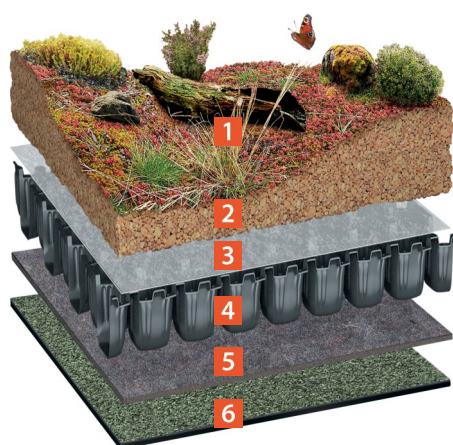


SYSTEM SUMMARY

BauderGREEN Biodiverse Green Roof System

Extensive, biodiverse solution

Biodiverse (previously referred to as brown roofs) are designed to incorporate as many types of habitat as possible giving a home and food source to invertebrates and pollinators which in turn are food for many birds and bat species. The roof is typically sown with BauderGREEN Flora seed mixes or plug plants to give a very broad range of plant species. Additional habitat features such as dead wood, stone/sand piles and dew ponds can also be incorporated into the design. BauderGREEN Flora seed mixes are collected in line with the Flora Locale Code they are designed to give a long flowering season (RHS perfect for pollinators and Buglife approved). The system is fully GRO and FLL compliant. A comprehensive range of guarantees are available for this system.



	Flora Locale Membership
	Royal Horticultural Society Perfect for Pollinators
	Endorsed by Buglife (the invertebrate charity)

Product	Description	Thickness	Saturated weight
1 Vegetation *	Typically Bauder's range of native seed and plug mixes are used in combination with other habitat features.	Thickness and weight varies with season	
2 BauderGREEN SUB-BM UK biodiverse substrate	Bauder's SUB-BM biodiverse substrate is a lightweight growing medium tested to BS 8616 and designed to meet GRO and FLL guidelines, these are often contoured to give differing habitats.	Varies typically 100-150mm	120-180 kg/m ²
3 BauderGREEN FV 125 100 filter fleece	Filtration layer that prevents substrate fines from washing into the drainage and water storage layer.	1mm	0.13 kg/m ²
4 BauderGREEN DSE 40 drainage layer	DSE 40 is a 40mm drainage board, holding 13.5 ltr/m ² . The light weight board is made from 100% Recycled HDPE.	40mm	15.3 kg/m ² (water filled)
5 BauderGREEN FSM 600 protection layer	Is 100% recycled Polyester and polypropylene fibre mix protection layer to prevent mechanical damage to the underlying waterproofing.	4mm	3.6 kg/m ²
6 Bauder's underlying waterproofing system	Options for Bituminous membrane, Hot Melt, Single ply or Cold applied liquid systems.	Not Included	Not Included
Green Roof System Build up (fully saturated, excludes waterproofing & vegetation)		145-195 mm	139-189 kg/m²

*Bauder also produce a biodiverse wildflower blanket solution

Please note: All green roofs require water during times of drought. Bauder recommend that the watering and maintenance of this roof is considered and addressed during its design.

Where to specify:

Primarily used when Biodiversity and habitat creation are the primary goals, such as for BREEAM or to comply with a local planning requirement.

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BAUDER FLORA 3 SEED MIX

General Use/ BioSOLAR Installations

The Bauder Flora 3 Seed Mix is a blend of seed, tackifier and additives developed to maximise diversity of vegetation on green roofs. Bauder Flora 3 has all the components required to improve the germination and the successful establishment of vegetation for a variety of rooftop conditions: light and shade; exposed and sheltered. The varied mix of species

is designed to deliver the British native, biodiverse species required for BREEAM compliance.

Bauder Flora 3 contains a broad range of wildflowers chosen to give an extended flowering season providing nectar and pollen rich habitat for priority pollinators, larval food plants for butterflies and seed sources for birds.



Mix Details:

- **UK Native British Provenance Seed Mix**
(certification on request)
- **49 Species**
 - 31 species of which eight are annuals
 - 8 Grasses/Sedge
 - 2 Sedum species
- **35 of the wildflowers are classed as RHS Perfect for Pollinators**
- 12 Butterfly and moth larval food plants.
- Shade tolerant species.
- Low growing to medium height.
- **Mix percentages; 65% perennial wildflowers, 20% annuals & 15% grasses.**



Key Specification Features

- Very broad spectrum of species ensuring a broad diversity of created habitats.
- Lengthy flowering season – April to October.
- High number of annuals to give excellent colour in first year.
- Shade tolerant species to give coverage in less sunny locations.
- Low growing plants with good wind tolerance suited to exposed locations.
- Ideal mix for BioSOLAR installations establishing quickly to provide substrate stabilisation.
- Designed to deliver British native, biodiverse species required for BREEAM compliance.

Ecological Value

This Flora 3 plant mix has a high ecological value providing a long flowering period and nectar sources for a wide variety of pollinators. Plants with long flower tubes such as Wild Red Clover and Vetch species will provide valuable nectar sources for Long-tongued Bumblebee species including the priority species Brown-banded Carder Bee.

Bird's-foot Trefoil and Kidney Vetch make up 20% of the mix, which are important larval food plants for ten butterfly and moth species, including common and small blue priority species. Plant seed heads provide refuge and overwintering sites for invertebrates and our mix includes Black Knapweed and Common Toadflax, which provide valuable seed sources for birds.

The yellow composite flowers such as Rough Hawkbit and Mouseear Hawkweed in this mix provide good nectar sources for generalist pollinators including hoverflies and beetles. The mix also contains native and or naturalised sedums that will provide evergreen ground cover in sunny areas and can support specialist invertebrates such as the notable bug species *Chlamydatus evanescens*.

BAUDER FLORA 3 SEED MIX

Establishment and Growth

Typically the mix will produce flowers from April to October starting with species Wild Strawberry and Cowslip, through the summer with Yarrow and Black Knapweed with Lady's Bedstraw flowering later into the autumn. The annuals, biennials and grasses will provide cover and colour in the first season allowing time for the slower growing perennials to establish in later years. The mix has been specified to be drought tolerant with sedum species and low growing perennials.

BioSOLAR

Plants are chosen that do not exceed 40 cm in height to avoid problems with shading of solar panels when the vegetation is used in conjunction with Bauder BioSOLAR. Shade tolerant ground cover plants were specified that will occupy semi-shade microclimates under the panels.

Green roofs are exposed environments subject to wind erosion therefore the mix contains pioneer and ephemeral species such as annuals, biennials and short perennials, which establish quickly from seed and help to stabilise the substrate and prevent wind erosion prior to perennial root systems getting established. A small percentage (typically <15%) of the mix contains non-aggressive grass and sedge species, which will also help to establish and stabilise the substrate.

The seed source is British Provenance (with the exception of sedum species) and suppliers of the mix adopt the Flora Locale Code of Practice for collectors, growers and suppliers of native flora.



(Flora locale is an independent charity. Promoting and advancing the conservation and enhancement of native wild plant populations)

Bauder's Unique Additive Mix

Establishing seed at roof level is difficult, to maximise the germination and establishment of the diverse range of seed used, Bauder has developed a unique blend of seed adhesive, organic nutrients and mycorrhizal fungi to encourage water and nutrient uptake by the developing seedlings.

- The seed mix and additives are combined with a bulking agent which enable the correct sowing rate to be achieved, the adhesive binds the seed to the substrate preventing it from being blown away in windy conditions or washed deep into the substrate and failing to germinate.
- A small quantity of organic slow release fertiliser gives the seed a gentle boost as it establishes. Mycorrhizal fungi increases the root surface area helping the transfer of water and nutrients from the substrate to the developing root system of the plant, enabling the plants to establish quickly.



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Specification Support



Specification downloads:

www.bauder.co.uk/technical-centre



Telephone helpline:

0845 271 8800

TECHNICAL DATA SHEET

BauderGREEN Flora Seed Mixes

A range of UK provenance seed mixes with additional tackifier and mycorrhizal fungi. Designed to produce high germination rates and plant establishment on green roofs.

Intended Use

BauderGREEN Flora Seed Mixes are intended to be used on biodiverse green roofs to give the highest establishment rate. The mix contains UK provenance seed as per Flora Locale guidelines. All mixes carry the RHS Perfect for Pollinators mark and have been endorsed by Buglife. The product is installed over BauderGREEN SUB-BM UK biodiverse substrate. The species mix varies with the type of habitat the mix is designed for.



PRODUCT INFORMATION AND TECHNICAL PERFORMANCE

Flora 3, 5, 7, 9, 11 Seed Mixes

Characteristic	Unit	Value
Seed source		Flora Locale compliant
Typical sow rate	g/m ²	100
Species	No.s	(See table on following page)
Storage	Months	Up to 12 months in cool, dark, and dry environment
Spreading method		Bauder spreader trolley or by hand

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TECHNICAL DATA SHEET

Name	Sub-Heading	Description	No. of Species	Wild Flowers	Annuals	Sedge & Grasses	Sedum	Coverage	RHS P for P	Laval Food
BauderGREEN Flora 3 Seed Mix GB 50120403	General - BioSOLAR	A broad mix of low growing and some shade tolerant species ideal, for most roof environments. It is also the mix Bauder Recommend for BioSOLAR installations.	49	31 (65%)	8 (20%)	8 (15%)	2	100g per m ²	35	12
BauderGREEN Flora 5 Seed Mix GB 50120405	Urban	A mix of species ideal for city environments. The plants chosen are able to absorb pollution and CO ₂ and give a suitable environment for insects and invertibrates.	38	28 (80%)	6 (10%)	2 (10%)	2	100g per m ²	34	9
BauderGREEN Flora 7 Seed Mix GB 50120407	Chalk Grassland	The mix contains many of the key wild flower species found on the Downs and other Chalk Grassland.	28	23 (85%)	None	5 (15%)	0	100g per m ²	22	11
BauderGREEN Flora 9 Seed Mix GB 50120409	Coastal	The species mix reflects the harsh environment found around Britain's coastline, it contains species that are able to cope with higher winds and a more saline environment.	24	14 (75%)	3 (10%)	4 (15%)	3	100g per m ²	20	8
BauderGREEN Flora 11 Seed Mix GB 50120411	Scottish	This mix contains a range of common, Scottish green roof species. All the seeds are certified to be of Scottish Providence. It enables Scottish sites to have truly native vegetation.	33	26 (75%)	3 (15%)	2 (10%)	2	100g per m ²	29	6

Cont..

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TECHNICAL DATA SHEET

CERTIFICATION AND ENVIRONMENTAL INFORMATION	
	Flora Locale - Membership Code of Practice https://cieem.net/resource/code-of-practice-for-collectors-growers-and-suppliers-of-native-flora/#:~:text=This%20Flora%20Locale%20Code%20of,the%20origin%20of%20their%20stock.
	Royal Horticultural Society – Perfect for Pollinators https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/plants-for-pollinators
	Endorsed by Buglife (an invertebrate charity) https://www.buglife.org.uk/our-work/living-roof-projects/
DELIVERY AND PACKAGING	
Packaging	Woven polypropylene sacks. Widely recycled
Storage	Do not open until required: Store in dry, cool conditions for less than 6 months.
Delivery method	By post or on pallets if required.
	(There is no recycled content to the packaging)
INSTALLATION GUIDANCE	
Normally installed directly onto saturated SUB-BM UK biodiverse substrate. Care should be taken not to traffic the area after seeding. After sowing do not water until after germination. See Bauder's Green Roof Installation Guide for full details. Seed mixes should only be sown in the Spring and Autumn. The correct watering and aftercare is required for this product.	

Bauder reserves the right to update this data set without prior notice and this document is uncontrolled if printed or stored. Always confirm the latest version is used for the adoption of this product, available from our website: bauder.co.uk/technical-centre.
Intended use of this product should be verified with Bauder to ensure suitability and compliance with applicable guidance, regulations, legislations, project requirements, specifications, and installation techniques.

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TECHNICAL DATA SHEET

BauderGREEN Plugs - native and sedum species

Bauder provide a broad range of sedum and wildflower plugs for use on extensive green roofs. British grown sedum and native providence wildflower plugs. Plugs are a useful way of establishing a green roof, enabling the exact species to be planted in any location.

Intended Use

Bauder Plugs are typically planted into 100mm+ of Bauder (GRO & FLL Compliant) substrate – SUB BM for Wildflower, SUB-EM for sedum. These plugs are suitable to be the sole establishment method or combined with Bauder flora seed mixes. The use of plug plants allow particular species to be planted in particular positions or densities. The production of plugs is seasonal and particular species availability will vary through the year. Planting should only take place in the spring and autumn and will require regular water and aftercare for the first 10 weeks.



PRODUCT INFORMATION AND TECHNICAL PERFORMANCE		
Characteristic	Unit	Value
Maximum saturated weight (per plug)	g	Circa 35
Size	mm	50
Number per tray	No.	104
pH Value	pH	7.6
Growing Medium		Coir/bark Based (100% Peat Free)
Trays per Box	No.	Circa 50
Boxes per pallet	No.	24

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CERTIFICATION AND ENVIRONMENTAL INFORMATION	
Flora Locale – Membership	
Perfect for Pollinators	
Endorsed by Buglife (the invertebrate charity)	
Trays	Black LDPE 160g (recyclable)
Supply Box	350g Recycled Cardboard (recyclable)
Recycled content of plugs	≥ 50% recycled material

INSTALLATION GUIDANCE
Normally planted into SUB-BM Biodiverse Substrate. Plugs should be saturated prior to planting. The plug should be planted so as the plug sits flush with the substrate. Care should be taken not to traffic the area after planting. Plugs should be laid by skilled operative. See Bauder's Green Roof Installation Guide for full details. The correct watering and aftercare is required for this product.

Bauder reserves the right to amend information and product specifications without prior notice. All reasonable care has been taken to ensure that all data is current at the time of print, however because Bauder pursues a policy of constant development we recommend ensuring that your copy of this information is current by contacting our Technical Department at technical@bauder.co.uk

Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications, installation techniques and any applicable laws and regulations.

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