



Quality Create The Future



# Z'Panel+

Ultra-Lightweight Nutrient Green Wall

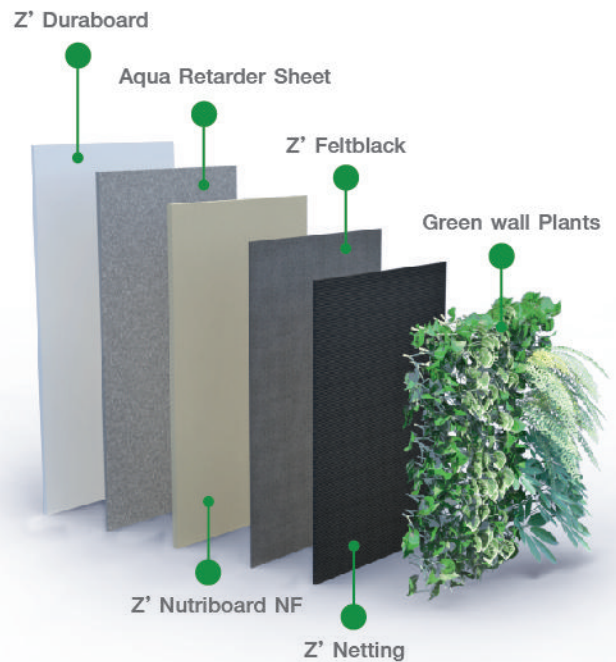


# Z'Panel+

**Z'Panel+** is a special garden foam infused with essential nutrients designed for vertical garden arrangement. Z'Panel+ has an ultra-lightweight at 30-35kg per m<sup>2</sup> and thickness only at 35 mm.

**Z'Panel+** comprises of 5 layers namely

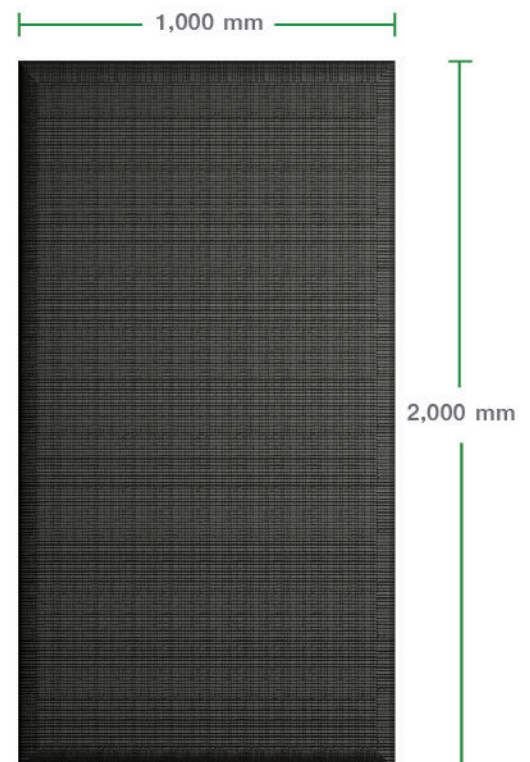
1. **Z'Duraboard**: a basement board made of a high quality Rigid PVC Intergral with thickness of 12 mm.
2. **Aqua Retarder Sheet**: With the thickness of 4mm., it is a synthetic fiber sheet, which has an excellent water retention and can retard water for Z'NutriBoard NF layer.
3. **Z'Nutriboard NF**: an ultra-light weight planting media infused with essential nutrients. Z'NutriBoard NF has an excellent capacity of absorbing and retarding water at 840 g/L. It also has a good ventilation reducing the problem of plant fungi and has neutral PH.
4. **Z'Feltblack**: a synthetic fiber made from Polypropylene with UV protection from nutrient damage at Z'NutriBoard NF layer.
5. **Z'Netting**: a netting sheet made from HDPE on top for planting with the capacity of UV endurance and high elasticity for use of wrapping Z'Panel+.



## Technical Specification

### Z'Lifewall Nutri+

<b>Panel Size</b>	
Width	1,000 mm
Length	2,000 mm
Thickness	35 mm
<b>Weight</b>	
Panel	8.5kg/m <sup>2</sup>
Plants+Water	30-35kg/m <sup>2</sup>
<b>Z'Duraboard Thickness</b>	
	12 mm
<b>Aqua Retarder Sheet Thickness</b>	
	4 mm
<b>Z'Nutriboard NF</b>	
Thickness	15 mm
Density	28kg/m <sup>3</sup>
Tensile strength dry	150kpa
Elongation dry	32%
Water retention	840g/L
<b>Z'Feltblack Weight</b>	
	100g/m <sup>2</sup>
<b>Z'Netting Material</b>	
Shade Factor	100% Virgin HDPE UV Stability
Air Permeability	80%
	12%





# Z'NutriBoard NF

## Ultra-Lightweight Nutrient-Infused Media

Z'NutriBoard NF is an ultra-lightweight garden foam infused with essential nutrients and high water retention capability making it an excellent soil-less media for effective plant growth.

Building integrated vegetation such as green roofs and green walls have long been incorporated in buildings to mitigate Urban Heat Island Effect. However, the market has seen a shift from using accustomed materials such as soil to a soil-less medium to improve current greenery systems.

**Z'NutriBoard NF** is relatively hassle-free when compared to soil-based planting media. It is easy to transport and quick to install, likewise its replacement and removal is equally effortless. Infused with essential nutrients within the foam structure, the roots can easily penetrate through the spaces within the foam matrix and absorb the nutrients required for sustaining the plant's growth.

**Z'NutriBoard NF** has an excellent water retention capability when compared to standard foam grades. A new foam technology is developed to control the release of water, ensuring that the plants do not face water-logging issues. Moreover, it has a superb hydrolysis resistance, making it a suitable foam media for humid weather conditions.



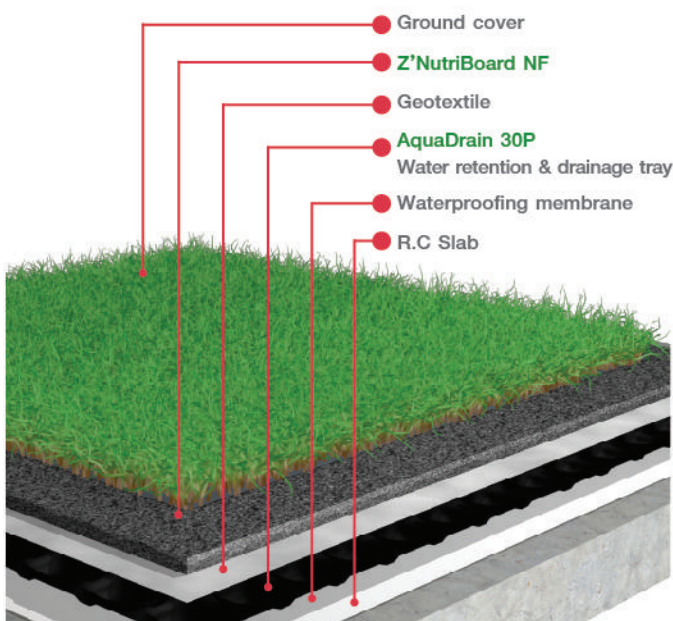
### Z'NutriBoard NF for Green Roofs

Green roofs have become increasingly popular over the years due to its long-term cost benefits and in providing an additional natural habitat for wildlife.

Green roof systems are constructed in several distinct layers, all of which are critical to provide sustainable long-term vegetation and to minimise maintenance frequency.

**Z'NutriBoard NF** ultra-lightweight properties make it an ideal choice to reduce the load on the roof. Moreover, it provides a protective layer for the roof, drainage layer, retention layer and vegetation layer at the same time.

The Elmich green roof system using Z'NutriBoard NF with plants weigh approximately 30 kg per square meter.







## Z'NutriBoard NF for Green Walls

Z'NutriBoard NF as part of the Zillion Innovation green wall system can be pre-fabricated and delivered on-site for planting to be commenced immediately, completing the entire installation within a day's time. It offers a sleek and flexible green wall profile allowing for modifications on-site. Hence, reduces time-consuming delays and potential material wastage.

Designers will be able to freely express their planting design intent and create a living art feature wall with excellent water retention capacity, stable root penetration of plants and nutrients for healthy plant growth.

### Technical Specifications

Property	Test Method	Specification
Density (kg/m <sup>3</sup> )	DIN EN ISO 845	28
Tensile strength dry (kPa)	DIN EN ISO 1799	150
Elongation dry (%)	DIN EN ISO 1799	32
Tear strength dry (%)	DIN 53575	4.2
Airflow (lt/m <sup>2</sup> /s)	DIN EN ISO 9237	115
Water retention (g/L)	RPA-1010	840
Wet out (s)	RPA-1010	<1
Comprehensive strength at 40% (kPa)	DIN EN ISO 3386-1	21
pH		Neutral

Supplied in sheets or blocks, dimensions available upon request

### Advantages

- Increased water retention
- Ultra-lightweight and stable
- Excellent hydrolysis resistance
- Good insulator
- Easy to install and remove

### Applicable Areas

- Green roofs
- Horticulture
- Green walls
- Stage backdrop





# Project Reference



98 Wireless by Sansiri









East West Seed



East West Seed



Formosa, Ladprao7



Formosa, Ladprao7



Formosa, Ladprao7





Habitia Vent by Sansiri