

## HYDROSOIL

### SOIL BASED EXTENSIVE GREEN ROOF



**Axter Limited**

West Road Ransomes Europark

Ipswich Suffolk IP3 9SX

Tel (01473) 724056 Fax (01473) 723263

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

**[www.axter.co.uk](http://www.axter.co.uk)**

NB: The manufacturer reserves the right without prior notice to modify the composition of his products. Characteristics provided in this publication derive from data obtained under controlled test conditions. AXTER Limited makes no warranties, express or implied as to the properties and performance under any variations from such conditions in actual construction.

**HYDROSOIL** extensive green roof system with its low nutrient, soil based substrate offers great ecological benefits, providing habitat for invertebrates, butterflies, moths and birds. HYDROSOIL can be used with a sedum, wildflower or grass blanket but through hydro seeding, plantlets, plug planting or with container grown plants a much wider variety of plants can be grown on the roof.

HYDROSOIL also provides the base for brown roofs replicating the ecological benefits from brown field sites. HYDROSOIL can be installed on any of Axter's green roof waterproofing systems and comprises a water reservoir, filter layer, soil based growing medium and plants.



#### HYDROSOIL

Substrate saturated weight	60 kg/m <sup>2</sup> at 6 cm depth
Total saturated weight	80 kg/m <sup>2</sup> at 6 cm depth
Water reserve	20 l/m <sup>2</sup>
Maximum retention capacity	44 l/m <sup>2</sup>

#### WATER RESERVOIR

As with all extensive green or brown roofs HYDROSOIL incorporates a water reservoir keeping plants alive in periods of drought. Axter offers three alternatives:-

##### *Bac canalis*

BAC CANALIS is a recycled polypropylene tray, 59.8 cm x 38 cm, comprising 48 separate beakers containing, when full, 20 l of water/m<sup>2</sup>. The beakers are linked by a lip ensuring an even distribution of water with provision for excessive water, in storm conditions, to be run off. BAC CANALIS can be used on both new and refurbishment projects. BAC CANALIS withstands a force of 2 tonnes/m<sup>2</sup> and is ideal for mixed use and/or access roofs. It can also be used as permanent shuttering for hard landscaping purposes.





# Technical Data Sheet

## Axter Limited

West Road Ransomes Europark  
Ipswich Suffolk IP3 9SX  
Tel (01473) 724056 Fax (01473) 723263  
Email [info@axterltd.co.uk](mailto:info@axterltd.co.uk)

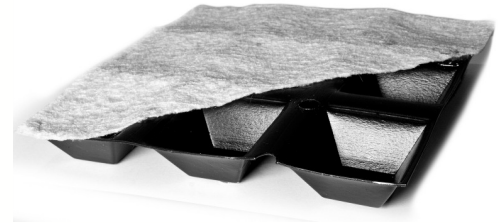
[www.axter.co.uk](http://www.axter.co.uk)

## HYDROSOIL, cont'd

### Hydrodrain 20 or 40

Axter HYDRODRAIN provides a lightweight drainage layer and water reservoir to sustain plant growth on extensive green roofs. It consists of a perforated cusped HDPE (High Density Polyethylene) core with a geotextile filter thermally bonded on the upper side. Used under soil layers, it allows the plant roots to reach down to the water in the core reservoirs. The core is perforated to allow the excess rainwater to flow into the underside and away to the outlets (available from Axter Ltd).

NB: The manufacturer reserves the right without prior notice to modify the composition of his products. Characteristics provided in this publication derive from data obtained under controlled test conditions. AXTER Limited makes no warranties, express or implied as to the properties and performance under any variations from such conditions in actual construction.



### Axter hydroponic mineral substrate

Described as part of the HYDROLITE system, Axter's hydroponic mineral substrate can be used as the water reservoir in conjunction with a suitable topsoil growing medium.

## FILTER LAYER

Axter's 200 gm/m<sup>2</sup> fleece filter layer should be laid over BAC CANALIS or the hydroponic mineral substrate to retain the growing medium.

## GROWING MEDIUM

Normally a min. 6 cm layer of an organic growing medium would be applied on top of the water reservoir to provide anchorage for the vegetative plants and to absorb and supply nutrients. This will be designed for the particular plant varieties to be grown on the roof but, in general, it should be free draining, lightweight but also able to absorb and retain water.

Axter offers a range of four extensive green roof substrates to suit different green roof projects:

**Sedum Mix:** a lightweight mix designed for sedum mat or plug plant systems. The mix has excellent water retaining capacity and good nutrient availability.

**Wildflower Mix:** designed for wildflower mats and wildflower seeded roofs. This blend is suitable for slightly deeper depths, has good water retaining capacity and fairly low nutrient content to prevent unwanted vegetation.

**Acid Grassland Mix:** the formulation of this mix provides a lower pH value than other blends and slightly richer in organic content to resemble natural acidic grassland.

All substrates are tested to FLL standards and are supplied in bulk bags.

*A separate datasheet is available on Axter Hydrosoil green roof substrate.*

## PLANTS

These can comprise a sedum, wildflower or grass blanket but can also be plantlets, plugs or container grown plants. Seeds can be mixed into the growing medium. Once this is watered they will germinate and provide the vegetative cover. Axter can provide a list of suitable species for any application upon request.



*Root structure 1 year after initial planting*

## HYDROSOIL

### SOIL BASED EXTENSIVE GREEN ROOF



**Axter Limited**

West Road Ransomes Europark

Ipswich Suffolk IP3 9SX

Tel (01473) 724056 Fax (01473) 723263

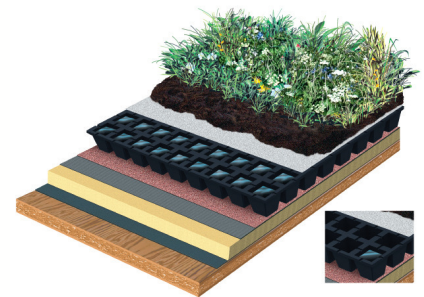
Email [info@axterltd.co.uk](mailto:info@axterltd.co.uk)

**[www.axter.co.uk](http://www.axter.co.uk)**

NB: The manufacturer reserves the right without prior notice to modify the composition of his products. Characteristics provided in this publication derive from data obtained under controlled test conditions. AXTER Limited makes no warranties, express or implied as to the properties and performance under any variations from such conditions in actual construction.

**HYDROSOIL** extensive green roof system with its low nutrient, soil based substrate offers great ecological benefits, providing habitat for invertebrates, butterflies, moths and birds. HYDROSOIL can be used with a sedum, wildflower or grass blanket but through hydro seeding, plantlets, plug planting or with container grown plants a much wider variety of plants can be grown on the roof.

HYDROSOIL also provides the base for brown roofs replicating the ecological benefits from brown field sites. HYDROSOIL can be installed on any of Axter's green roof waterproofing systems and comprises a water reservoir, filter layer, soil based growing medium and plants.



#### HYDROSOIL

Substrate saturated weight	60 kg/m <sup>2</sup> at 6 cm depth
Total saturated weight	80 kg/m <sup>2</sup> at 6 cm depth
Water reserve	20 l/m <sup>2</sup>
Maximum retention capacity	44 l/m <sup>2</sup>

#### WATER RESERVOIR

As with all extensive green or brown roofs HYDROSOIL incorporates a water reservoir keeping plants alive in periods of drought. Axter offers three alternatives:-

##### *Bac canalis*

BAC CANALIS is a recycled polypropylene tray, 59.8 cm x 38 cm, comprising 48 separate beakers containing, when full, 20 l of water/m<sup>2</sup>. The beakers are linked by a lip ensuring an even distribution of water with provision for excessive water, in storm conditions, to be run off. BAC CANALIS can be used on both new and refurbishment projects. BAC CANALIS withstands a force of 2 tonnes/m<sup>2</sup> and is ideal for mixed use and/or access roofs. It can also be used as permanent shuttering for hard landscaping purposes.





# Technical Data Sheet

## Axter Limited

West Road Ransomes Europark  
Ipswich Suffolk IP3 9SX  
Tel (01473) 724056 Fax (01473) 723263  
Email info@axterltd.co.uk

[www.axter.co.uk](http://www.axter.co.uk)

## HYDROSOIL, cont'd

### Hydrodrain 20 or 40

Axter HYDRODRAIN provides a lightweight drainage layer and water reservoir to sustain plant growth on extensive green roofs. It consists of a perforated cusped HDPE (High Density Polyethylene) core with a geotextile filter thermally bonded on the upper side. Used under soil layers, it allows the plant roots to reach down to the water in the core reservoirs. The core is perforated to allow the excess rainwater to flow into the underside and away to the outlets (available from Axter Ltd).

NB: The manufacturer reserves the right without prior notice to modify the composition of his products. Characteristics provided in this publication derive from data obtained under controlled test conditions. AXTER Limited makes no warranties, express or implied as to the properties and performance under any variations from such conditions in actual construction.



### Axter hydroponic mineral substrate

Described as part of the HYDROLITE system, Axter's hydroponic mineral substrate can be used as the water reservoir in conjunction with a suitable topsoil growing medium.

## FILTER LAYER

Axter's 200 gm/m<sup>2</sup> fleece filter layer should be laid over BAC CANALIS or the hydroponic mineral substrate to retain the growing medium.

## GROWING MEDIUM

Normally a min. 6 cm layer of an organic growing medium would be applied on top of the water reservoir to provide anchorage for the vegetative plants and to absorb and supply nutrients. This will be designed for the particular plant varieties to be grown on the roof but, in general, it should be free draining, lightweight but also able to absorb and retain water.

Axter offers a range of four extensive green roof substrates to suit different green roof projects:

**Sedum Mix:** a lightweight mix designed for sedum mat or plug plant systems. The mix has excellent water retaining capacity and good nutrient availability.

**Wildflower Mix:** designed for wildflower mats and wildflower seeded roofs. This blend is suitable for slightly deeper depths, has good water retaining capacity and fairly low nutrient content to prevent unwanted vegetation.

**Acid Grassland Mix:** the formulation of this mix provides a lower pH value than other blends and slightly richer in organic content to resemble natural acidic grassland.

All substrates are tested to FLL standards and are supplied in bulk bags.

*A separate datasheet is available on Axter Hydrosoil green roof substrate.*

## PLANTS

These can comprise a sedum, wildflower or grass blanket but can also be plantlets, plugs or container grown plants. Seeds can be mixed into the growing medium. Once this is watered they will germinate and provide the vegetative cover. Axter can provide a list of suitable species for any application upon request.



*Root structure 1 year after initial planting*