

# Boughton Intensive Green Roof Substrate 1



## Product information

Boughton Intensive green roof substrate 1 has been designed to contain a greater proportion of organic matter and finer sand particles. This allows the substrate to retain more moisture for longer periods of time, as well providing extra nutrition for plants.

Boughton IN 1 is a substrate that has greater organic content to allow it to support larger plants and also to be installed at deeper depths.

## Application

This substrate is designed for intensive green roofs, where planting schemes are much more detailed and formalised. This means that a wide range of plants can be supported in IN1, dependent on the depth at which it has been installed.

Depending on the substrate depth and plant type, permanent irrigation systems (above or below ground) are sometimes installed. These are usually to act as a backup for extended dry periods and are not required for everyday irrigation as the substrate has the ability to hold onto sufficient moisture during ambient conditions.

## Standard

Boughton Intensive Green Roof Substrate 1 meets and exceeds all present G.R.O guidelines.



## Properties

Bulk density oven dried (g cm-3)	1.07
Bulk density at 10% VMC (g cm-3)	1.33
Bulk density at field capacity (g cm-3)	1.46
Field Capacity (% v/v)	53.9
Particle Density (g cm-3)	2.18
Total Porosity (%)	48.9
Porosity at Field Capacity (%)	57.5
Effective Porosity (%)	0.0
Saturated Hydraulic Conductivity (mm min-1)	18

## Installation details

Boughton Intensive Green Roof Substrate 1 can be laid to depths varying from 100 / 500 cm. The depth of substrate is determined by the planting scheme and the weight loading capability of the roof which must be assessed by a qualified structural engineer.

## Delivery info

Boughton Intensive Green Roof Substrate 1 can be delivered in any required format. This includes 25ltr and IBC Bulk bags. Or loose tipped as required.



**Boughton Intensive 1 Mix engineering characteristics compared to FLL standards for Extensive greening**

**Substrate Density**

Bulk Density when oven dried (g cm <sup>-3</sup> )	1.07
Bulk Density at 10% VMC (g cm <sup>-3</sup> )	1.33
Bulk Density at field capacity (g cm <sup>-3</sup> )	1.46
Particle Density (g cm <sup>-3</sup> )	2.18

**Water & Air**

Field Capacity (% v/v)	53.9
Total Porosity (%)	48.9
Porosity at Field Capacity (%)	57.5
Effective Porosity (%)	0.0
Saturated Hydraulic Conductivity (mm min <sup>-1</sup> )	18

**Chemical**

Organic Matter (%)	3.7
pH	8.0
EC (mS cm <sup>-1</sup> )	3.1

**Plant Available Nutrients**

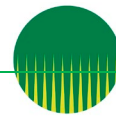
Nitrogen (mg l <sup>-1</sup> )	7.8
Phosphate (mg l <sup>-1</sup> )	>165
Potassium (mg l <sup>-1</sup> )	>241

**Particle Size Distribution**

Stones (>8 mm)	10.4
Coarse gravel (8-4 mm)	5.0
Fine gravel (4-2 mm)	0.6
Very coarse sand (2-1 mm)	7.2
Coarse sand (1.0-0.5 mm)	20.1
Medium sand (0.5-0.25 mm)	39.5
Fine sand (0.250-0.125 mm)	15.5

**Boughton Loam Ltd**

**PRODUCT INFORMATION SHEET**



**Boughton**

Very fine sand (0.125-0.050 mm)	1.2
Silt (0.050-0.002 mm)	0.5
Clay (<0.002 mm)	0.1

**Boughton Loam Ltd**

Telford Way Industrial Estate, Telford Way, Kettering, Northamptonshire NN16 8UN  
T 01536 510515 E enquiries@boughton.co.uk