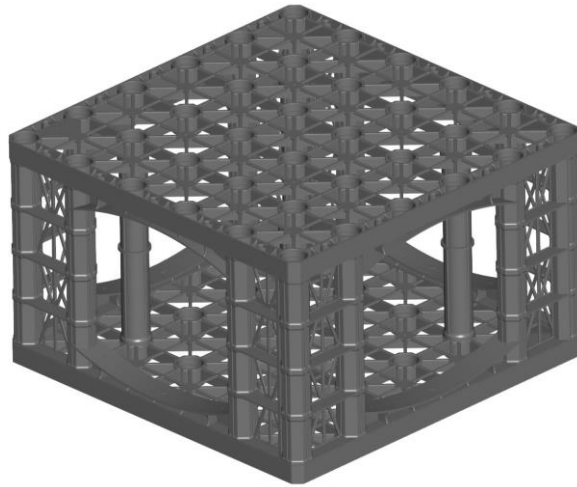


TerraVault II[®] MODULE SPECIFICATION SHEET



Terravault II Module

Terra Vault II Modules are modular units that assemble to form a skeletal matrix that supports relevant pavement loads while providing large volumes of un-compacted soil within the structure for free root growth.

The open, skeletal matrix provides a maximum growth zone for tree roots. More than 95% of the Internal Void volume is available for un-compacted soil and root growth.

Traditionally rock and soil mix use to provide support for pavement, while permitting some root growth within the pavement. Terra Vault System have moved this principle forwarded by entirely replacing the rock (80% of the total volume) the engineered modules provide the structural strength for pavement loads whilst providing free un-compacted root zone for trees.

Terra Vault Module Dimensions:

Module (Unit)	Width (mm)	Width (inches)	Length (mm)	Length (inches)	Height (mm)	Height (inches)
Single (1)	600	23.62	600	23.62	360	14.72
Double (2)	600	23.62	600	23.62	690	27.16
Triple (3)	600	23.62	600	23.62	1020	40.15

Soil Storage Volume:

Module (Unit)	Module Volume (L)	Module Volume (cf)	Module Volume (gal)	Soil Storage Volume (l)	Soil Storage Volume (cf)	Soil Storage Volume (gal)
Single (1)	129.60	4.57	34.23	123.12	4.35	32.52
Double (2)	248.40	8.77	65.62	235.98	8.33	62.34
Triple (3)	367.20	12.96	97.00	348.84	12.31	92.15

TerraVault II Module.

Item	Description	Value	Unit
Void Area	Area available for water storage vrs that made up of plastic	> 95	%
Surface Void Area	Open area where water may percolate in or out of the units	> 95	%
Rib Thickness	Minimum thickness of the load bearing members to full depth of the plate	4.3-4.4 (0.16 -0.17)	mm (inches)
Product Plate Details	The Soil module must be of a vertical coulomb supports for maximum load bearing	**	**
Product Weight Details	Each single module must have a minimum of 7.00 Kgs or raw material weight, as light weight products are not suitable to handle constant Dead weight load over a period of time.	**	**
Product Structural Design	Structural Design shall be based on sound structural calculations and must be designed as structural components, using structural design theory in accordance with CIRIA C680 Report. Material Factor of Safety to be used as 2.75. All calculations shall be submitted to engineer for approval prior to any works commencing	**	**
Service Temperature	Operating temperature where the units can be expected to perform adequately	-10 to 75°C (-14 to 167°F)	°C (°F)
Recycled Content	85% Selected Recycled Polypropylene + 15% proprietary mix	85% + 15%	%
Biological & Chemical Resistance	Unaffected by moulds, algae, Soil Bourne Chemical, <i>bacteria and bitumen</i> , polypropylene is very inert	**	**
Ultimate unconfined VERTICAL Crush Strength	Using a full -size plate that completely covers the top of the unit determines the pressure required to crush the entire unit	65 (92.45)	ton/sqm (PSI)
Ultimate unconfined Lateral Load Crush Strength on side	Using a full -size plate that completely covers the top of the unit determines the pressure required to crush the entire unit	7.5 (10.66)	ton/sqm (PSI)

****Heavy Duty Tank for High load baring capacity are also available**

NOTE: All 'RAINSMART Products and Systems are DESIGN REGISTERED.

Safety Factors: Engineers, designers and geotechnical engineers should design and calculate safety factors to a serviceable limited state to suit specific project. In case of doubt, consult your nearest distributor or representative.

Disclaimer: All information provided in this publication is correct to the best knowledge of the company and is given out in good faith. This information is intended only as a general guide, no responsibility can be accepted for any errors, omissions or incorrect assumption. As each project is unique, and as Rainsmart Solutions Pty. l td. and its distributors and agents worldwide have no direct control over the methods employed by the user in specifying, installing or supervising of its products hence no responsibility is accepted by RAINSMART Solutions Pty Ltd. and its distributors and agents worldwide. Users should satisfy themselves as to the suitability of the product for their purpose.

TerraVault™ System Advantages at Glance:

- ✓ **Heavy Load bearing capacity.**
TerraVault Modules have a high load bearing capacity of up to 65 t/sqm. UNCONFINED
- ✓ **Modular Structure provides Design Flexibility**
Modular Nature of the system helps designers to create any shape, any size and fits tight spot.
- ✓ **Use Strength with Flexibility.**
Reduce or Increase the number of internal support plates to use achieves Required load rating whilst keep costs low.
- ✓ **High Internal Void Ratio.**
TerraVault Modules have 95% internal void Ratio, meaning more space for un-compacted soil and roots and water management. Allowing healthy root and plant growth.
- ✓ **High Surface void Ratio.**
Up to 95% surface void ratio providing free un-obstructed root growth and movement in the un-compacted soils.
- ✓ **Quick & Lightweight Easy to install.**
TerraVault Modules are light weight and easy to install by unskilled labor, without the need of any heavy Machinery
- ✓ **Available in Kit form.**
Supplied in kit form its easy delivery and handling and reduces transport costs.
- ✓ **Easy to Infill and Top Up.**
Unlike other systems, this is a single component module which is easy to infill and lock in place. Reduces installation time and costs.
- ✓ **Environmentally Friendly.**
Made from Recycled Polypropylene the Terra Vault Modules are Green label Certified.
- ✓ **High Lateral load Capacity**
The TerraVault Modules have a high lateral load carrying capacity of > 7.5 t/sqm. Internal plate layout ensures uniform load distribution and load capacity. Lateral forces must also be considered for engineering design of tree pits, when in proximity of traffic areas.
- ✓ **Interlocks**
TerraVault units lock together vertically and laterally if required to form a single structure with excellent modular strength, both vertically and laterally.
- ✓ **Enhances and Recycles Stormwater.**
There are many WSUD methodologies to capture and utilize valuable rainfall using the TerraVault system and other Rainsmart product range to enhance growth of trees in an Urban Environment.



Rainsmart Solutions Pty Ltd.
25 Lidco Street, Arndell Park, NSW-2148, Australia.
(p): +61 2 9678 9667 (f):+61 2 9678 9667
(e) info@rainsmartsolutions.com |(w) www.rainsmartsolutions.com