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

Technical Data Sheet

December 2012

HYDROBROWN

BIO-DIVERSE (BROWN) ROOF

A bio-diverse (brown) roof is described in the GRO Green Roof Code 2011 as "a roof that is similar in composition to an extensive roof, but designed specifically to create a habitat that will attract a particular flora and fauna; whether replicating the original footprint of the building or enhancing the previous habitat. Includes a brown roof, which is a non-vegetated version. The growing medium is purposely selected to allow indigenous plant species to inhabit the roof over time."

Axter can supply a specialist growing medium to suit the requirements of the planting regime. However in many cases soil and spoil from the development site can be recycled and used on the roof. This is particularly so with brown roofs that are to be left bare for windblown or bird sown seeds to germinate in order to replicate the ecology of the site pre development.

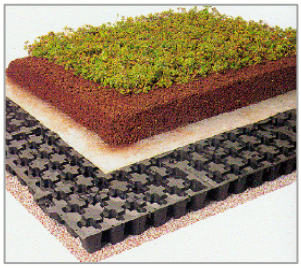
A variety of habitats can be created on such roofs by contouring the soil, providing a variety of substrates, soil, rocks, sand, gravel, crushed concrete and the addition of features such as rotting wood and ponds. The objective is to create a number of different environments on the rooftop, each favouring different species thus increasing biodiversity.

WATER RESERVOIR

As with all extensive green or brown roofs HYDROBROWN would normally incorporate a water reservoir keeping plants alive in periods of drought. Axter offers the following 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^2. 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^2 and is ideal for mixed use and/or access roofs. It can also be used as permanent shuttering for hard landscaping purposes.



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 cuspated 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).

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WATER RESERVOIR, cont'd

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 200gm/m^2 fleece filter layer should be laid over BAC CANALIS or the hydroponic mineral substrate to retain the growing medium.

GROWING MEDIUM

In most cases soil, spoil or recycled construction materials are sourced locally and are applied to a required thickness on top of the water reservoir and filter layer. Such material 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.

PLANTS

In many cases the gowning medium will be left bare to germinate windblown or bird sown seeds. However to speed up the process seeds collected locally or replicating locally grown naturalised species can be mixed into the growing medium. Once this is watered they will germinate and provide the vegetative cover.