

# fully integrated flexible membranes for roofing



# Axter – fully integrated flexible membranes for roofing

## The Company

Axter specialises in the design and manufacture of high quality, fully integrated robust membranes for roofing and for the waterproofing of basements and civil engineering structures to suit a variety of aesthetic and performance criteria. Recent investment has seen the introduction of photovoltaic solar cells fully integrated into the top layer of a multi layer waterproofing system.

## Technical

The Company possesses an unrivalled degree of technical and design expertise and has established itself at the forefront of innovation and quality in the field of engineered waterproofing systems.

## The product

Axter produces a range of rubber and TPO modified, polymeric waterproofing membranes for use with thermal and acoustic insulation on both protected and warm roof applications. All elements within each system are designed to be fully compatible, with the maximum of integration and consistent detailing.

## Appearance

Axter systems are adaptable to virtually any architectural shape or design. Warm roof membranes are self finished in a wide range of colours or in aluminium, copper or stainless steel foil or with integrated photovoltaic solar cells to suit almost any aesthetic requirement. The appearance of protected membrane systems depends upon the type of usage and protection layer required – green roofing, paving, macadam or gravel. See the Axter WILOTEKT-PLUS brochure for further details.

## Authority

All Axter membranes are CE marked to BS EN 13707. Mechanically fastened systems are supported by European Technical Approvals (ETA). In addition the Excel range of TPO modified membranes carry a BBA Agrément certificate 94/3037/C.

## Quality

Axter's manufacturing sites are independently assessed by AFAQ as quality assured to ISO 9001 : 2000.

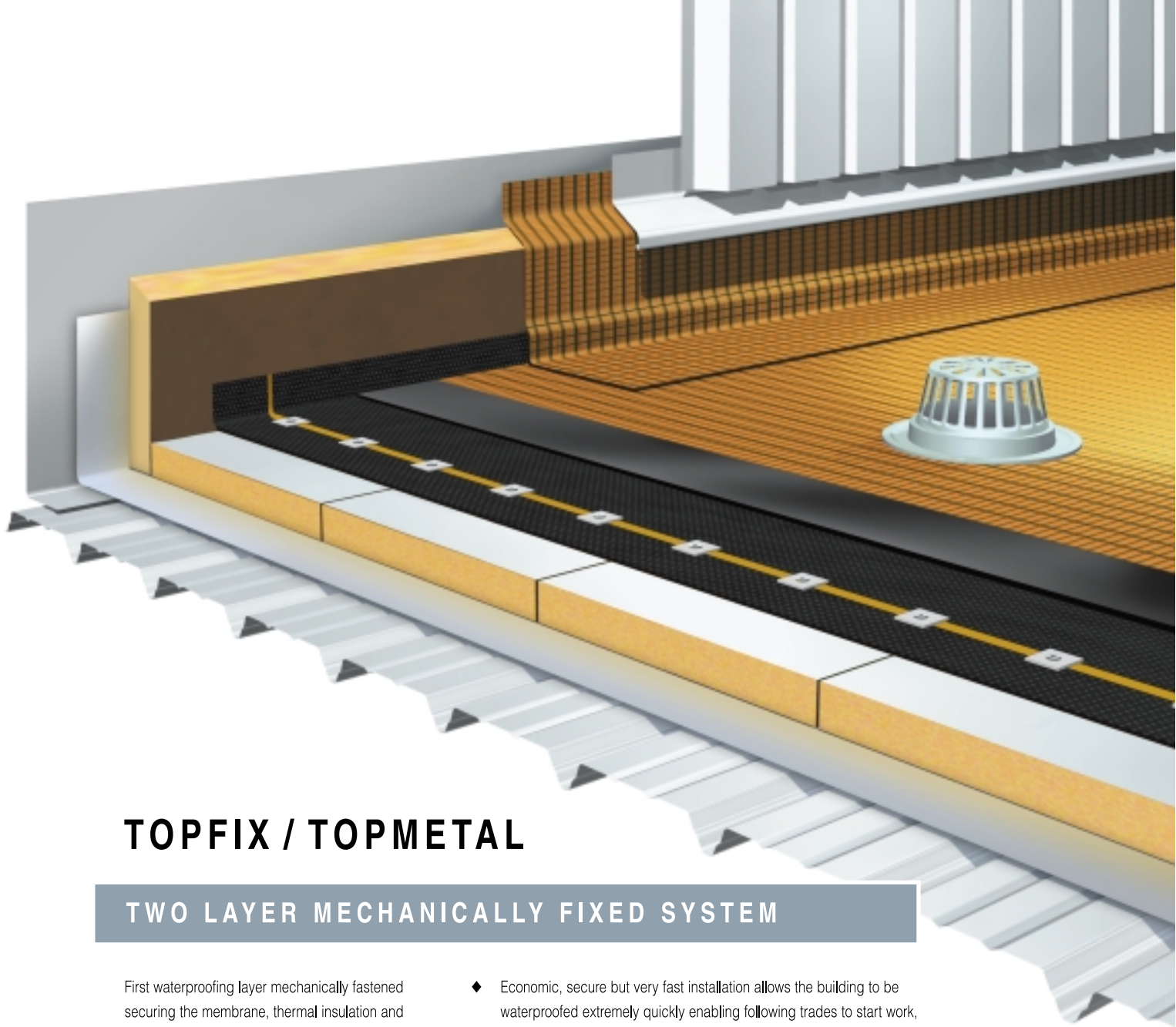
## Fire

All self finished granular membranes achieve at least an AC rating when tested to BS 476 – 3 : 2004 as described in Clause 4.6.10 External Fire Performance of BS 8747 : 2007 Reinforced Bitumen Membranes (RBMs) for Roofing – Guide to selection and specification. In addition the Excel range achieves an AA classification. Axter materials are therefore unlimited in their application in accordance with the UK Building Regulations.

## Durability and Performance

BS 8747 : 2007 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, Axter systems will continue to protect buildings with little maintenance 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.





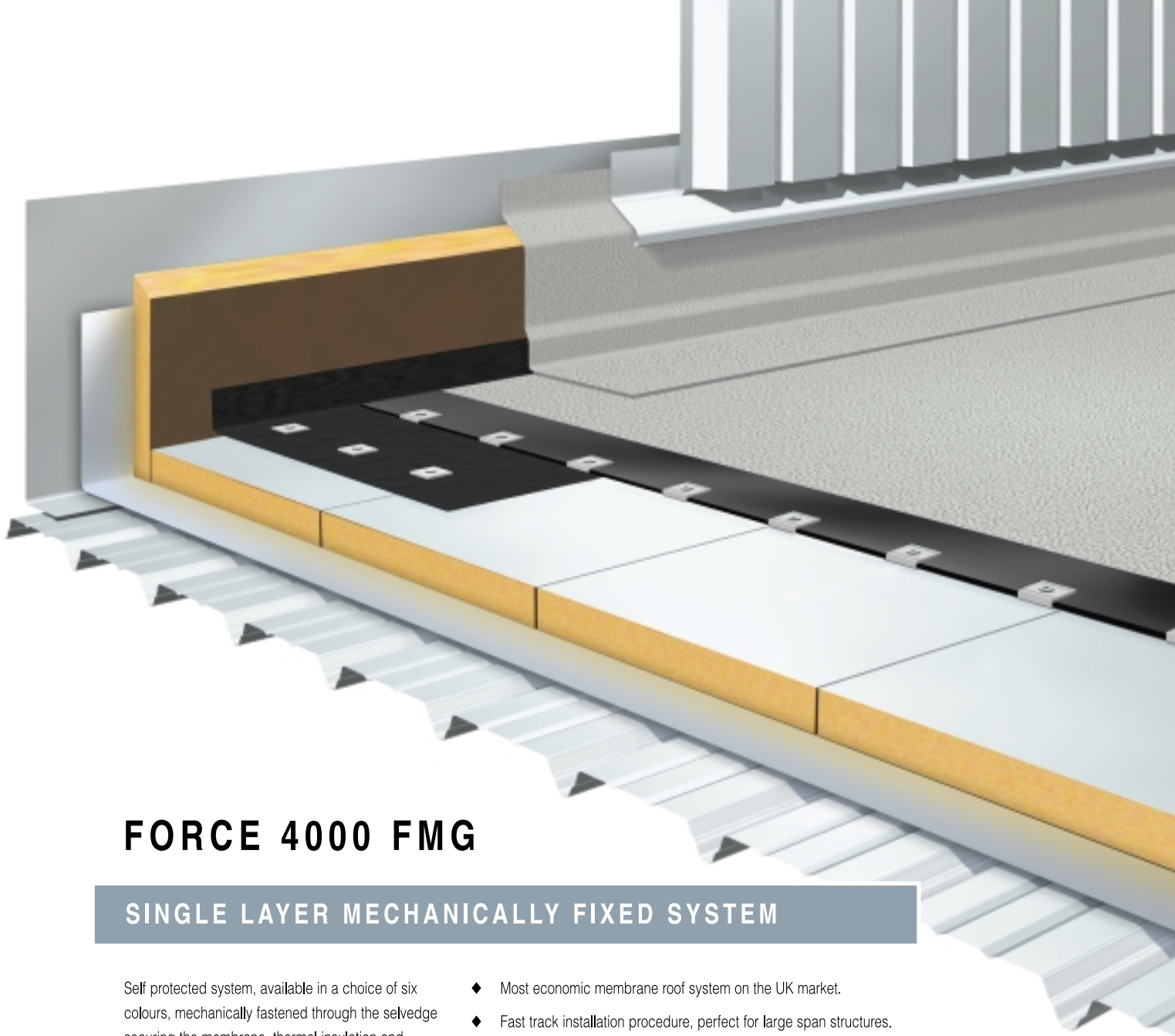
## TOPFIX / TOPMETAL

### TWO LAYER MECHANICALLY FIXED SYSTEM

First waterproofing layer mechanically fastened securing the membrane, thermal insulation and vapour control layer to either profiled metal, plywood or OSB decks in one operation. Cap sheet can then be applied at a later date.

Self protected system, available in a choice of colours or metal foil which can follow any roof shape.

- ◆ Economic, secure but very fast installation allows the building to be waterproofed extremely quickly enabling following trades to start work, in the dry, inside the building without delay. Capping sheet protection can then be applied at a later date.

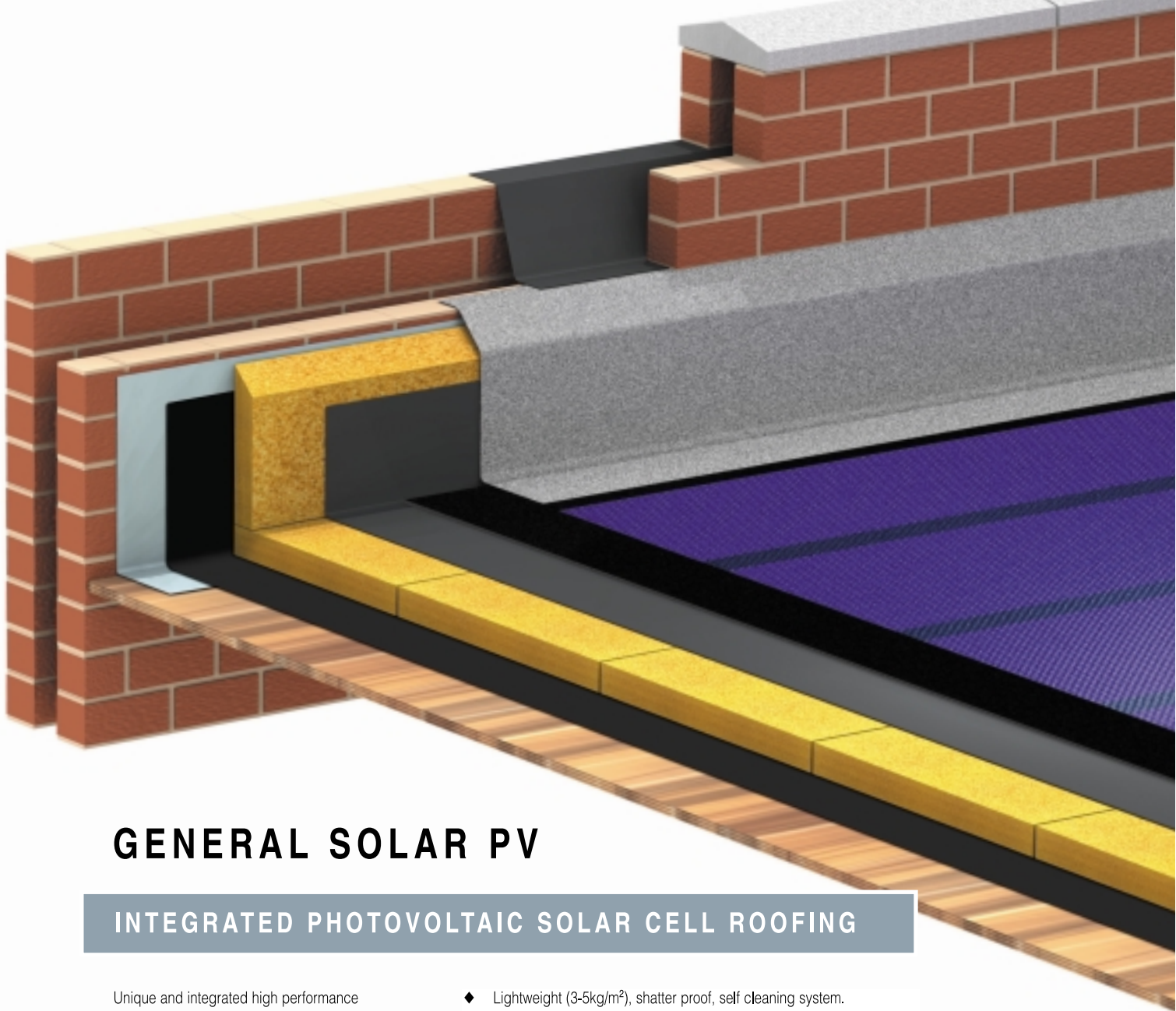


## FORCE 4000 FMG

### SINGLE LAYER MECHANICALLY FIXED SYSTEM

Self protected system, available in a choice of six colours, mechanically fastened through the selvedge securing the membrane, thermal insulation and vapour control layer to either profiled metal, plywood or OSB decks in one operation.

- ◆ Most economic membrane roof system on the UK market.
- ◆ Fast track installation procedure, perfect for large span structures.
- ◆ Easy to detail and to alter should clients require to install extra plant on roof once construction is complete.
- ◆ Ideal for new or re-roofing projects.

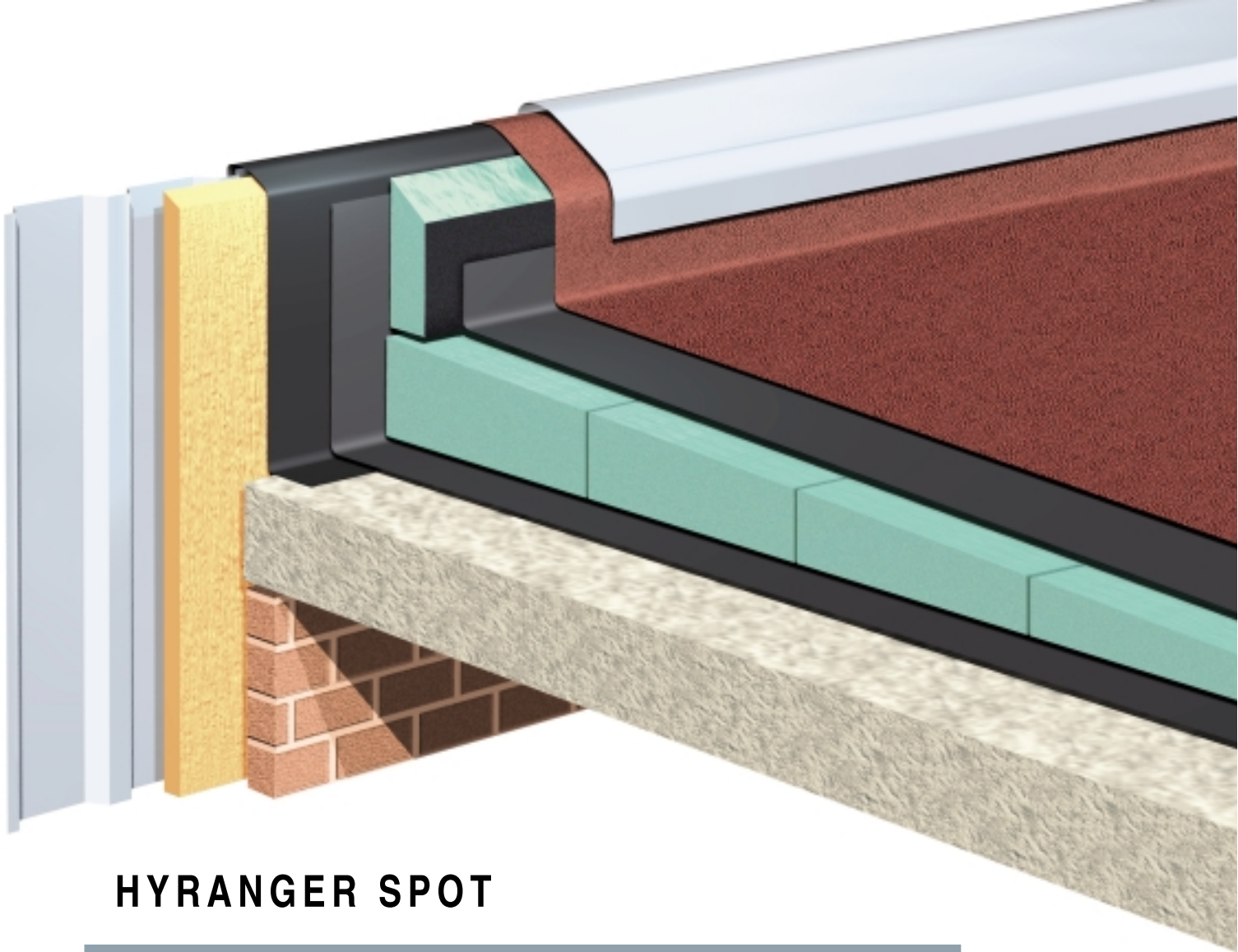


## GENERAL SOLAR PV

### INTEGRATED PHOTOVOLTAIC SOLAR CELL ROOFING

Unique and integrated high performance waterproofing system with photovoltaic solar cells embedded in the cap sheet, producing clean energy.

- ◆ Lightweight (3-5kg/m<sup>2</sup>), shatter proof, self cleaning system.
- ◆ No requirement for 35° orientation (unlike traditional panel systems).
- ◆ Thin film, amorphous cells; high productivity even in low light.
- ◆ Flexible, will follow shape of roof; suitable for new build or refurbishment projects.



## HYRANGER SPOT

### SELF ADHESIVE/HEAT ACTIVATED TWO LAYER SYSTEM

Fire safe system with self adhesive vapour control layer, cold bond applied thermal insulation and self adhesive base layer.

The self protected cap sheet is available in a choice of six colours or metal foil.

- ◆ Secure, robust and clean system for those constructions where mechanical fastening is not possible.
- ◆ Ideal for use on tapered insulation schemes on both new and refurbished buildings.

## Environmental statement

Axter is part of the Bouygues group of companies which has adopted the United Nations Global Compact including a commitment to environmental protection. Bouygues and its subsidiaries are committed to a proactive sustainable development approach in all areas of activity. Axter continues to reduce its carbon footprint and is in the process of obtaining ISO 14001 accreditation.

## Bitumen a natural derivative of petroleum

Although bitumen exists naturally at the site of old oil deposits - Lake Trinidad in the West Indies and the tar tunnel at Ironbridge, Shropshire are well known examples - its current form, as used in the manufacture of bituminous membranes, comes from the industrial refining of crude oil. It is extracted by a simple distillation process generating very little CO<sub>2</sub>, requires no heavy chemical transformation and consumes low levels of energy resources.

Given the non-volatility of bitumen at ambient temperatures, bituminous membranes constitute a sustainable way of storing carbon on the earth's surface emitting very little CO<sub>2</sub>.

## A material that respects man and the environment

Bitumen is a hydrocarbon which is not used for combustion but which is developed as a construction material. It is a useful carbon store that generates no greenhouse gases. The other constituents of bituminous membranes (fillers, polymers, sand, slates etc) are inert with a very low chemical reaction: they pose no danger to man or nature. They do not release any organic or volatile compounds or give off any toxic or mutagenic gases harmful to health.

## A material with ideal properties

The principal task of bituminous waterproofing is to protect buildings from the elements. With excellent bonding qualities, bitumen does not absorb water and is resistant to structural movement. It retains its properties over a long period of time thus making a contribution to the long life of buildings.

In addition to the waterproofing of buildings bitumen is the ideal material for all kinds of water storage (reservoirs, polluted water, irrigation systems) as it is insoluble in water and non-biodegradable.

## BRE Green guide

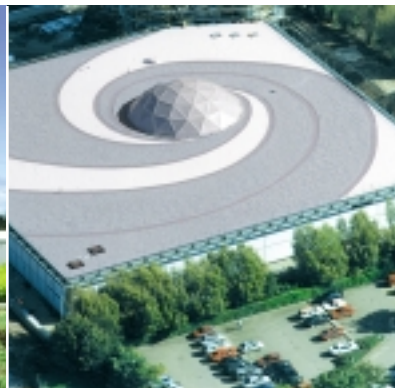
The Green Guide is part of BREEAM (BRE Environmental Assessment Method), an accredited environmental rating scheme for buildings.

The rankings, based on Life Cycle Assessments using BRE's Environmental Profiles Methodology 2008, enable designers to compare and select appropriate materials as they compile their specifications. For this exercise the whole specification is assessed which for flat roofs includes the decking, thermal insulation and the waterproofing elements. As a rule the most important criteria is the environmental performance of the supporting deck with the type of membrane having little impact.

BRE have assessed more than 1500 specifications awarding rankings from the best performing rank A+ to the least performing E.

Axter membranes will achieve an A+ ranking when installed as a warm roof on metal, plywood or OSB insulated decks or B on pre-stressed concrete hollow slab insulated decks.

Further information, including detailed environmental impact assessments of different specifications, is available from Axter.



## Installation and Guarantees

Installation is enabled through the Axter network of AXTERSIELD INSTALLERS, roofing contractors who perform consistently to a high standard of workmanship, are well used to installing Axter materials and through whom Axter can offer long term, up to 35 year, no leak guarantees.


## Service

Roof design is a complex process for, in addition to a roof's primary weatherproofing role, consideration has also to be given to its structural, thermal, acoustic and aesthetic performance.

From drawing board to final handover, Axter's team of technical experts looks after all your needs. Consultation during the early stages of a project is vital to ensure cost effective implementation of our systems.

To assist designers Axter provides a free bespoke design and specification service, including CAD drawings and value engineering for both new build and renovation total roof projects.

Call Axter for further details and assistance.

 **(01473) 724056**

Axter also specialises in the design and manufacture of:

**GREEN ROOFS**  
**STRUCTURAL WATERPROOFING**  
**CONTINUOUS ROOFLIGHTS**  
**DOMED ROOFLIGHTS**  
**ROOF ACCESS UNITS**  
**SMOKE & FIRE VENTILATION EQUIPMENT**  
**GEOMEMBRANES**

Further details on the above and the specifications contained in this document can be obtained from Axter Limited



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Project reference list:

**National Space Science Centre, Leicester • Printworks, Manchester**  
**The Cube, Birmingham • Devonshire Green, Sheffield • Brunel University**  
**Queen Elizabeth Hospital, Birmingham • Cynon Valley Neighbourhood Hospital**  
**Liverpool One • Bluewater Shopping Centre • Fountain North, Edinburgh**  
**Home Office, London • BBC White City, London • The Plaza, Leeds**  
**New South Quarter, Croydon • The Hub, Worksop • The Bull Ring, Birmingham**  
**The Royal Free Hospital, London • Aston University Student Accommodation**  
**Barking Hospital • West Quay Shopping Centre, Southampton**  
**Westfield Shopping Centre • Buckinghamshire New University**  
**Broomfield Hospital, Chelmsford and more...**