**Polystorm-R Modular Cell**

**Product code:** PSM1A

The Polystorm-R modular cell is ideally suited for loaded applications at greater depths, such as housing, commercial and infrastructure projects and has a compressive strength of up to 61 tonnes/m². It offers all the proven performance of the Polystorm cell, with the added benefits of being manufactured from over 90% recycled material content.

Wherever performance criteria and standards allow, we will always maximise the sustainability of our products by using post consumer plastics in their manufacture. By sourcing and carefully controlling the quality of the recycled material we use our precision injection moulding. Therefore we are able to guarantee consistent quality in our recycled plastic, giving you the confidence and the performance levels you expect from the market leader.

### Key Benefits
- Made from specially selected and controlled recycled materials
- Environmentally friendly, sustainable solution
- Has undergone stringent testing to ensure product performance
- Compressive strength of 61 tonnes/m²
- Ideal for retention, attenuation and infiltration applications with a suitable geomembrane or geotextile
- BBA approved
- Allow flexibility of shape - ideal for shallow excavation systems, narrow strips or use in restricted areas
- Can be used as part of a value engineered hybrid system with Polystorm, Polystorm Lite and Polystorm Xtra
- Integrated inlet and outlet
- 3D flow throughout the structure
- 95% void ratio
- Light weight yet robust - excellent Health and Safety and installation benefits
- 60 years creep limited life expectancy

### Technical Support
Detailed guidance and assistance is available. For further information, please contact our Technical Team on +44 (0) 1509 615100 or email civils@polypipe.com

### Exact colour may vary due to recycled materials.

#### ELEMENT

<table>
<thead>
<tr>
<th>PHYSICAL PROPERTIES</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>1m</td>
</tr>
<tr>
<td>Width</td>
<td>0.5m</td>
</tr>
<tr>
<td>Depth</td>
<td>0.4m</td>
</tr>
<tr>
<td>Total volume</td>
<td>0.2m³</td>
</tr>
<tr>
<td>Unit weight</td>
<td>9kg (approx)</td>
</tr>
<tr>
<td>Unit storage volume</td>
<td>0.19m³ (190 litres)</td>
</tr>
<tr>
<td>Void ratio</td>
<td>95%</td>
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</tbody>
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**SHORT TERM COMpressive STRENGTH**

| Vertical | 610 kN/m² ** |
| Lateral  | 63 kN/m² **  |

**SHORT TERM DEFlection**

| Short-term vertical deflection | 60 kN/m² per mm |

**LONG TERM DEFlection**

| Estimated long term vertical deflection (creep) |
| 0.2798 Ln (design life in hrs) + 0.485 |

[Based on an applied test load = 162 kN/m²] Creep data limit 60 years

| Estimated long term lateral deflection (creep) |
| 1.0192 Ln (design life in hrs) - 3.864 |

[Based on an applied test load = 30.8 kN/m²] Creep data limit 60 years

Note: Polystorm-R is ideal for use in trafficked and pedestrian applications subject to a structural design check and suitable installation conditions

* Each unit includes 4 Clips and 2 Shear Connectors.

** Compressive strength at yield, maximum recommended value for design purposes.
**Durability**

The polymer material used in the manufacture of the Polystorm-R unit has an adequate resistance to attack from the type and quantities of chemicals that may be expected to naturally occur in uncontaminated soils and rainwater runoff. When installed in accordance with our recommendations, it is expected that the Polystorm-R unit will have a design life in excess of 60 years*. The installer of a proposed geocellular structure should ensure that an appropriate design check has been undertaken, in accordance with the recommended methodology and factors of safety given in CIRIA C680 (2008), Structural Design of Modular Geocellular Drainage Tanks, prior to the commencement of construction activities.

* Derived from long term extrapolated creep testing

**Notes**

1. Unless stated, all values are nominal and may vary within normal production tolerances.
2. The characteristic unit parameters stated have been based on Polypipe BBA certificate No 06/4297, sheet 3.
3. Polypipe reserve the right to change product specifications without prior notice.
4. This document is uncontrolled and updates will not be issued automatically.

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