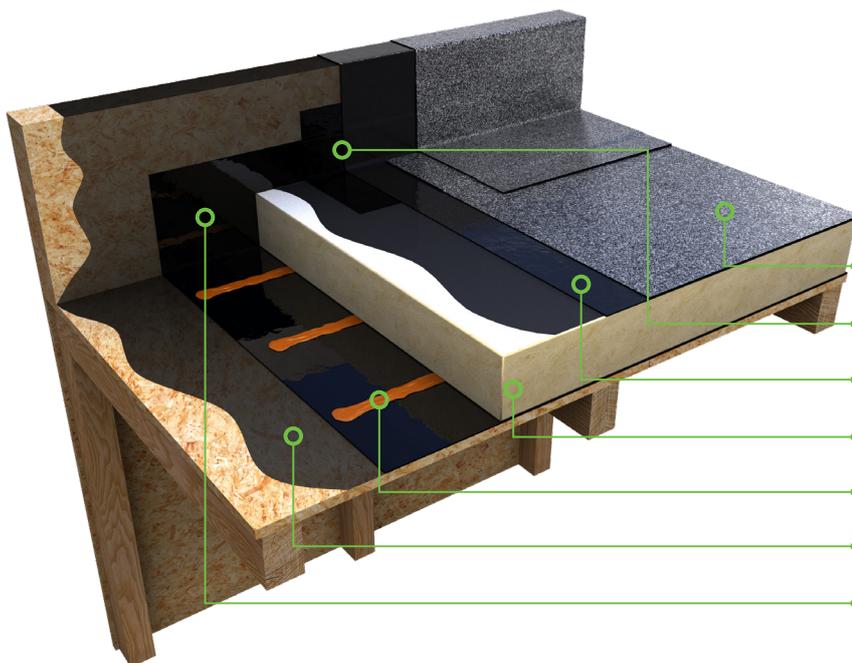
A completely flame free multi-layer specification providing fire safety whilst delivering durability and reliability.



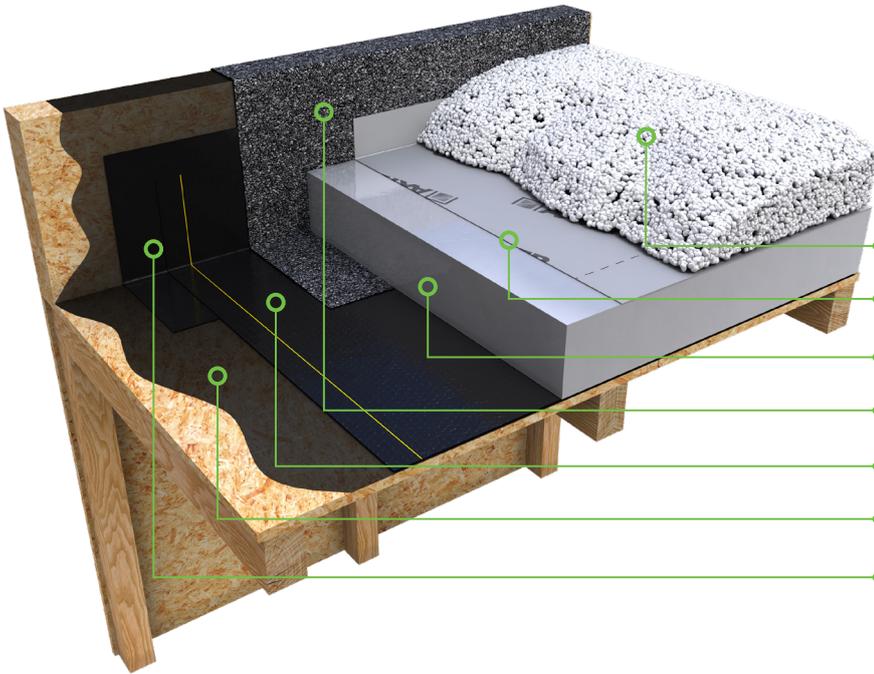
- Force 4000 Flame Free Capsheet
- Stickflex Underlayer
- Stickflex PY Angle Reinforcement
- Hytherm ADH Insulation
- Stickflex Air & Vapour Control Layer (AVCL)
- Vernis SA Primer

## Hyranger Neo-Bitumen Flame Free Warm Roof Multi-Layer

A completely flame free multi-layer specification providing fire safety whilst delivering durability and reliability.



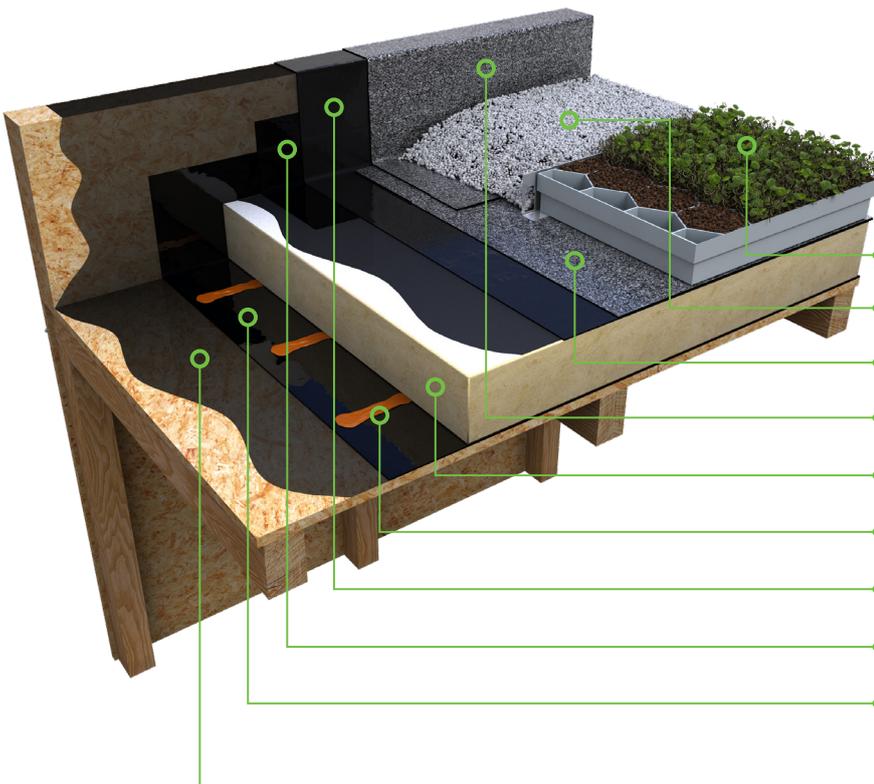
- Excel Capsheet
- Stickflex PY Angle Reinforcement
- Stickflex Underlayer
- Hytherm ADH Insulation
- Hyrastik EVO Adhesive
- Vernis Antac Primer
- Roll 25 Alpa Alu Air & Vapour Control Layer (AVCL)



## Force Dalle Neo-Bitumen Flame Free Inverted Roof Single-Layer

A completely flame free inverted roof single-layer waterproofing system providing fire safety whilst delivering durability and reliability.

- Riverstone Pebbles/Ballast
- Water Flow Reducing Layer
- Hytherm Eco XPS
- Force 4000 Flame Free Capsheet
- Force Dalle Top Layer
- Vernis SA Primer
- Stickflex PY Angle Reinforcement



## Cityflor Neo-Bitumen Flame Free Warm Roof Multi-Layer Living Roof

A completely flame free BBA approved living roof waterproofing system providing fire safety whilst delivering durability and reliability with a 25-year guarantee.

- HydroSoil Wildflower Living Roof
- Riverstone Pebbles/Ballast
- Force 4000 Traffic Flame Free Capsheet
- Force 4000 Traffic Flame Free Capsheet
- Hytherm ADH Insulation
- Hyrastik EVO Adhesive
- Stickflex Underlayer
- Stickflex PY Angle Reinforcement
- VAP ALU ADH Air & Vapour Control Layer (AVCL)
- Vernis SA Primer

Force ADH Flame Free is a robust fast track single-layer or multi-layer warm roof bitumen waterproofing system, engineered for cold bonded installation without the need for hot

works and naked flame gas-torch tooling. Force ADH Flame Free establishes an advancement in cold bonded polymer modified bitumen technology, combining synthetic cold

adhesive that eliminates the need for traditional hot bitumen bonding compounds with hot air automatic and hand held welding techniques.

# 0.5 FORCE<sup>®</sup> ADH FLAME FREE

Single-layer or multi-layer warm roof bitumen system, engineered for cold bonded installation without the need for hot works

## 20-Year Guarantee

Developed to safeguard client and contractor confidence through the reassurance of long-term 20-year Axter insured system guarantees which indemnify the building owner's liability in the unlikely event of failure arising from material, design and workmanship. Additional independent insurance backed insolvency protection for Axter's materials, and the workmanship of the accredited roofing contractor, is also available for 10 years in respect to Platinum Guarantees.

## Accreditations

Force ADH Flame Free system has a BBA Agrément Certification - N° 15/5222, is certified Broof(t4) in accordance with BS EN 13501-5: 2005 fire classification and has a durability and service life expectancy in excess of 50 years (BS 8217:2005).

## Benefits

- 100% Flame Free
- Fast, clean and safe installation method
- Durability and service life expectancy of more than 50 years (BS 8217:2005)
- Single-layer or multi-layer application
- Minimum 20-year insured system guarantee covering, materials, design, workmanship and insolvency
- Excellent mechanical strength and dimensional stability even at low temperatures
- Suitable for new build and refurbishment projects
- Comprehensive range of system accessories ensuring compatibility and single source responsibility
- Manufactured within ISO 9001 and 14001 certified management systems



# 0.5 FORCE<sup>®</sup> ADH FLAME FREE

## Performance

Force ADH is a high-performance Single-Layer or multi-layer cold bonded polymer modified bitumen waterproofing system. The Force ADH capsheet provides exceptional mechanical strength, point load resistance and dimensional stability due to its composite reinforced core. Technological development and improved percentages of SBS than would ordinarily occur in a standard polymer modified bitumen membrane create a highly flexible and robust

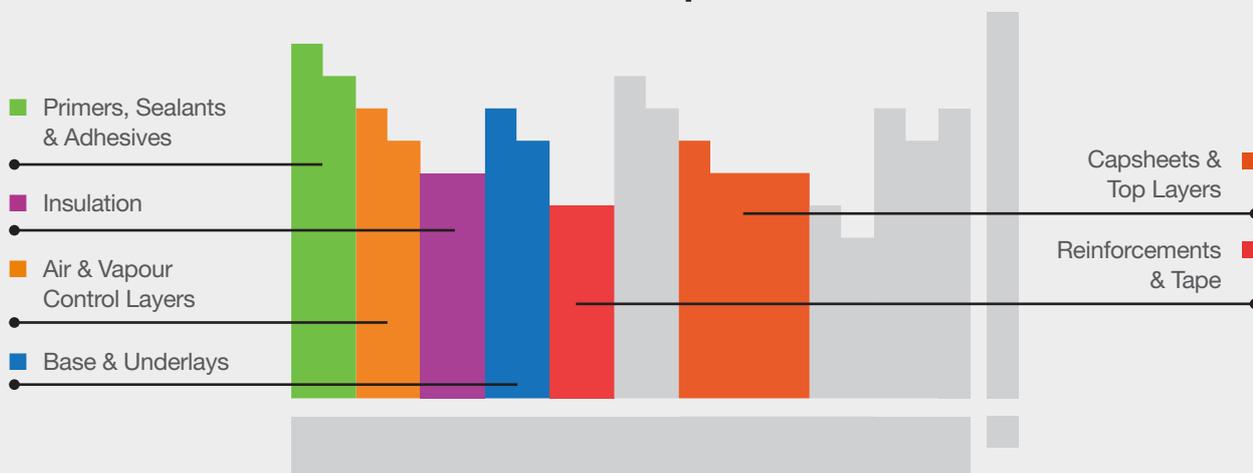
material, with a safe and secure response to hot air welding methods at laps and joints.

## Installation

Engineered for cold bonded installation without the need for traditional hot bitumen compounds, the Force ADH Flame Free polymer modified bitumen capsheet has a unique textile undersurface that when combined with ADH cold bonding adhesive achieves outstanding bond strength to all substrates including

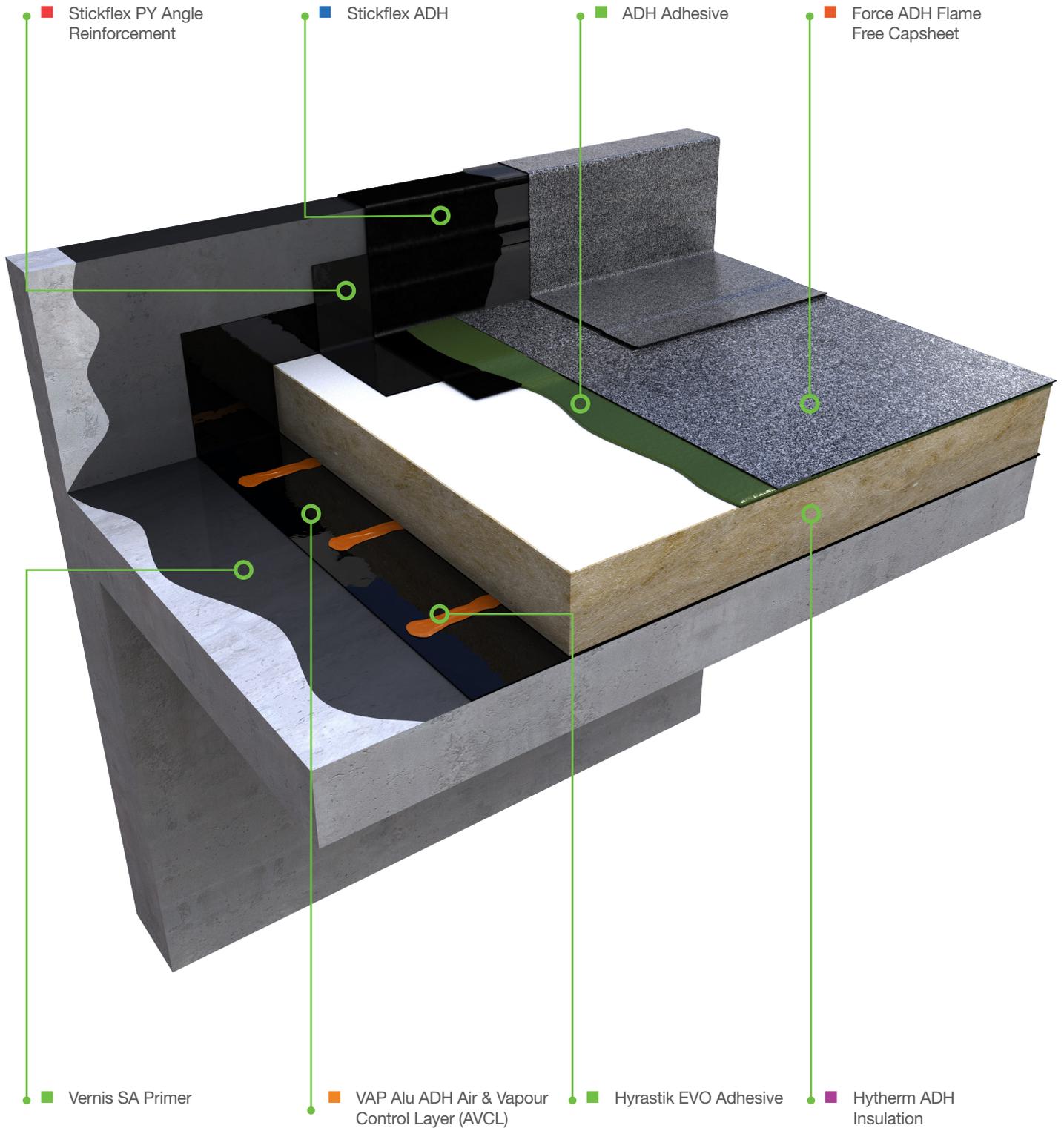
concrete slabs, metal and timber roof decks. All laps and joints are sealed by hot-air welding method to ensure a visible 2mm bead of bitumen is achieved in accordance with BS 8217 Reinforced bitumen membranes for roofing – Code of Practice. Detailing is also completed using Neo-Bitumen flame free underlayer technology using hot-air welding techniques. The system must be installed by accredited installers that have successfully completed Axter's Flame Free System upskilling course.

## Force ADH Flame Free - Table of Components



# Force ADH Flame Free Warm Roof Single Or Multi-Layer

A fast track, cold bonded single or multi-layer waterproofing system. A new safer range of flame free systems engineered to be fully compatible with Axter's unique Neo-Bitumen membrane innovation.



“

I have found Axter to be a company with technically advanced products, unrivalled designed capabilities, excellent on-site support and people with good moral fibre.”

Divisional Director, AYM Services Ltd



# 0.6 GREEN ROOF

## Extensive

Provides visual or biodiversity interest.

## Intensive

Used as recreational spaces and often contain similar features to traditional parks.

## Biodiverse

Designed to create a habitat for a specific requirement of flora and fauna, and are generally designed as part of a green roof.

## Modular

Provides complete extensive green roof systems in a tray, for simple and quick installation.

## Systems

Green roofs are set to play a big part in the future of sustainable architecture. Also known as living roofs, they provide a huge number of environmental and social benefits.

Our green roof systems are designed and engineered to accommodate the most varied ecological and environmental requirements. We encourage the use of flowering plants that are packed with nectar and pollen so that we provide a rich, biodiverse mix for pollinating insects and we work to the guidelines set out by the RHS Plants for Pollinators.

We're on a mission to improve the roofscape and transform the world above our heads.

## Considerations

- The roof must be capable of supporting the design load
- There must be adequate provision to drain excess rainwater
- Safe access for maintenance must be included in the design
- The roof waterproofing must be robust and long lasting
- Anti-root / root resistant membranes must be considered
- Outlets must be capable of inspection
- Green roofs are generally categorised as extensive or intensive, however we also offer biodiverse (brown) systems that promote and increase local biodiversity, as well as versatile modular systems to aid installation. Read more about our different green roofs on the following pages

Extensive living roofs are primarily installed to provide visual or biodiversity interest, and are less suited for use as an amenity or recreational space.

Typically they have thin growing medium/substrate layers to keep system depth and saturated load to a

minimum and are generally designed to be low maintenance, utilising hardier, more drought tolerant plant species.

They are often created to benefit the wider environment through their positive visual impact and to enhance building performance by reducing

rainfall run-off and improving thermal efficiency. Extensive green roofs are normally intended to be viewed from another location as visual or ecological features, and are usually not trafficked.

## 0.6 EXTENSIVE

Provides visual or biodiversity interest



## Guarantee

All Axter green roof systems achieve comprehensive guarantees. The guarantee length and type will be dependent on the waterproofing system selected and the variety of green roof finish chosen.

## Accreditations

The Green Roof Organisation (GRO) is a technical body of expert knowledge formed in the UK to ensure the green roof market delivers quality green roofs for the built environment.

The GRO Green Roof Code has been developed and provides guidance in relation to the design, specification, installation and maintenance of green roof systems. Axter are members of GRO and work in accordance with the GRO Code of Best Practice.

## Benefits

- Boosts local biodiversity
- Reduces rainwater run-off
- Improves air quality
- Provides visual impact and interest
- Suitable for flat/low slope and pitched roofs
- Low maintenance
- Lightweight
- Compatible with Wilotekt-Plus, Cityflor and Force Dalle waterproofing systems



# 0.6 EXTENSIVE LIVING ROOF

Substrates for extensive green roofs are shallow and usually of a low nutrient base formulation, thus are able to support sedums, grasses and some wild flower varieties whilst suppressing the growth of invasive weed species. These plant types are able to survive and thrive in such conditions, and when correctly designed require little irrigation beyond the establishment phase and during periods of drought. Planting styles are usually naturalistic with the object of establishing a self-sustaining plant ecology on the roof.

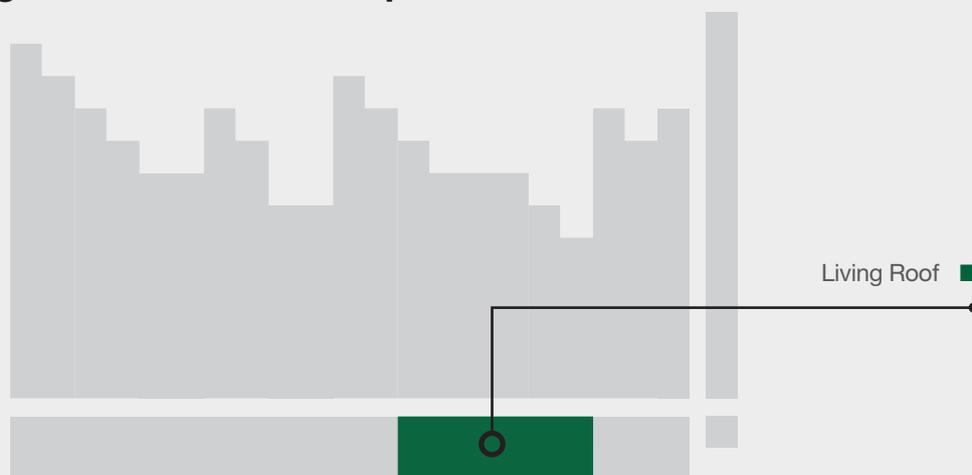
Extensive living roof planting designs can incorporate pre-grown mixed sedum mats/blankets, pre-grown modular trays, sedum plug plants and/ or a mixed seed broadcast with plant cuttings.

## Installation

Both warm and inverted roofs can be employed for all Axter green roof types. However, extensive roofs, mainly designed for biodiversity, would normally be installed on a warm roof Cityflor system assembly.

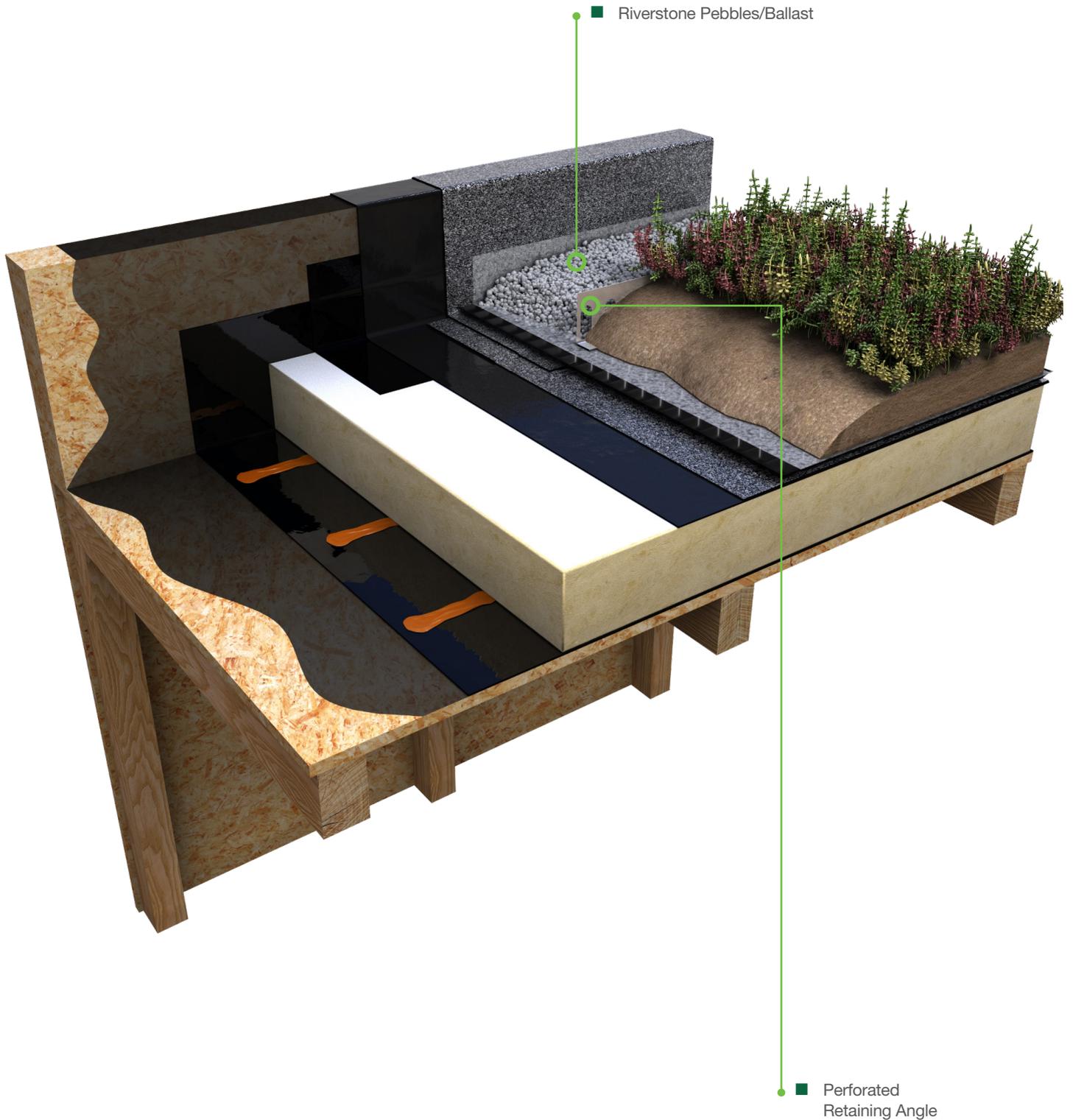
Installation of Axter green roof systems is carried out by accredited Axtershield installers. All system components are specified and installed to ensure compatibility, single source responsibility, and compliance with Axter recommendations and the Green Roof Organisation (GRO) Code.

## Extensive Living Roof - Table of Components



## Extensive Living Roof Finish

An extensive living roof finish can be laid on top of a variety of waterproofing systems and provides a great variety of flora and fauna for visual and biodiverse interest.



Intensive living roof systems, also known as roof gardens, are characterised by their capacity to sustain a wide variety of vegetation ranging from herbaceous plants, large shrubs, trees, lawns and even food crops, as well as hard landscaped areas and water features.

Intensive living roofs are principally designed for their recreational and amenity value, creating public and private spaces used for playgrounds, parks and gardens for people and nature to enjoy. Intensive living roofs are rapidly gaining popularity in dense urban environments where access to green space is reduced and at a premium.

Aside from recreational use, intensive living roofs are facilitating the growth

of urban agricultural movements, or rooftop farms, where roof space is used for growing food crops. This produce often serves the local community, reducing the 'food miles' travelled from where it is grown to where it is consumed and increasing local food security.

Our design philosophy of 'whatever you can build on the ground, you can build on the roof' is fully established when designing and creating an intensive green roof. Provided the basics of intensive green roof design are observed, such as engineering a structure capable of withstanding saturated loads and installing a robust root resistant waterproofing system, intensive green roof design parameters are essentially limitless.

## Guarantee

All Axter living roof systems achieve comprehensive guarantees. The guarantee length and type will be dependent on the waterproofing system selected and the variety of green roof finish chosen.

## Benefits

- Increases green amenity space in dense urban environments
- Fully accessible recreation environments improving population wellbeing
- Supports urban agriculture and community rooftop farms
- Limitless hard and soft landscaping design possibilities
- Improves air and water quality, filtering out dust and pollutants
- Suitable for use with Cityflor, Wilotekt-Plus and Force Dalle waterproofing systems





## 0.6 INTENSIVE

Used as recreational spaces and often contain similar features to traditional parks

### Accreditations

The Green Roof Organisation (GRO) is a technical body of expert knowledge formed in the UK to ensure the green roof market delivers quality green roofs for the built environment.

The GRO Green Roof Code has been developed and provides guidance in relation to the design, specification, installation and maintenance of green

roof systems. Axter are members of GRO and work in accordance with the GRO Code of Best Practice.

# 0.6 INTENSIVE LIVING ROOF

Intensive living roofs require intensive maintenance and a structured approach to irrigation. Effective rainwater management in terms of drainage and retention is essential to ensure long-term system performance. Plant selection and design will also greatly affect system nutrient requirements and focused maintenance provided by Axter specialist partners is essential.

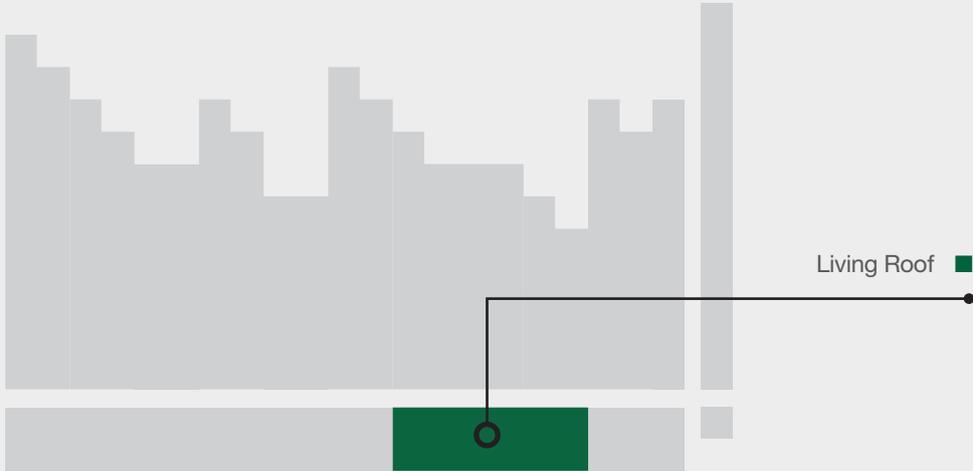
## Installation

Both warm and inverted roofs can be employed for all Axter green roof types. However, intensive roofs, mainly designed for amenity value, would normally be installed on an inverted roof Wilotekt-Plus or Force Dalle system assembly.

Installation of Axter green roof systems is carried out by accredited Axtershield installers. All system components are specified and installed to ensure compatibility, single source responsibility, and compliance with Axter recommendations and the Green Roof Organisation (GRO) Code.

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## Intensive Living Roof - Table of Components



# Intensive Living Roof Finish

An intensive living roof is ideal for creating a usable space on your roof, be it a rooftop garden, playground, podium or communal park.





## 0.6 BIODIVERSE

Designed to create a habitat for a specific requirement of flora and fauna, and generally part of a green roof

Biodiverse living roofs are significant biologically diverse environments. They help create vibrant new sustainable ecosystems or re-establish lost habitats, and aim to conserve priority species identified as most threatened within the UK's national and local biodiversity action plan (BAP).

Also referred to as brown roofs, they are carefully designed spaces

that intend to replicate the local biodiversity prior to construction of the building. Biodiverse green roofs or brown roofs are designed to enhance the site's pre-development ecology. By enriching plant species and creating habitats, these roofs encourage diversity and allow new or lost ecosystems to flourish.

The successful design and performance of biodiverse roofs is

difficult and requires collaboration with a wide range of multi-discipline advisers such as sustainability consultants, ecologists, landscape designers, conservationists, engineers, architects, contractors and waterproofers. Rooftop biodiversity is entirely dependent upon specialist knowledge and their ability to create environments that will thrive with minimal intervention.



SUSTAINABLE SYSTEMS | GREEN ROOF | BIODIVERSE



## Guarantee

All Axter living roof systems achieve comprehensive guarantees. The guarantee length and type will be dependent on the waterproofing system selected and the variety of green roof finish chosen.

## Accreditations

The Green Roof Organisation (GRO) is a technical body of expert knowledge formed in the UK to ensure the green roof market delivers quality green roofs for the built environment.

The GRO Green Roof Code has been developed and provides guidance in relation to the design, specification, installation and maintenance of green roof systems. Axter are members of GRO and work in accordance with the GRO Code of Best Practice.

## Benefits

- Increases indigenous biodiversity
- Recreates habitats lost to development
- Creates a wide range of microhabitats for invertebrates
- Supports conservation of endangered species
- Incorporates a variety of wildlife habitats including grassland, woodland, wetland and meadows
- Meet the objectives of Local Biodiversity Action Plans
- Suitable for use with Cityflor, Wilotekt-Plus and Force Dalle waterproofing systems

# 0.6 BIODIVERSE LIVING ROOF

There are multiple critical components that when combined create a biodiverse roof. Critical elements include drainage, water retention capacity, irrigation need as well as growing medium/substrate mixture and depth.

Axter biodiverse growing medium is purposely selected to allow indigenous plant species to inhabit the roof over time, and we also engineer specialist substrates to suit the specific and unique requirements of the planting regime. By contouring

the substrate and introducing a variety of reclaimed and natural materials such as gravel, sand, rocks and wood, habitat variability is established on the roof and therefore increases biodiversity.

## Installation

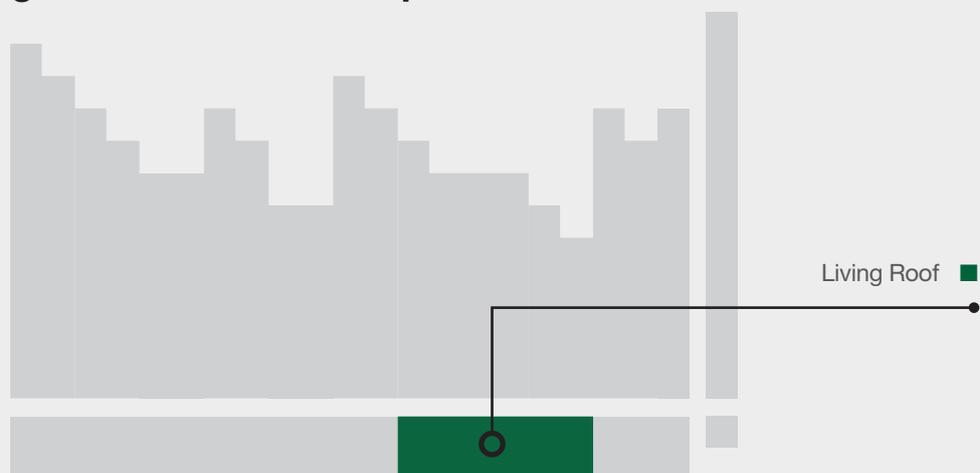
Both warm and inverted roofs can be employed for all Axter green roof types.

Installation of Axter green roof systems is carried out by accredited Axtershield installers. All system

components are specified and installed to ensure compatibility, single source responsibility, and compliance with Axter recommendations and the Green Roof Organisation (GRO) Code.

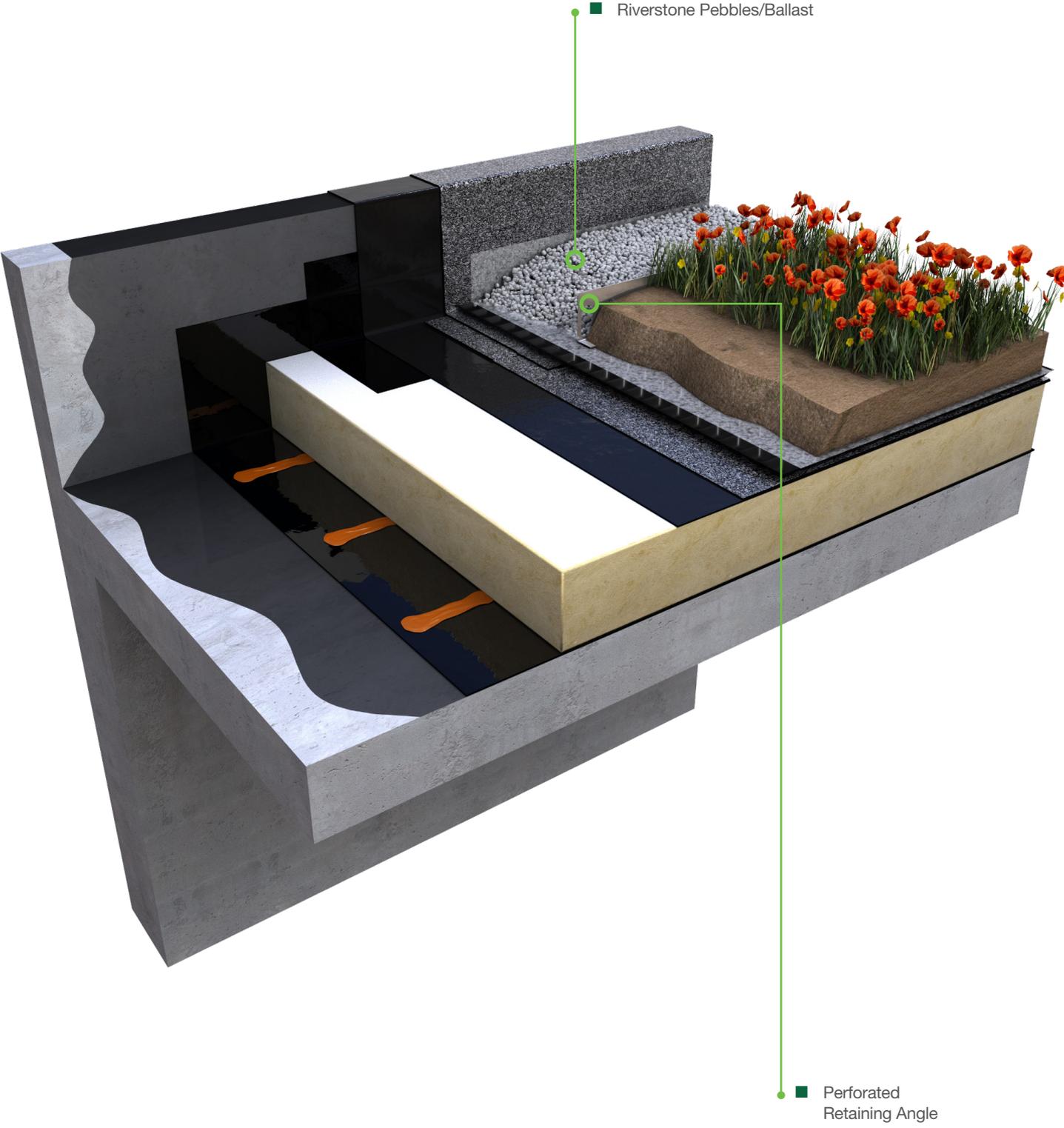
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## Biodiverse Living Roof - Table of Components



# Biodiverse Living Roof Finish

Create a space for habitat to flourish by choosing a specially designed biodiverse roof that includes specific plants and soil to benefit the local environment.



Modular living roof systems provide a complete pre-established extensive living roof in a modular cassette, combining excellent planting quality with simplicity of installation.

Axter's Hydropack™ modular living roof system provides the perfect solution for low maintenance, simple-to-install green roofs. Hydropack comprises of a unique patented cassette design, manufactured from recycled high density polypropylene

(HDPE), combined with drainage granules, a filtration layer, engineered growing substrate and established planting chosen to replicate a variety of environments.

## 0.6 MODULAR

Provides complete extensive green roof systems in a tray, for simple and quick installation



## Guarantee

All Axter living roof systems achieve comprehensive guarantees. The guarantee length and type will be dependent on the waterproofing system selected and the variety of green roof finish chosen.

## Accreditations

The Green Roof Organisation (GRO) is a technical body of expert knowledge formed in the UK to ensure the green roof market delivers quality green roofs for the built environment.

The GRO Green Roof Code has been developed and provides guidance in relation to the design, specification, installation and maintenance of green roof systems. Axter are members of GRO and work in accordance with the GRO Code of Best Practice.

## Benefits

- Pre-established planting provides immediate visual impact
- Varied planting to suit a variety of climates and environmental conditions
- Quick and simple extensive living roof installation
- Suitable for flat, low slope and pitched roofs
- Ideal for exposed roofs in high wind zones
- Linked cassette-to-cassette drainage maximising water usage
- Inbuilt water reservoir (8 litres/sqm) reducing irrigation dependency
- Patented modular cassette design
- Suitable for use with Cityflor, Wilotekt-Plus and Force Dalle waterproofing systems



# 0.6 MODULAR LIVING ROOF

Through its innovative design, Hydropack cassettes can retain up to 8 litres of rainwater per sqm, ensuring planting schemes have sufficient water reserves to sustain strong growth and continued establishment even during prolonged periods of dry weather. Hydropack's inbuilt reservoir also reduces dependency on high cost irrigation systems, particularly when installed on low slope or pitched roofs, which would ordinarily suffer from rapid drying, planting degradation and species death.

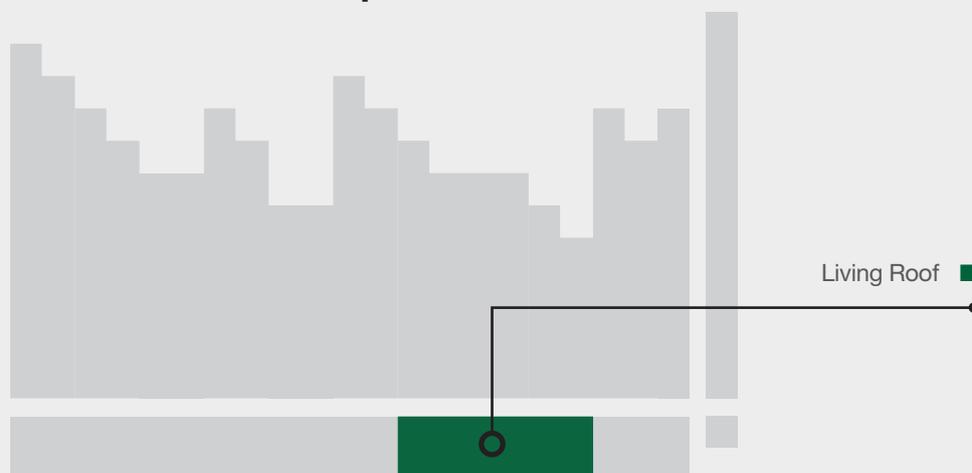
During heavy rainfall Hydropack effectively attenuates storm water, reducing and delaying rainwater run off, thus lessening the demand on the drainage system, reducing flooding and the impact of climate change. Hydropack cassettes are planted and cultivated at our specialist partner nursery for 12-18 months. Once the planting scheme has become established, the cassettes are carefully palletised and delivered directly to the specified project with full plant coverage.

## Installation

The Hydropack modular cassette system is quick and simple to install, providing an immediate, visually impressive green roof. Once installed Hydropack living roof cassettes require no specialist maintenance for the first two years post installation, and only standard biannual system inspection as recommended in Axter's living roof maintenance guide is necessary.

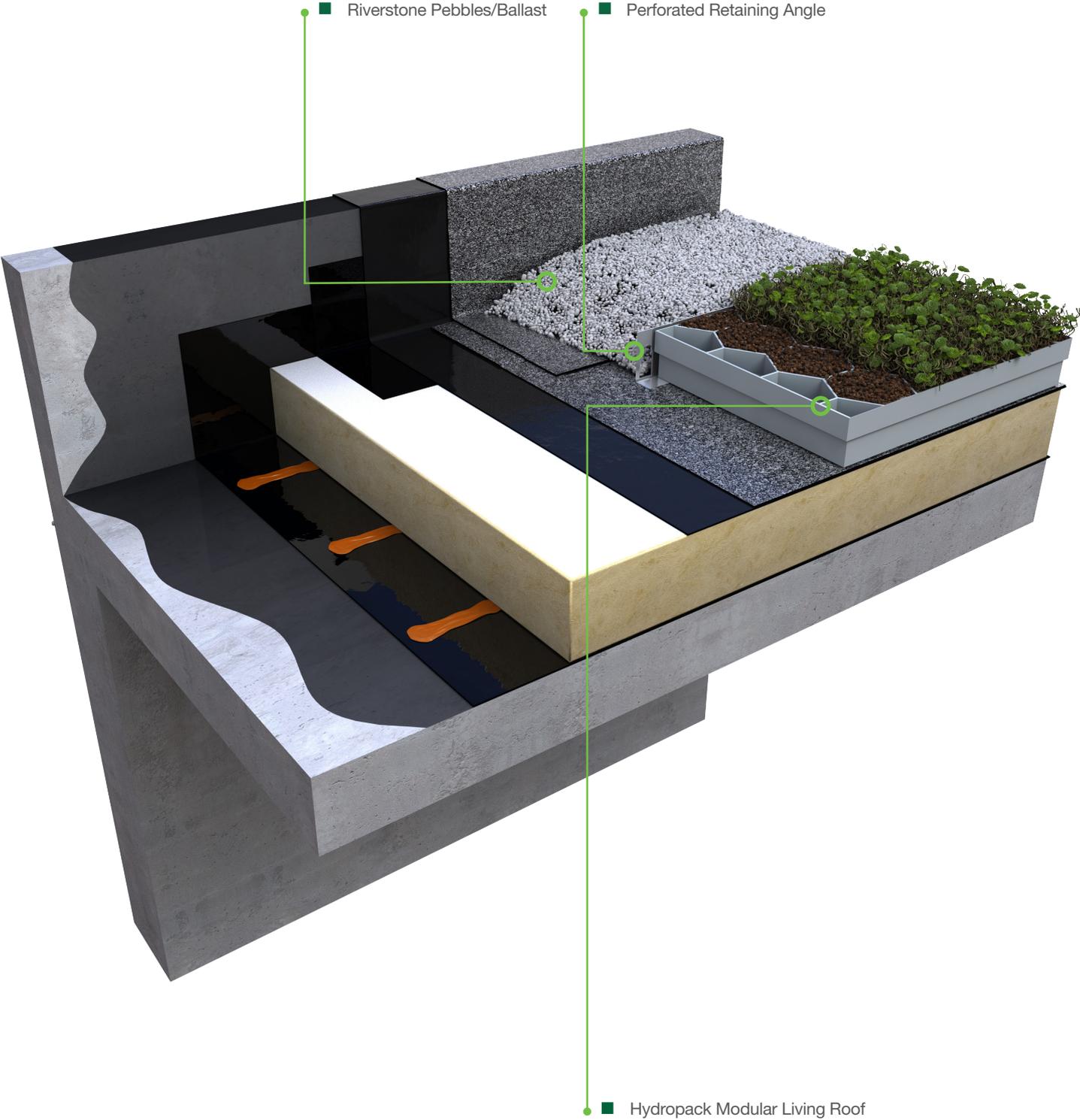
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## Modular Living Roof - Table of Components



# Modular Living Roof Finish

A modular living roof system makes it simple to quickly establish and maintain an excellent planting selection on the roof.



# 0.7 BLUE ROOF

Aquamodul™ Blue Roof

## Systems

The Aquamodul blue roof system is an innovative, sustainable drainage method specifically designed to attenuate and manage stormwater on flat roofs.

With climate change increasing the risk of flooding within our communities, rainwater management within urban areas is becoming more critical. Traditional flat roof drainage principles state that all rainwater should be removed from the roof as quickly as possible. However, this is now being challenged and sustainable drainage methods such as blue roofs are being implemented more frequently to slow the rate of rainwater from the roof, preventing flash flooding.

Aquamodul blue roofs can be used beneath a multitude of different surface finishes including living roofs, solar PV and multi-functional mixed amenity finishes, or combinations of them all.

## How Does A Blue Roof Work?

As defined within BS 6229 Flat roofs with continuously supported flexible waterproof coverings – Code of Practice, a blue roof is a “roof designed to attenuate the rate at which rainwater is drained from the roof and is allowed to enter the drainage system”.

A blue roof is not rainwater storage on a roof. Instead, a blue roof provides source control, managing rainfall where it falls by temporarily attenuating it on a roof.

It mimics the natural environment by managing the discharge of rainwater from roofs at a controlled rate in line with a drainage strategy and overall site flood risk assessment.

Blue roofs are becoming a common approach to deliver Sustainable Drainage Systems (SuDS) and manage local flood risk, particularly in dense urban environments.

The Aquamodul blue roof sustainable drainage system is designed to attenuate, control and manage rainwater at source, providing attenuation capacity within the flat roof or podium deck construction of a development that can be combined with living roof, solar PV and multi-functional mixed amenity finishes.

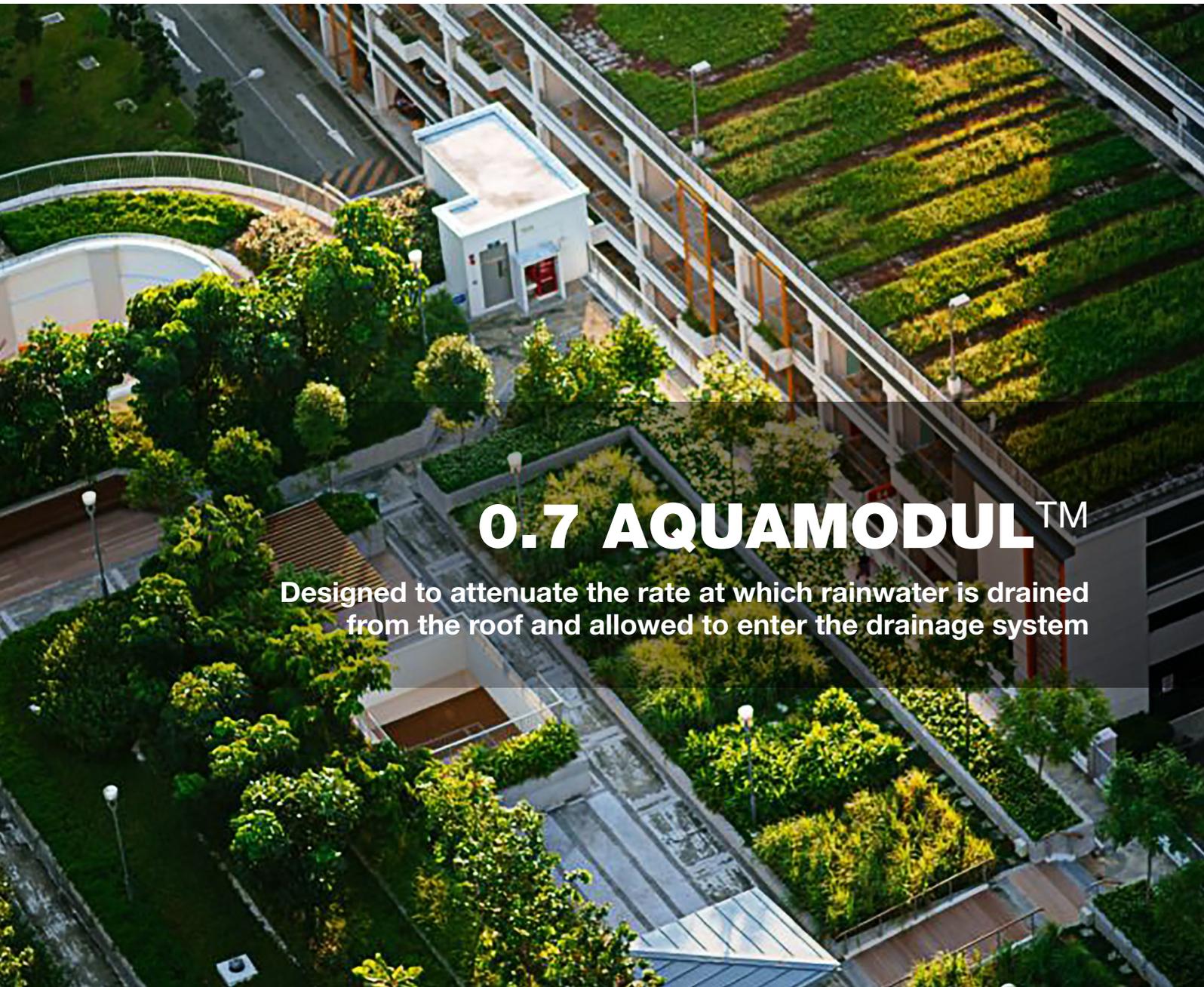
Utilising podium deck and flat roof space in this way means that the attenuation capacity required to meet sustainable drainage systems (SuDS) best practice can be achieved without the requirement for land consuming ponds and retention basins, or the challenges of constructing large and expensive subterranean geocellular rainwater attenuation tanks.



## Benefits

- British Board of Agrément (BBA) blue roof waterproofing system approval
- Single source system responsibility comprising waterproofing, insulation, blue roof and multi-functional finishes (green roof, solar PV)
- Site specific drainage and out-flow calculations
- SuDS regulation and planning condition compliant
- Third party building warranty (LABC / NHBC) compliant
- Cost effective to install and to maintain
- Minimum 20-year insured guarantee, covering materials, design, workmanship and insolvency





# 0.7 AQUAMODUL™

Designed to attenuate the rate at which rainwater is drained from the roof and allowed to enter the drainage system

## Accreditations

Compliant with BS 6229:2018 – Code of Practice (section 4.6.2.4). Designed and engineered in compliance with the NFRC Technical Guidance Note for the

construction and design of blue roofs. Compliant with CIRIA SuDS manual 2015, British Board of Agrément (BBA) Certificate 15/5222 Axter Force Dalle

RBM system, and European Technical Approval (ETA) Certificate No ETA-03/0049 Axter Wilotekt-Plus hot melt system.

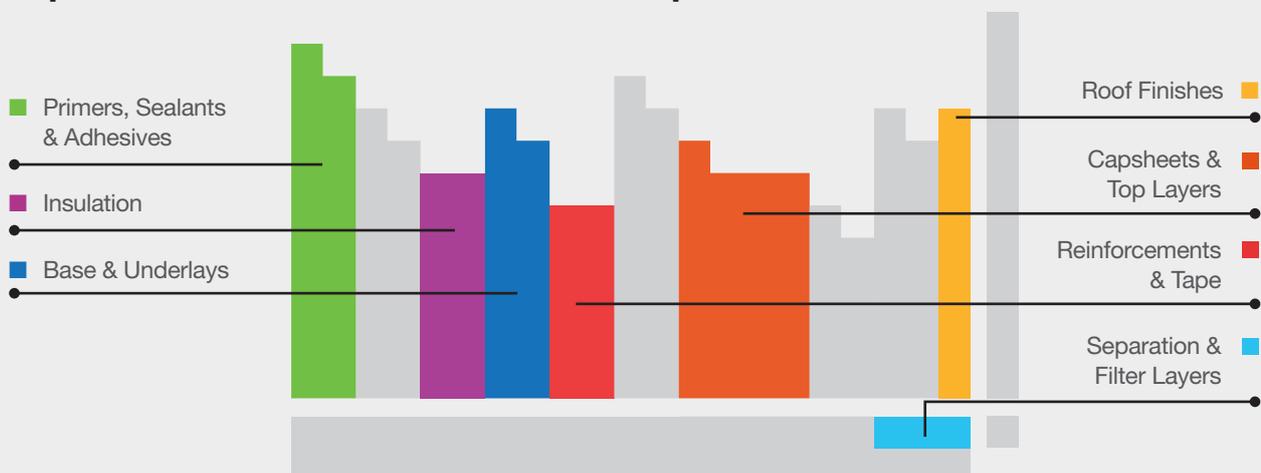
# 0.7 AQUAMODUL™

Aquamodul blue roof systems are designed to slow the release of rainwater into the drainage system and to discharge the water completely from the roof within a 24-hour period. They comprise of two key components; a drainage geocomposite system with integral filter geotextiles and a series of restrictor chambers, and a restrictive flow outlet system.

Aquamodul blue roof sustainable drainage systems are designed for use with Axter Force Dalle roof waterproofing systems in a warm, cold or inverted roof construction. Aquamodul blue roof systems are also suitable for installation in conjunction with Axter's unique Wilotek-Plus Hot Melt structural waterproofing system in a cold or inverted roof construction.

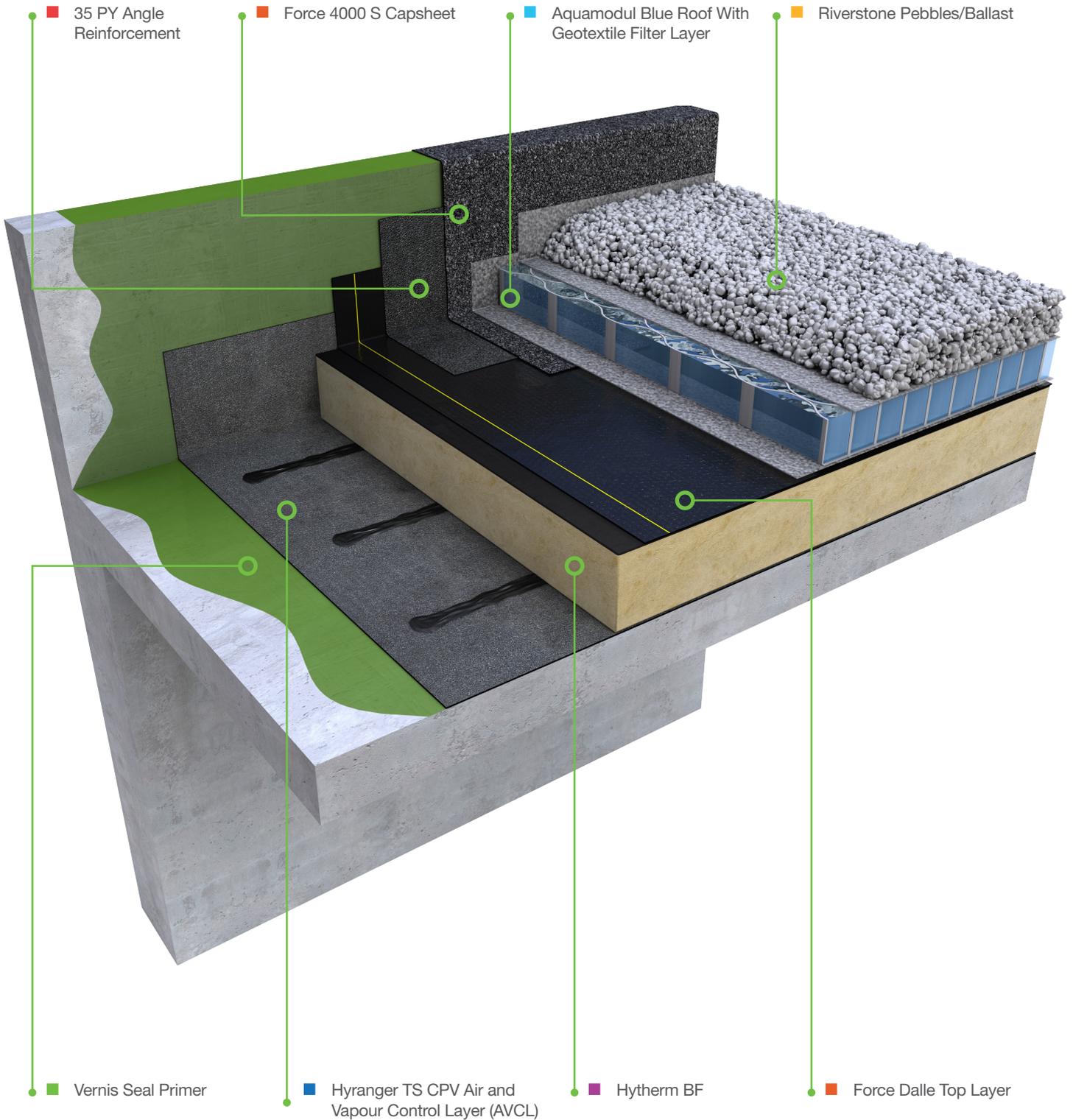
When designing inverted warm blue roofs, advice provided within BS 6229: 2018 and the National Federation of Roofing Contractors (NFRC) technical guidance note for the construction and design of blue roofs should be followed.

## Aquamodul Blue Roof - Table of Components



# Force Dalle Warm Roof Single-Layer With Aquamodul Blue Roof

A single-layer hybrid waterproofing system providing durable protection, BBA approved for zero falls and blue roofs.



# 0.8 SOLAR PV

Solar PV Flex

Solar PV

Biosolar PV

## Systems

A flat roof is ideally suited to generate electrical energy via a photovoltaic array. At Axter we believe the roof space should be utilised effectively, rather than being forgotten about and left as an unused resource. Through the installation of an Axter solar

system, the flat roof can easily be converted into an electricity generator, producing clean and efficient electrical energy to power the building, the local community or feed back into the national grid.



# 0.8 SOLAR PV FLEX

**A unique single-layer waterproofing system with integrated and lightweight photovoltaic module finish**

Solar PV Flex is our lightweight thin film alternative to traditional photovoltaic arrays. This innovative technology is ideal for lightweight deck types, curved roofs and sites with planning constraints. Bonded on our Excel Solar membrane, this is an innovative solution for refurbishment and new build projects.

It is a unique integrated solution that provides robust, durable bitumen waterproofing and the production of clean efficient electrical energy within a single flat roof system configuration.

Solar PV Flex combines Excel high-performance reinforced bitumen waterproofing membranes,

manufactured with the patented Alpa® polymeric binder with fully bonded Solar PV Flex (CIGS) modules.



## Guarantee

The CIGS module carries a 5-year product warranty against material defect and a 25-year linear power output warranty - referring to 80% of the nominal power (STC). As part of a BIPV (Building Integrated Photovoltaic) system, please see the waterproofing product guarantee documents for the full guarantee information.

## Accreditations

Solar PV Flex waterproofing system is British Board of Agrément (BBA) certified Certificate No 94/3037, compliant with BS 6229: 2018 - Flat roofs with continuously supported flexible waterproof coverings – Code of Practice, CE Marked and accepted by all third-party building warranty providers such as the LABC and the NHBC, and B Roof (T4) tested.

## Benefits

- No roof penetrations BIPV solution
- Shade tolerant CIGS technology
- Can be installed on curved surfaces not suitable for rigid panels
- Lightweight, less than 2.9kg/m<sup>2</sup> (6.2kg/module)
- Excellent bond strength
- Multi-layer or single-layer waterproofing options
- Approved for all structural deck types (concrete, metal or timber)
- Suitable for new build and refurbishment projects

# 0.8 SOLAR PV FLEX

## Performance

Solar PV Flex is a flexible polymer encapsulated thin-film solar module based on advanced CIGS (Copper Indium Gallium Selenide) technology. The photovoltaic modules are lightweight (2.9 kg/m<sup>2</sup>), shatterproof, hail resistant, compatible with Excel Solar bitumen waterproofing membrane and, being flexible, are suitable for all roof shapes with no requirement for orientation, plinths, or ventilation. Increased energy output is achieved when compared to rigid panel systems in low level light or indirect light conditions.

The Solar PV Flex with an Excel waterproofing system is designed for installation in either a multi or Single-

Layer application using torch-on techniques. With exceptional ageing characteristics and excellent bond strength, Axter's Solar PV Flex has been technologically developed to be flexible and durable and is suitable for use on all new build and refurbishment Solar PV projects.

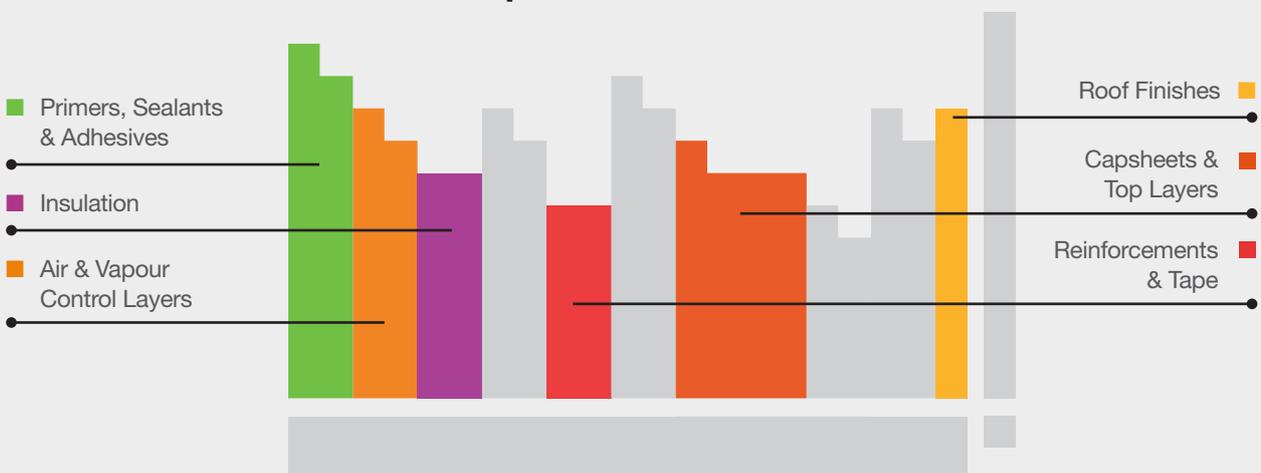
## Installation

The application technique for Solar PV Flex eliminates any need for penetration of the Excel waterproofing system during installation and greatly simplifies installation on roofs of all shapes and sizes. The modules can simply be bonded to curved surfaces, enabling solar power generation on roofs where traditional rigid silicon panels are not suitable.

Prefabricated cable penetration units should also be installed to ensure the waterproofing system integrity is maintained at all times.

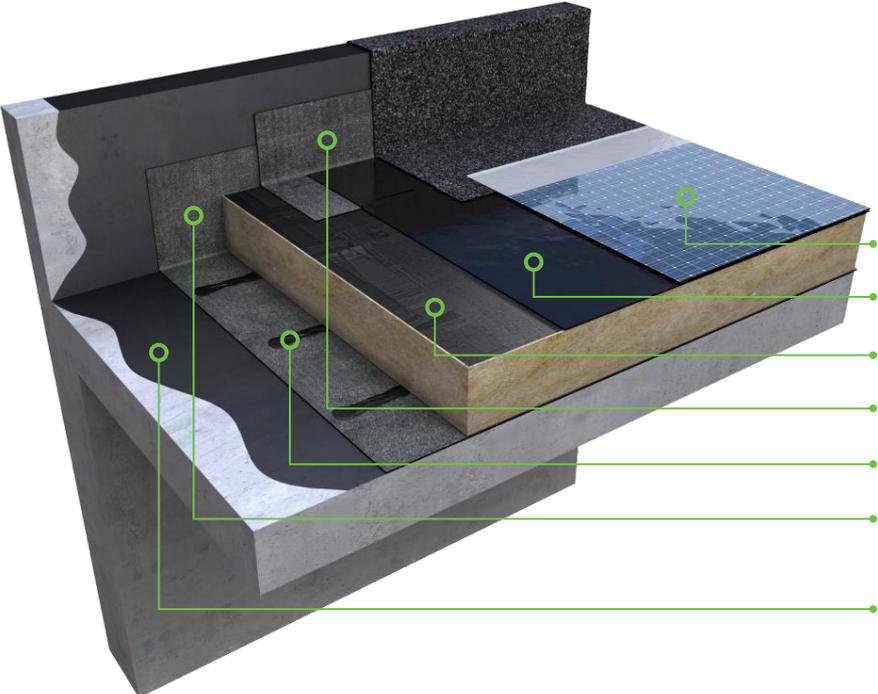
We will offer a full bespoke design pack including a 3D model covering the yield calculation, wind uplift calculation (where required) and a modelled output of the system. We can also show you an accurate cost saving if we are provided with the consumption figures.

## Solar PV flex - Table of Components



### Excel Solar PV Flex Warm Roof Single-Layer

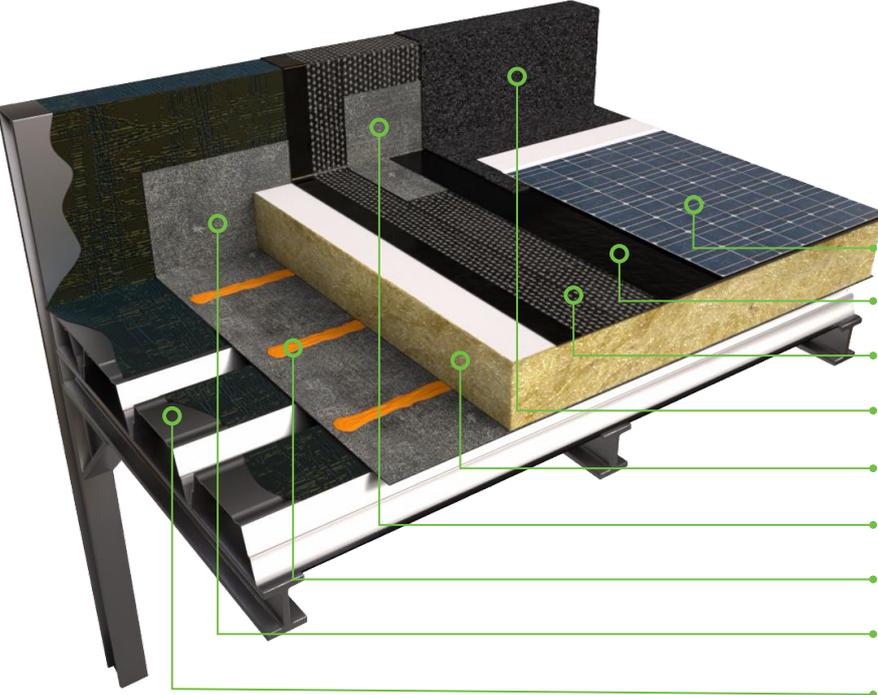
A unique single-layer waterproofing system with an integrated and lightweight CIGS photovoltaic module finish. Maximises roof usage while minimising risk.



- Excel Solar PV Flex
- Excel Solar Membrane
- Hytherm BF Insulation
- 35 PY Angle Reinforcement
- Hyrastik EVO Adhesive
- Roll 25 Alpa ALU Air & Vapour Control Layer (AVCL)
- Vernis Antac Primer

### Excel Solar PV Flex Warm Roof Multi-Layer

A unique multi-layer waterproofing system with an integrated and lightweight CIGS photovoltaic module finish. Maximises roof usage while minimising risk.



- Force 4000 Flame Free Capsheet
- Stickflex PY Angle Reinforcement
- Stickflex Underlayer
- Excel Capsheet
- Hytherm ADH Insulation
- 35 PY Angle Reinforcement
- Hyrastik EVO Adhesive
- VAP ALU ADH Air & Vapour Control Layer (AVCL)
- Vernis Antac Primer

Axter's Solar PV is a combined PV panel with mounting system that does not compromise roof waterproofing integrity or roofing system guarantees. It is a complete solution, designed by Axter specifically for your project, and installed by an accredited contractor.

Our Solar PV systems utilise high power output Crystalline PV panels with ballasted or mechanically anchored mounting systems that secure performance against wind load. Mechanically anchored mounting systems are installed with our Universal Fixing Point (UFP), that is fully compatible with Axter bitumen

and Single Ply roof waterproofing systems. The Solar PV system range is extremely versatile and can be used across all support structures, subject to weight load.

## 0.8 SOLAR PV

A multi-functional hydroactive roof system combining four technological functions



## Warranty

The Solar PV system achieves a minimum 12-year product and 25-year linear power output warranty. Please refer to product specific technical data sheets available from Axter Ltd's Technical Support Team, email: [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk), telephone: 01473 935008.

## Accreditations

Axter's Solar PV system uses Microgeneration Certification Scheme (MCS) accredited panels suitable for UK grid connection and installed in conjunction with Axter's BBA accredited waterproofing systems. They are installed by an accredited contractor and eligible for Smart Export Grant (SEG) and Feed in Tariff (FIT).

## Benefits

- Project-specific designed solution
- Ballasted or anchored solution without compromising the roof waterproofing system guarantee
- Cost-effective solution ideal for retrofit and new construction
- High performance power output modules
- Lower levelised cost of electricity (LCOE)
- MCS accredited panel technology and contractor installation

# 0.8 SOLAR PV

## Performance

Axter Solar PV uses high performance power output modules with efficiency ratings greater than 19% in accordance with The Department for Education roof-mounted Solar PV output specification.

## Installation

The complete Solar PV system is engineered, designed and supplied by Axter, and installed by an Axter accredited contractor specialising in roof-mounted PV installations, to ensure compliance with our rigorous quality assurance procedures.

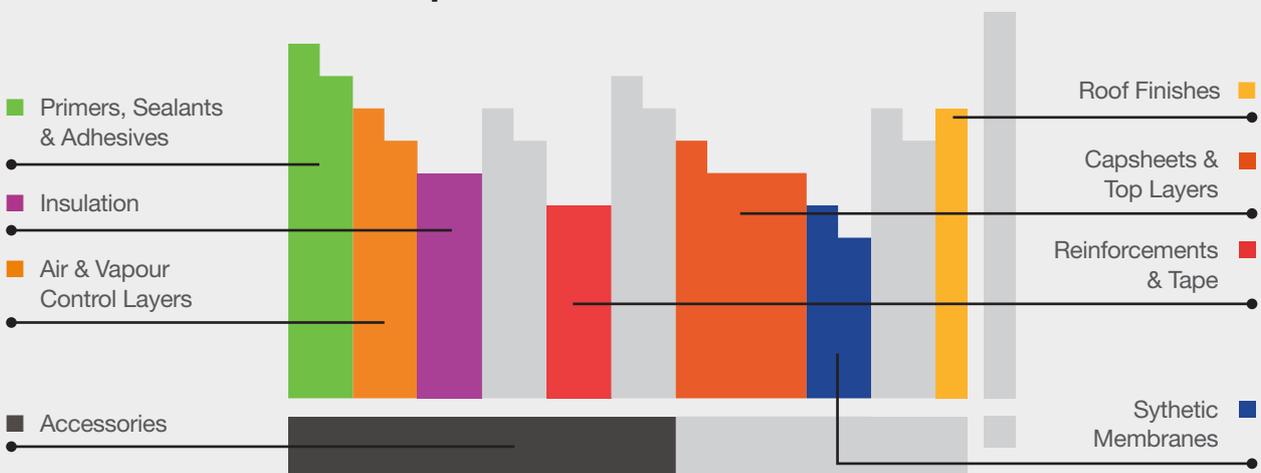
The installation process has been developed to ensure compatibility and eliminate damage to the roof waterproofing system. Ballasted systems include the installation of a durable rubber separation mat laid between the waterproof membrane and mounting frames. PV cabling is safely routed in raised cable trays mounted on protective supports that maintain drainage, don't encourage the build-up of roof debris and protect the waterproof membrane from damage.

Amidst a competitive market, our Solar PV service has been established to deliver complete consumer

confidence. The roof waterproofing system is guaranteed with a service life in excess of 30 years (BBA Certificate 94/3037). The Axter Solar PV system is supplied with a comprehensive project-specific design and construction portfolio, including 3D site model, generation/yield calculation, wind load calculation, technical drawings, system specifications and installation guides.

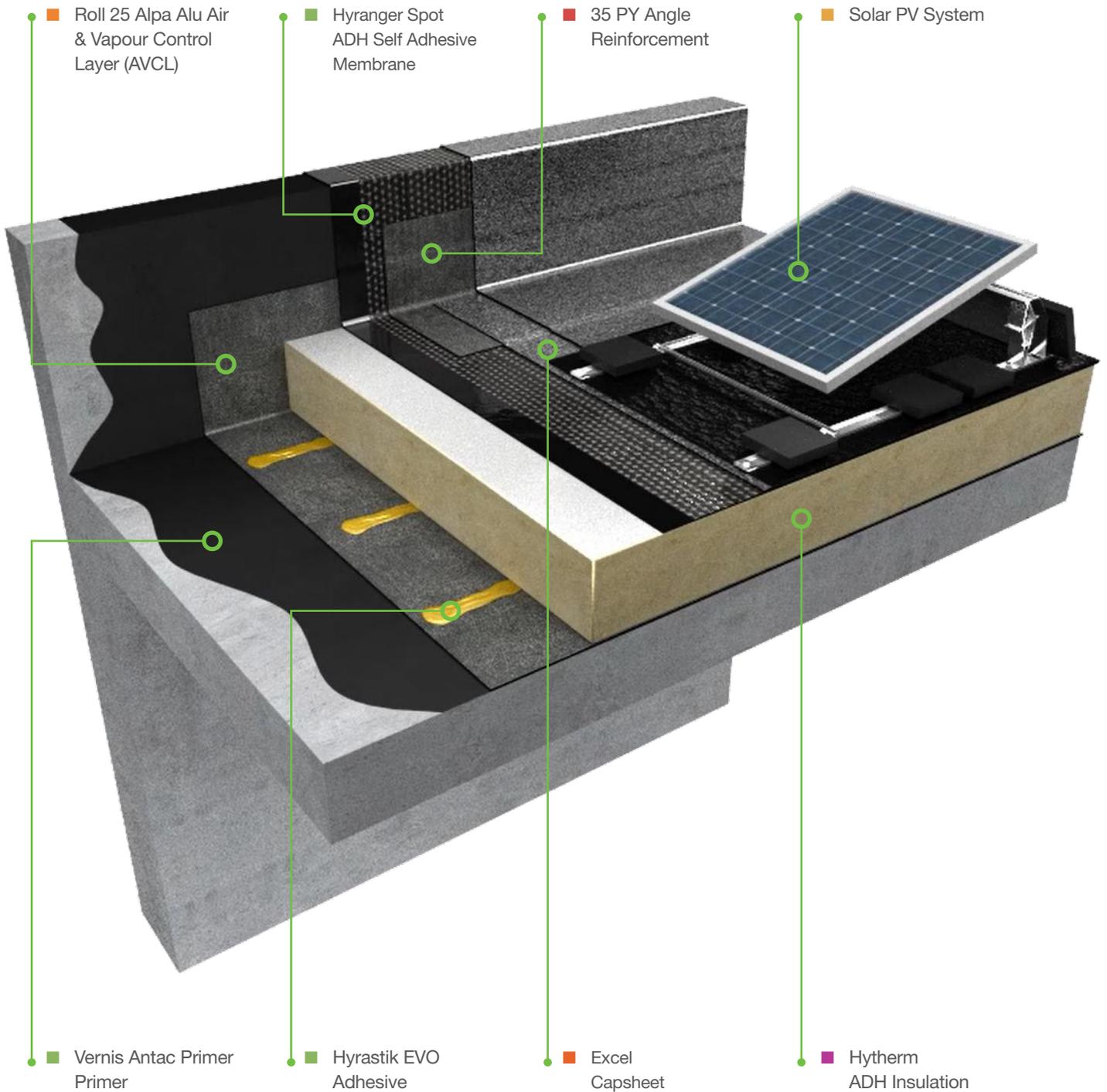
Axter's experienced team offer comprehensive support throughout the design, construction and handover processes, ensuring the success of your project.

## Solar PV - Table of Components



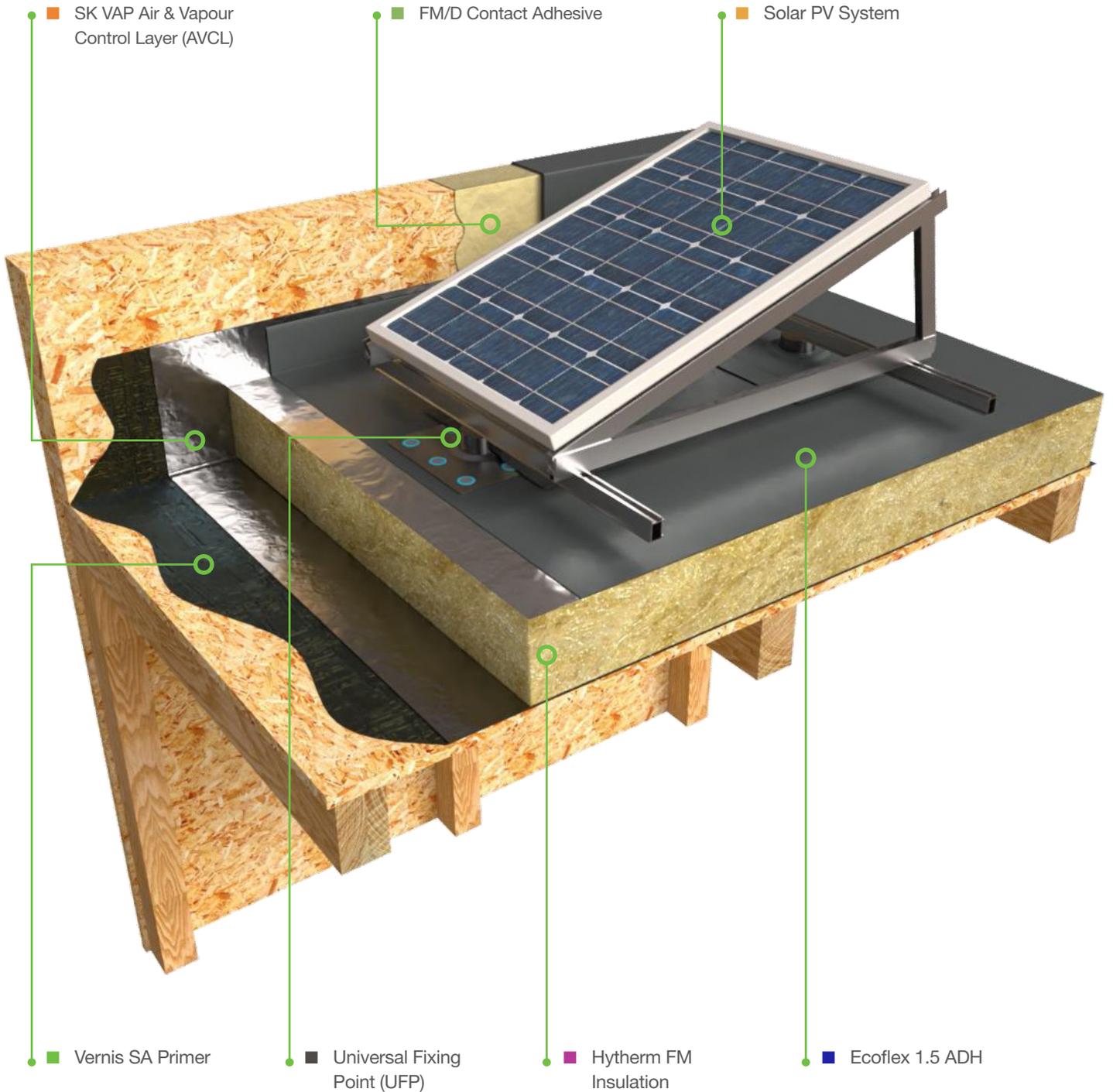
# Excel Warm Roof Multi-Layer With Ballasted Solar PV

A non-penetrative ballasted solar photovoltaic array atop a technologically advanced Alpa modified warm roof system.



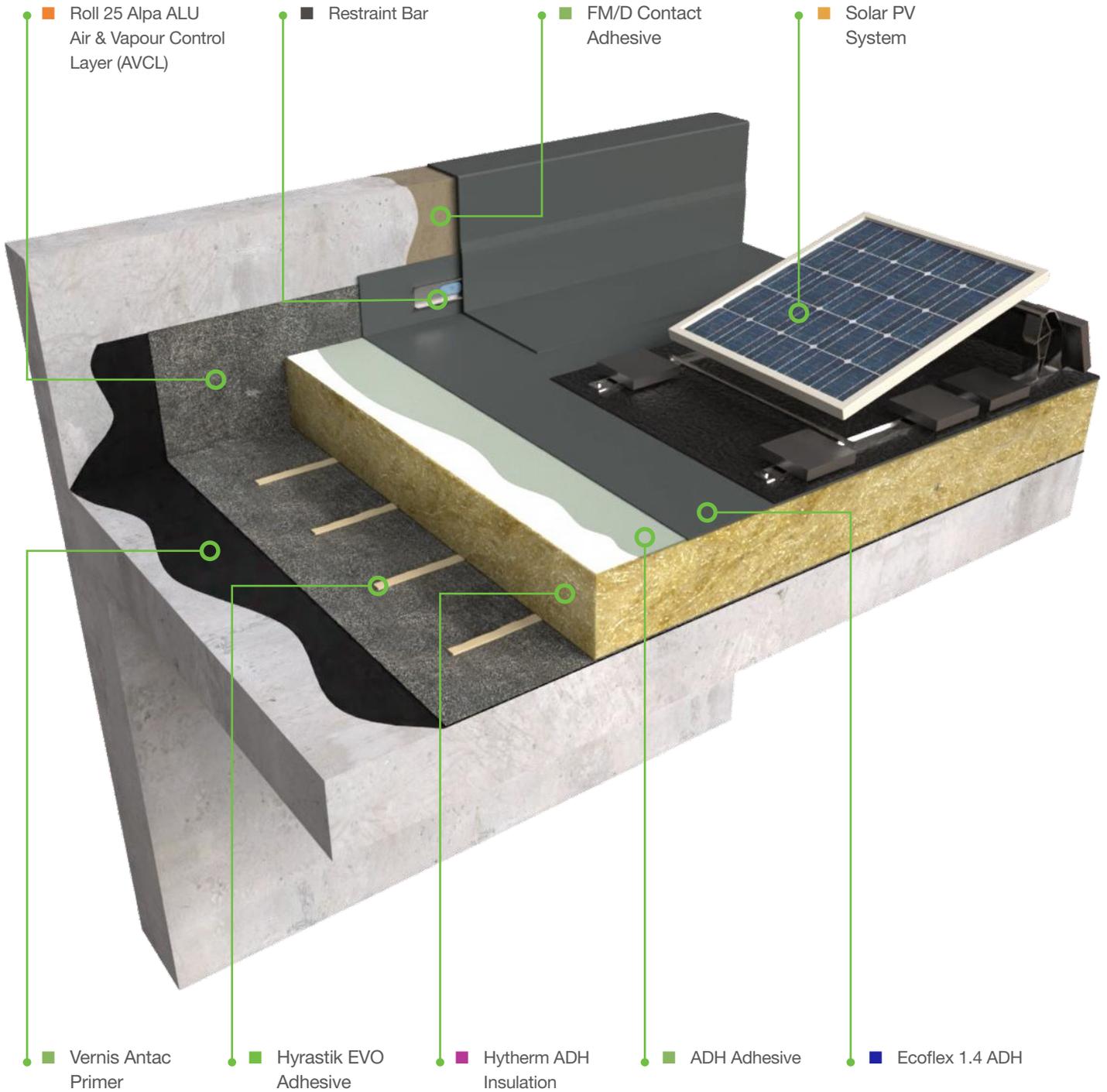
# Ecoflex FM Warm Roof Mechanically Fixed Single Ply With Anchored Solar PV

An anchored photovoltaic array with a watertight attachment using the UFP integrated with a durable and lightweight mechanically fixed Single Ply PVC system.



# Ecoflex ADH Warm roof Adhered Single Ply With Ballasted Solar PV

A non-penetrative ballasted solar photovoltaic array atop a durable and lightweight adhered Single Ply PVC system.



Axter's Biosolar PV system integrates a crystalline solar array with a biodiverse living roof. This is a combination of two systems that complement each other perfectly. It is a designed solution, specific to the project, with a complete service provided by Axter and installed by an accredited contractor.

Our Biosolar PV System uses the living roof to ballast the solar array, negating the need for any penetration or additional ballast. This product range is compatible with the Cityflor waterproofing product range and with most deck types, subject to weight load.

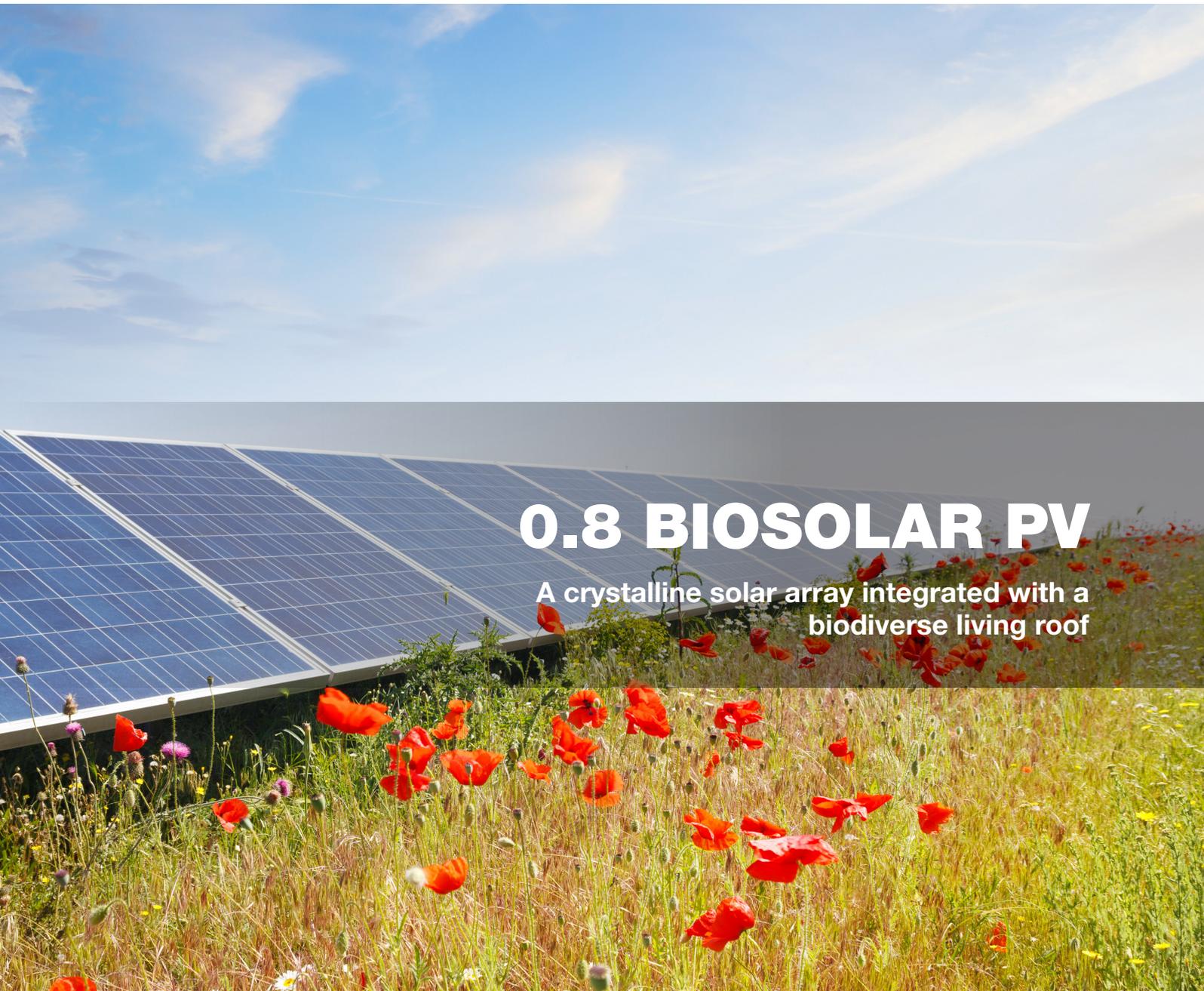
## Benefits

- Project-specific designed solution
- Biodiversity and renewables combined
- Improved efficiency due to evapotranspiration of planting
- Lower levelised cost of electricity (LCOE)
- Adjustable frames
- The frame is installed with the green roof ballasting the frame without compromising the roof waterproofing system guarantee

## Warranty

The Biosolar PV system achieves a minimum 12-year product and 25-year linear power output warranty. Please refer to product specific technical data sheets available from Axter Ltd's Technical Support Team, email: [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk), telephone: 01473 935008.





# 0.8 BIOSOLAR PV

A crystalline solar array integrated with a biodiverse living roof

## Accreditations

Axter's Biosolar PV system uses Microgeneration Certification Scheme (MCS) accredited panels suitable for UK grid connection and installed in conjunction with one of Axter's BBA

accredited waterproofing systems. They are installed by an accredited contractor and eligible for Smart Export Grant (SEG) and Feed in Tariff (FIT).

The system will be compliant with all relevant GRO guidelines.

# 0.8 BIOSOLAR PV

## Performance

Axter's Biosolar PV uses high performance power output modules with efficiency ratings greater than 19% in accordance with The Department for Education roof-mounted Solar PV output specification.

A biosolar roof is an innovative system where two sustainable technologies, a living roof and solar PV, are combined to create a thriving ecosystem that also produces green energy.

The living roof ballasts the array, avoiding the need for any additional ballast.

The solar panels benefit from a cooler ambient temperature, due to the evapotranspiration effect of the living roof, reducing the urban heat island

effect. This elevates the performance of the panels, enhancing their energy production.

The flora are carefully selected to be more shade tolerant. Not only do they shield the panels from excessive heat but also provide a habitat for local fauna, fostering biodiversity within the heart of an urban landscape.

## Installation

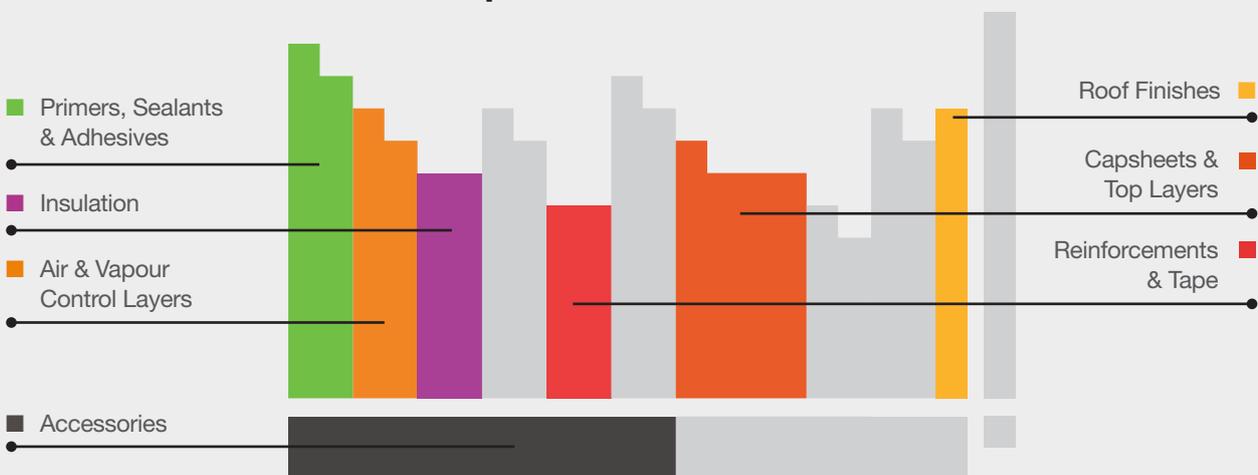
The complete Biosolar PV system is engineered, designed and supplied by Axter, and installed by an Axter accredited contractor specialising in roof-mounted PV installations, to ensure compliance with our rigorous quality assurance procedures.

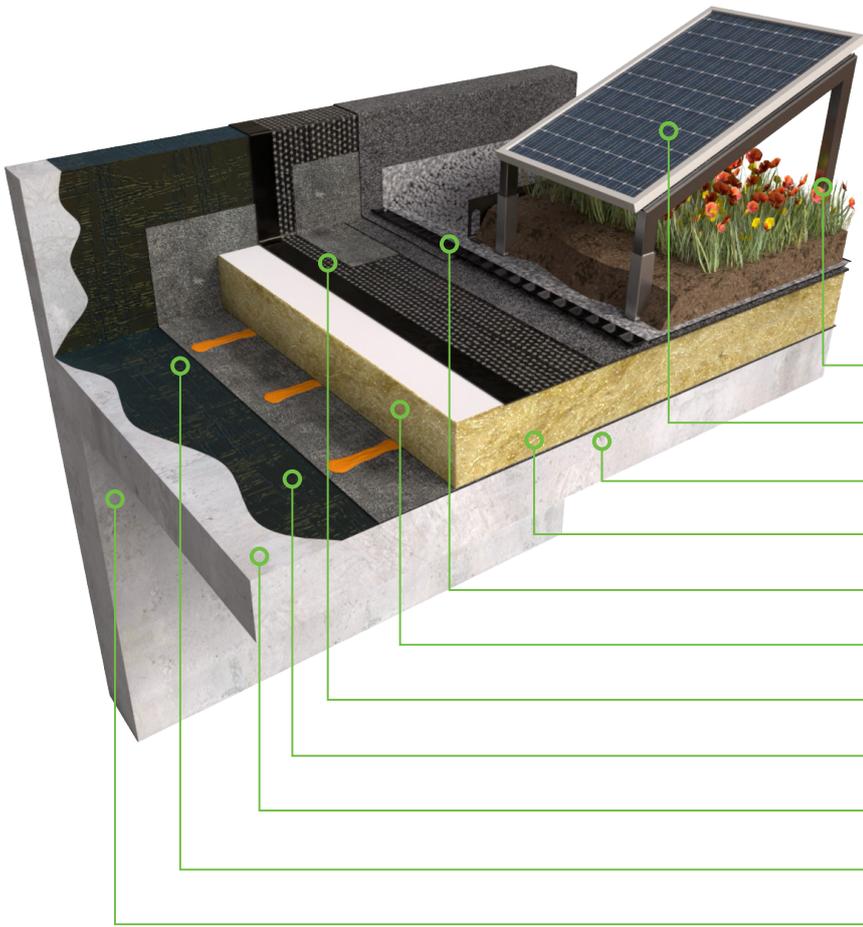
The installation process has been developed to ensure compatibility and eliminate damage to the roof

waterproofing system. Biosolar systems include the installation of a durable rubber separation mat laid between the waterproof membrane and mounting frames. PV cabling is safely routed in raised cable trays mounted on protective supports that maintain drainage, don't encourage the build-up of roof debris, and protect the waterproof membrane from damage.

The roof waterproofing system is guaranteed with a service life in excess of 30 years (BBA Certificate 15/5222 P2). The Axter Biosolar PV system is supplied with a comprehensive project-specific design and construction portfolio, including 3D site model, generation/yield calculation, wind load calculation, technical drawings, system specifications and installation guides.

## Biosolar PV - Table of Components

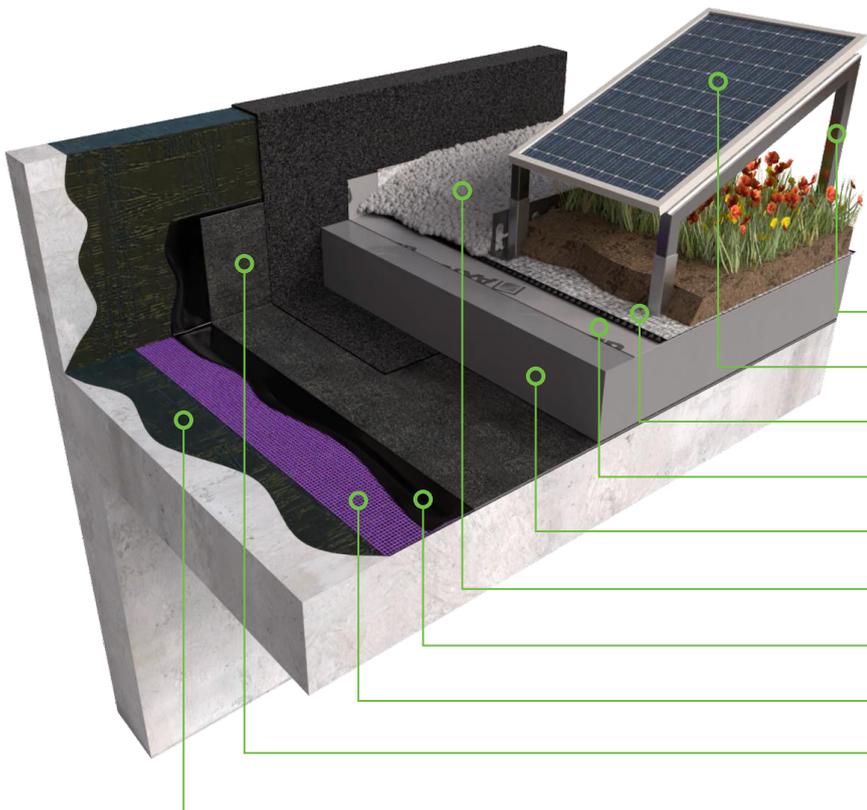




## Cityflor Warm Roof Multi-Layer – Biosolar

An integrated solar photovoltaic array within an engineered substrate atop a reliable BBA approved living roof waterproofing system, providing enhanced protection and durability.

- Biosolar Support Frame
- Solar PV System
- Biosolar Drainage & Storage Board
- Force 4000 S Capsheet
- Riverstone Pebbles/Ballast
- Hyranger Spot ADH Self Adhesive Membrane
- 35 PY Angle Reinforcement
- Hytherm ADH Insulation
- Hyrastik EVO Adhesive
- Roll 25 Alpa ALU Air & Vapour Control Layer (AVCL)
- Vernis Antac Primer



## Wilotekt-Plus Inverted Roof System - Biosolar

An integrated solar photovoltaic array within an engineered substrate ballasting a robust second-generation hot melt structural waterproofing system.

- Biosolar Support Frame
- Solar PV System
- Biosolar Drainage & Storage Board
- Water Flow Reducing Layer
- Hytherm ECO XPS Insulation
- Riverstone Pebbles/Ballast
- Wilotekt-Plus Compound
- Wilotekt-Plus Reinforcement Mesh
- Wilotekt-Plus Protection Membrane
- Wilotekt-Plus Surface Conditioning Primer



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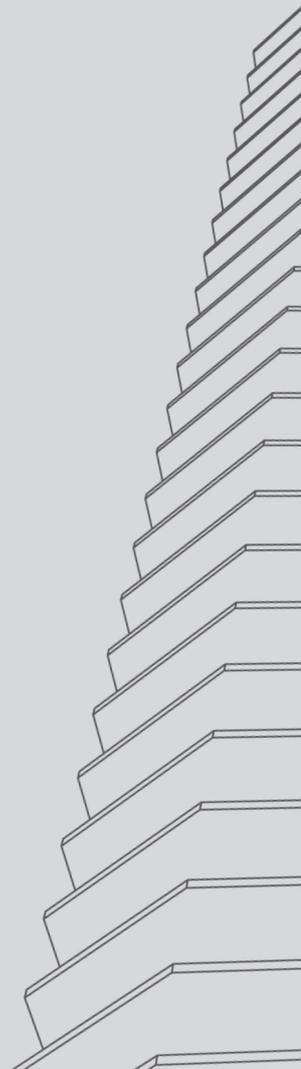
We have been working closely with Axter for a number of years across our regions, during which time they have become a vital part of the supply chain, from early stage design and costing to the successful delivery of robust, guaranteed waterproofing systems.

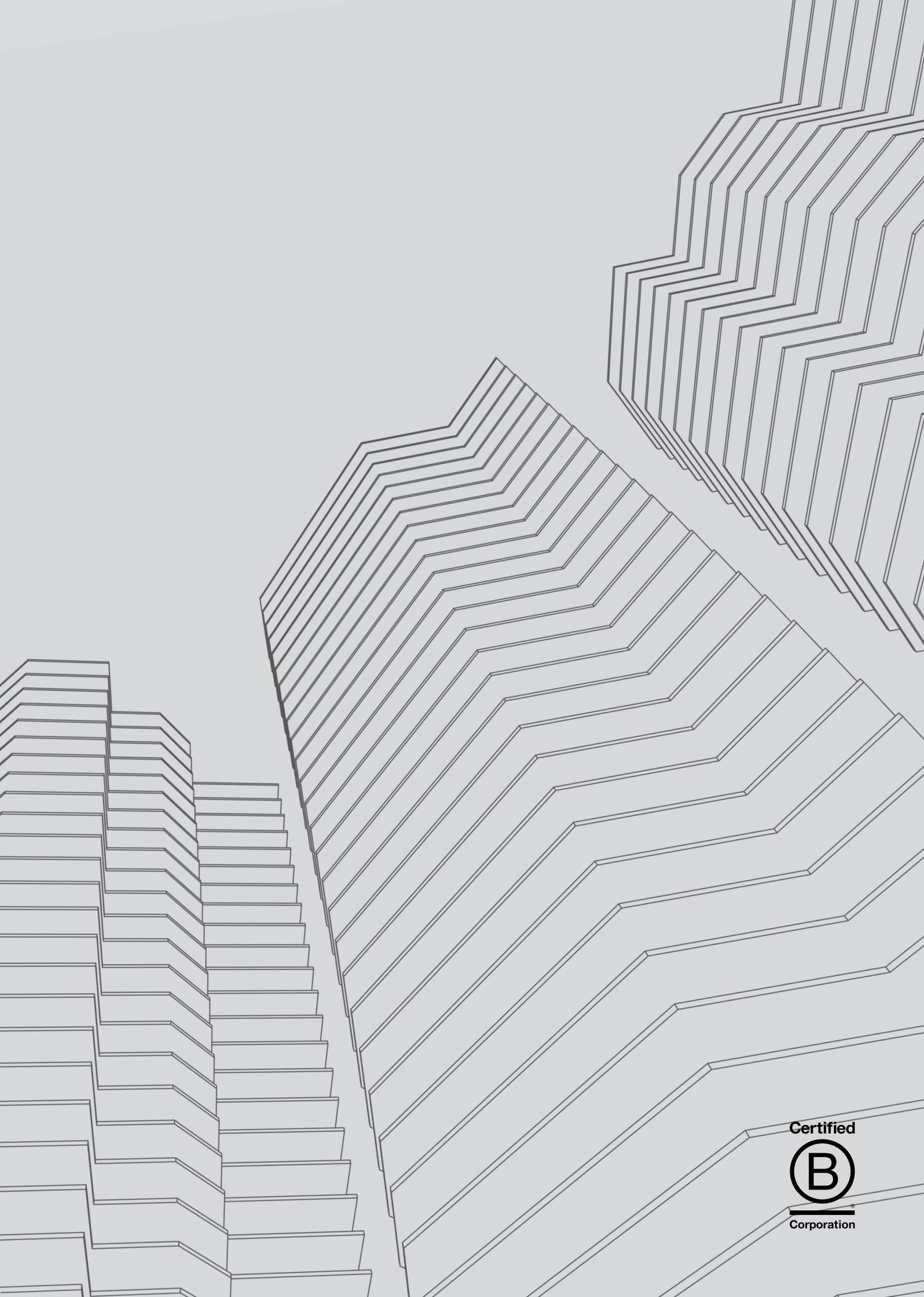
With a vast product portfolio, BYUK are confident that the build requirements and production timescales will always be met. With programme being such a critical element of the build, this reassurance is welcomed by the wider team.”

Package Manager, Envelope Bouygues UK



**RETHINKING  
WATERPROOFING.  
REIMAGINING THE  
BUILT ENVIRONMENT.**





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