

DATA SHEET

SKY GARDEN GREEN WALL SUBSTRATE MIX GWSM01

Version 1.0

SKY GARDEN GREEN WALL SUBSTRATE MIX

The Green Wall Substrate Mix is a lightweight, high-performance growing medium specifically engineered for vertical planting systems. Designed to meet the unique challenges of green wall environments. Provides optimal drainage, aeration, and moisture retention, this mix supports healthy root development and long-term plant vitality in green wall installations.



SYSTEM CONSIDERATIONS

- Ideal for vertical systems where weight and media stability are critical.
- Retains moisture efficiently while promoting even distribution across the vertical profile.
- Provides a supportive structure that allows plants to establish secure root systems in shallow planting zones.
- Prevents waterlogging and ensures oxygen availability for healthy root development.
- Formulated to maintain its integrity over time, reducing the need for frequent media replacement.

PHYSICAL PROPERTIES

Bulk Density When Oven Dried	0.85 – 0.95 g/cm ³ Dry weight for load calculations
Bulk Density at Field Capacity	1.00 – 1.10 g/cm ³ With water retained post-irrigation
Field Capacity (% v/v)	35 – 40% Moisture retained after free drainage
Total Porosity (%)	50 – 60% Air + water pore space
Porosity at Field Capacity (%)	15 – 20% Air-filled porosity when saturated

TECHNICAL PROPERTIES

Organic matter (% weight)	8 – 10% Moderate for green walls; limits shrinkage & compaction
pH	6.2 – 7.2 Neutral to slightly acidic – ideal for most wall species
Electrical Conductivity (mS cm ⁻¹)	0.6 – 1.0 mS/cm Low to moderate; avoids nutrient burn
Phosphate (mg l ⁻¹)	10 – 20 Moderate – supports plant growth without
Potassium (mg l ⁻¹)	150 – 250 mg/L Supports flowering and root development
Total nitrogen (%)	0.6 – 1.0% Stable baseline for sustained feeding

SPECIFICATION DESCRIPTION

Blending fine mineral aggregates with organic components, the mix ensures sustained plant health by facilitating nutrient uptake, resisting compaction, and maintaining consistent moisture distribution through capillary action. It is suitable for modular or continuous green wall systems in both interior and exterior applications. With its carefully balanced physical and chemical properties, this substrate supports vigorous plant growth while minimising weight load on structural elements.

n.b. these substrate blends are currently undergoing independent laboratory analysis by STRI (Sports Turf Research Institute) to validate physical, chemical, and biological performance. Full test reports will be made available upon completion and can be provided to clients on request.



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