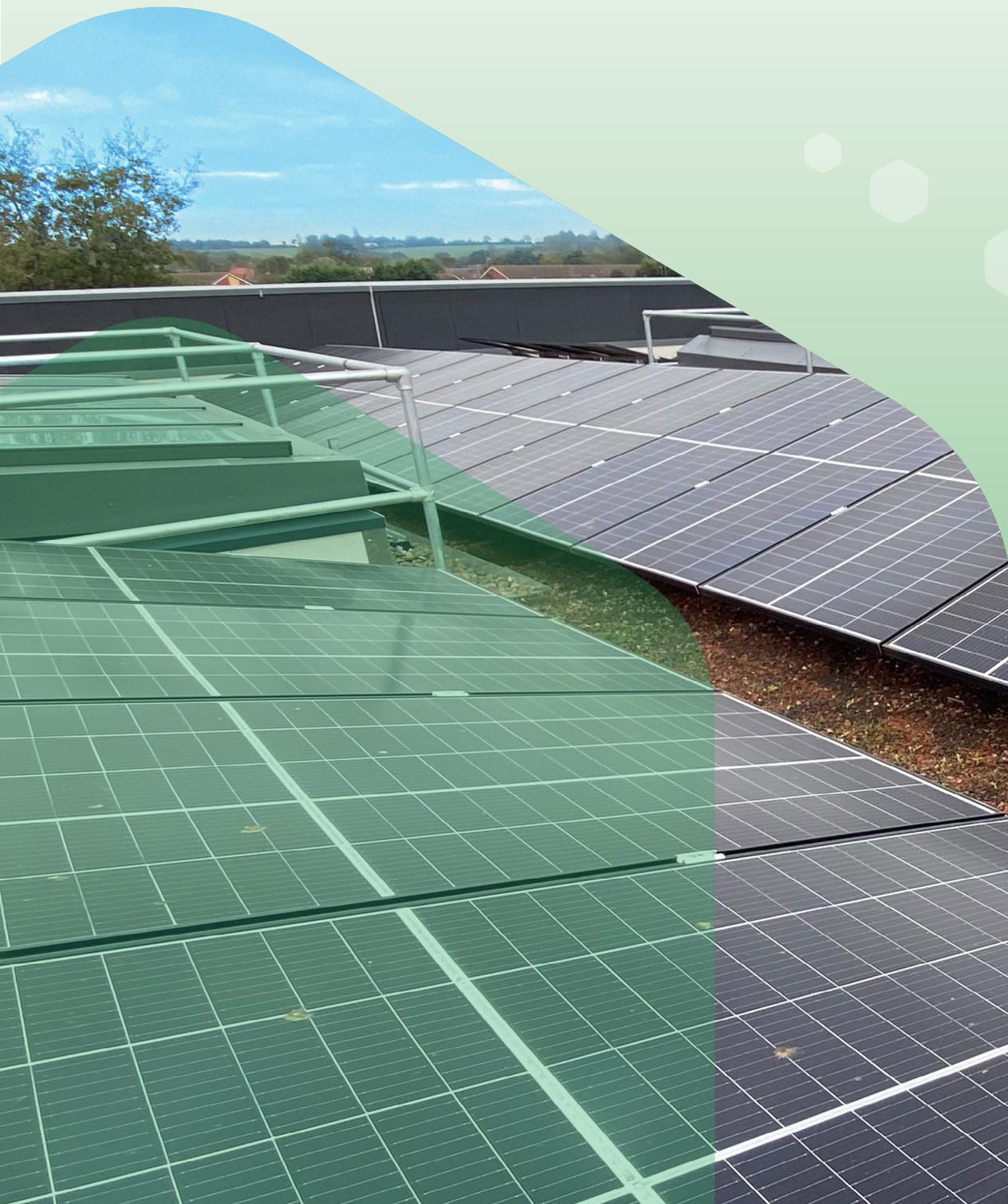


BIO-SOLACELL

BY ALUMASC



Your Complete Roofing Solution

www.alumascroofing.com

Environmentally Focused | Responsibly Sourced | Ethically Driven

INTRODUCING BIO-SOLAR TECHNOLOGY

In a world driven by innovation, where sustainability meets energy needs, Bio-Solar emerges as a beacon of change. Bio-Solar technology represents a revolutionary stride towards a greener, more sustainable future, combining the power of solar energy with the elegance of biological systems.

UNDERSTANDING BIO-SOLAR

Bio-Solar is a cutting-edge technology that seamlessly integrates solar cells with organic materials. This innovative approach harnesses the efficiency of solar energy, improving its performance, while blending harmoniously with the environment. By combining nature and technology, Bio-Solar not only generates clean energy but also becomes an integral part of the ecological landscape.

PAVING THE WAY FOR A SUSTAINABLE FUTURE

As the world grapples with the challenges of climate change, Bio-Solar stands as a solution that transcends conventional energy norms. By reducing carbon footprints and promoting sustainable practices, Bio-Solar contributes significantly to global efforts in combating environmental degradation. The technology aligns with evolving legislation requirements, emphasising a shift towards eco-friendly energy solutions.

BIO-SOLAR AND COMPLIANCE WITH LEGISLATION

Bio-Solar technology not only aligns with current environmental regulations but anticipates and adapts to future legislative changes like Biodiversity Net Gain (BNG). As governments worldwide intensify their focus on renewable energy, Bio-Solar effortlessly positions itself as a compliant and forward-thinking solution. Our commitment to sustainability goes hand-in-hand with the evolving legislation like updates in Part L, Building Regulations, and future British Standards, ensuring investment remains future-proof.

NAVIGATING LEGISLATION CHANGES WITH CONFIDENCE

In a landscape where legislation regarding energy efficiency is ever-evolving, Alumasc Roofing Bio-SolaCell system is designed not just to meet current legislation but to anticipate and adapt to future changes. As governments tighten their grip on environmental standards, our Bio-SolaCell system positions you as a proactive contributor to a sustainable future.

Example of a biodiverse roof
12 months post installation.



BIO-SOLACELL BY ALUMASC

Bio-SolaCell is a load-supported solar mounting system for roof penetration-free mounting of PV modules or PV module series. Consisting of Base Plate, Mounting Frame, and Drainage and Storage Boards. Supplied with associated Easy Mounting Rails, Module Clamps, Rail Connector Kit, and Wind Bracing.

Alumasc can provide a full technical design package to suit all specification and application requirements.

KEY LEGISLATION POINTS THAT BIO-SOLACELL MEETS

Bio-SolaCell satisfies a number of legislation factors:



As governments worldwide emphasise energy efficiency, Bio-SolaCell ensures compliance with stringent standards.



Alumasc Roofing Bio-SolaCell is not just a response to legislation; it's a proactive step towards reducing carbon footprints and building a greener world.



Governments are increasingly offering incentives for adopting renewable energy. Bio-SolaCell positions you to leverage these benefits while contributing to a sustainable future.

WHERE BIO-SOLACELL CAN BE USED



Education and Government

Transforming Schools, universities, and government buildings, into an energy-efficient haven, blending seamlessly with the roof's architecture.



Commercial Buildings

Embrace sustainable practices by integrating Bio-SolaCell into the fabric of a commercial property, lowering annual costs and improving the energy performance of the building whilst meeting legislation objectives.



Industrial Spaces

From warehouses to manufacturing units, Bio-SolaCell extends its transformative impact across diverse industrial settings.

THE UNIQUE FEATURES OF BIO-SOLACELL

In a world where sustainable choices shape our future, Alumasc Roofing Bio-SolaCell has been developed into a unique system, offering a revolutionary blend of innovative technology and unwavering commitment to environmental standards.

VERSATILITY IN APPLICATION

One of the remarkable features of Bio-SolaCell is its versatility. This innovative technology is not confined to specific environments – it seamlessly integrates with various roof types. Whether it's commercial or residential, flat, or pitched, Bio-SolaCell adapts to the application, delivering optimal energy efficiency without compromising the aesthetics of the structure.

ADJUSTABILITY AND EFFICIENCY

Bio-SolaCell not only harnesses the power of the sun but does so with unparalleled efficiency. The system boasts adjustability and quick installation, providing up to a remarkable 40%* reduction in installation time compared to alternative systems. This efficiency translates to cost savings, as the system is designed for swift on-site adjustments, reducing labour intensity, and minimising waste.

The lightweight aluminium framework not only aids in logistics but also contributes to a seamless installation experience for installers.

INTEGRATION WITH ALUMASC ROOFING SOLUTIONS

One of the standout features that sets Alumasc Roofing Bio-SolaCell apart is its seamless integration into any Alumasc Derbigum, Hydrotech or Liquid Roofing roof specification. This is more than technology; it's a combination of innovation and expertise. The Bio-SolaCell system doesn't just complement Alumasc Roofing solutions; it elevates sustainability. A roofing solution that not only protects but also powers your space.

UNIVERSAL COMPATIBILITY

Bio-SolaCell takes pride in being universally compatible with any PV panel system. This flexibility, coupled with on-site adjustability, positions our system as a front runner in the ever-evolving solar market. Continuous development ensures that Bio-SolaCell remains at the forefront of technological advancements, meeting the growing needs of the solar industry.

SWIFT DELIVERY

Benefit from faster delivery times, ensuring the project progresses without delays.

ENHANCED DURABILITY

Enjoy improved ground clearance for enhanced planting durability, coupled with a wider mount area accommodating evolving panel sizes.

COMPLETE MOUNTING SOLUTION

Bio-SolaCell offers a load-supported solar mounting system that is penetration-free, including Base Plate, Mounting Frame, Drainage and Storage Boards, Easy Mounting Rails, Module Clamps, Rail Connector Kit, and Wind Bracing.

CARBON EMBEDMENT AND RECYCLABILITY

Alumasc's Bio-SolaCell system is more than just a technological marvel; it's an eco-conscious choice. Manufactured from 100% recyclable materials, the system and its components undergo embedded carbon analysis, ensuring a minimal environmental footprint. Even at the end of a building's use, our system can be recycled, contributing to a sustainable, circular economy.

*Depending on site specific conditions and access, its unique design properties and light weight construction give the ability for the Alumasc Bio-SolaCell to be installed up to 40% quicker than other systems available.

HIGH WATER RETENTION

At the base of Alumasc Roofing Bio-SolaCell lies our advanced drainage boards, offering superior water retention capabilities. This versatility allows for tailored designs to suit any application, presenting a distinct advantage over alternative solutions. Our commitment to innovation ensures that our Bio-SolaCell system is not just a solar powerhouse but an adaptable solution designed to meet the biodiversity challenges of your project.

DURABILITY AND ENVIRONMENTAL RESPONSIBILITY

While some competitors rely on powder-coated steel, Bio-SolaCell's framework is crafted from corrosion-resistant aluminium, ensuring longevity without environmental compromise. This framework not only withstands the test of time without the fear of corrosion or rust but can also be recycled setting a benchmark for sustainability in solar infrastructure.

UK MANUFACTURED

Alumasc's commitment to reducing environmental impact is further exemplified by manufacturing Bio-SolaCell in the UK. By avoiding unnecessary carbon emissions associated with international shipping, we not only cut costs but also contribute to a greener, more sustainable planet.

TAILORED SOLUTIONS FOR YOUR ENERGY NEEDS

At Alumasc Roofing, we understand that energy requirements vary. That's why we take pride in offering bespoke solutions that cater to your specific needs. Whether you are striving to meet a specific energy output, particular energy standard or adapting to evolving legislation, we can deliver a tailored energy solution that aligns with your unique requirements.

PARTNERING FOR A GREENER TOMORROW

Choosing Alumasc Roofing Bio-SolaCell isn't just about embracing a solar technology; it's a commitment to a future where your energy needs are met responsibly. It's about staying ahead of legislation changes, reducing your environmental impact, and enjoying the synergy of innovative technology and Alumasc.

Example of a biodiverse roof
12 months post installation.



WHY BIO-SOLACELL?



EASE OF INSTALL

Aluminium is far lighter in weight and therefore easier on the installer(s). The full Alumasc system is approximately 160kg/m² lighter versus its heavier alternatives.



SPEED OF INSTALL

Bio-SolaCell is quicker to install as it has less parts and components to make the complete system, it is up to 40%* quicker to install versus alternative systems available.



ADJUSTABLE, SHORT LENGTH CARRIER RAILS

Bio-SolaCell's carrier rails are 2m/unit and adjustable, so more efficient in cost and reduction of waste by not having to cut down and dispose of excess wasted length.



HIGH WATER RETENTION

Alumasc 40mm drainage board provides higher water retention factor (14l/m²) than alternative solutions.



HIGH COMPRESSION STRENGTH FACTOR

Bio-SolaCell's compression strength is 100KPA which far exceeds comparable solutions.



UNIVERSALLY COMPATIBLE

Bio-SolaCell is compatible with any PV panel system and fully adjustable to suit on-site installation.



CARBON EMBEDMENT

The system is manufactured from 100% recycled materials and is recyclable at the end of its life. The drainage board itself is also recyclable and has the addition of embedded carbon analysis of 1.8kg CO₂e per kg or 4.5kg CO₂e per m² during its cradle-to-gate life cycle (raw materials embodied and transport, and manufacturing).



100% RECYCLABLE

Bio-SolaCell's framework is made from aluminium compared to powder coated steel. Aluminium is 100% recyclable and won't corrode or rust if its surface was to get damaged or scratched.



UK MANUFACTURED

Bio-SolaCell is manufactured in the UK, therefore reducing carbon footprint and impact on the environment.

*Depending on site specific conditions and access, its unique design properties and light weight construction give the ability for the Alumasc Bio-SolaCell to be installed up to 40% quicker than other systems available.

BIO-SOLACELL TECHNICAL DETAILS

Load-supported solar mounting system for roof penetration-free mounting of PV modules or PV module series. Consisting of Base Plate, Mounting Frame, and Drainage and Storage Boards. Supplied with associated Easy Mounting Rails, Module Clamps, Rail Connector Kit, and Wind Bracing.

TECHNICAL DATA					
Material	Aluminium (Base Plate and Mounting Frame) Recycled HDPR				
Dimensions	L: 2000 x W: 1000 x H: 870-950mm				
Colour	Natural Aluminium (Base Plate and Mounting Frame) Black				
Accessories	Mounting Rails Module Clamps Rail Connector Kit Wind Bracing				
Carbon Content	1.8 kgCO ₂ e per kg OR 4.5 kgCO ₂ e per m ²				
Water Discharge Capacity DINEN ISO12958	Water flow normal to the plane	l/m ² .sec	1.4		
	Thickness at 2kPa	mm	46.9	(nominal)	EN ISO9863-1
	Tensile strength	kN/m	54 / 40		EN ISO 10319
	Elongation	%	50 / 50		EN ISO 10319
	Mass/unit area (dry)	g/m ²	2 550		EN ISO 9864
	Mass/unit area (saturated)	g/m ²	16 550	(indicative)	EN ISO9864
	Compressive strength (unfilled)	kPa	100		
	Life expectancy	yrs	120 years in pH 4 to 9 at 25°C		
	Resistance to weathering	The geotextile has high UV stabilisation			
Chemical resistance	Excellent resistance to common chemicals EN 14030				
Water Reservoir Volume ⁽⁷⁾	l/m ²	14			



AREA OF USE

For the construction of solar green roofs with extensive greening.

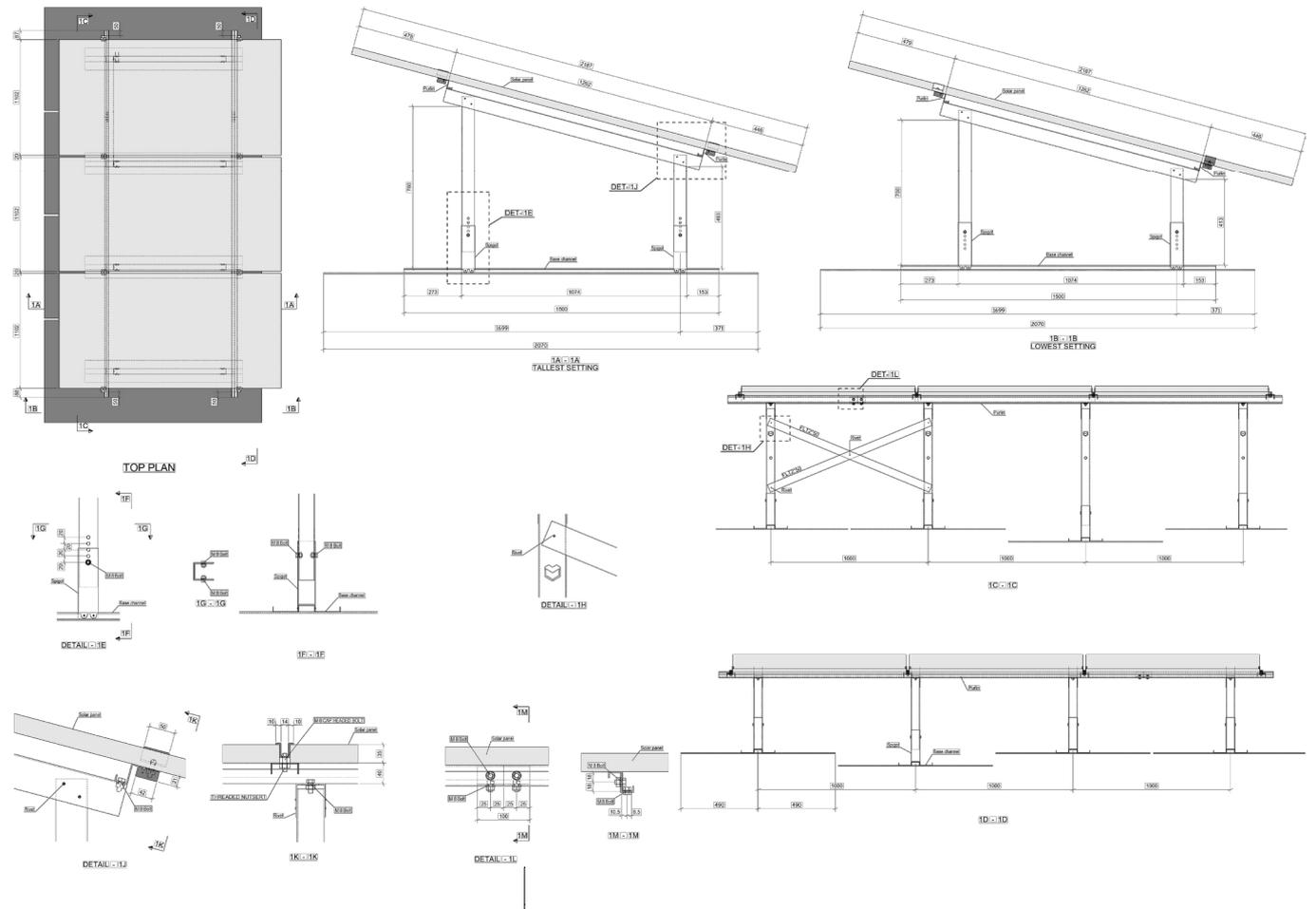


SPECIFIC PROPERTIES

- Stability of the overall system proven in accordance with Eurocode1
- Property specific proof of stability can be provided (free of charge following receipt of order)
- Suitable for roof areas with a roof pitch of 0° to 5°
- Penetration free assembly on the roof
- Available in inclines 10°, 15°, and 20°

The preceding details are guideline values established under laboratory conditions. These values are subject to a certain manufacturing tolerance. The data contained in this product information sheet represents Alumasc's technical knowledge at the time of publication. Alumasc reserves the right to change and update details in accordance with new insights and to modify specified properties accordingly. No liability accepted for misprints.

MOUNTING SYSTEM



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