

N5M Membrane Roof Panel



Product Description

It is used in terrace roof covering. Bottom face of the panel is metal (preainted galvanize steel), whereas top surface is produced either with PVC membrane or TPO membrane. This way, after the assembly at the construction site, there is no need for covering water insulation material and it saves time and labour. The panels are connected to the bearing system with its own threaded screws. After that, the lug over the other panel is stuck by lamination method.

Production Plant

İstanbul, Balıkesir

Product Application

- Industrial Buildings
- Military Buildings
- Public Buildings
- Agricultural Buildings
- Sports Facilities
- Construction Site Buildings
- Silos
- Hypermarkets
- Shopping Centers
- Storehouse Halls
- Administrative Buildings

And all other concrete structures with steel or prefabricated load bearing systems.

Performance Advantages

Best heat insulation values.

Fast and problem-free assembly saves both time and labor.

Polyurethane does not keep water within its body and it does not accommodate bacteria and insects.

Thanks to n-Pentane which is used to inflate the Polyurethane, no damage is caused to nature.

The colorful surface does not require additional coating like plaster or paint.

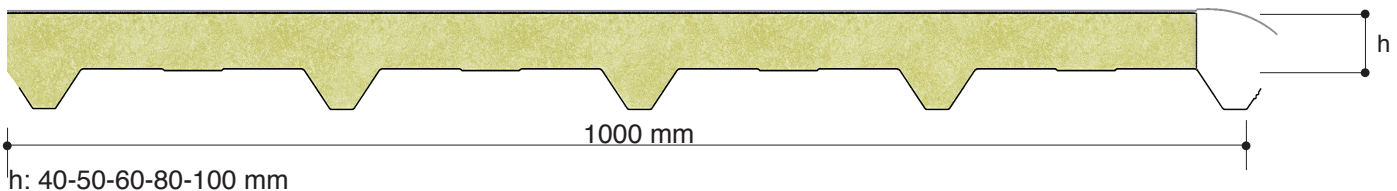
Color can be selected from the RAL catalogue.

There are surface paint options (Polyester, PvdF, Plastisol, PVC) suitable to the place of use.

It is highly demanded for heavy loads thanks to its 5-indented form.

It can be used with 1,5% slope as roof covering.

Measurements



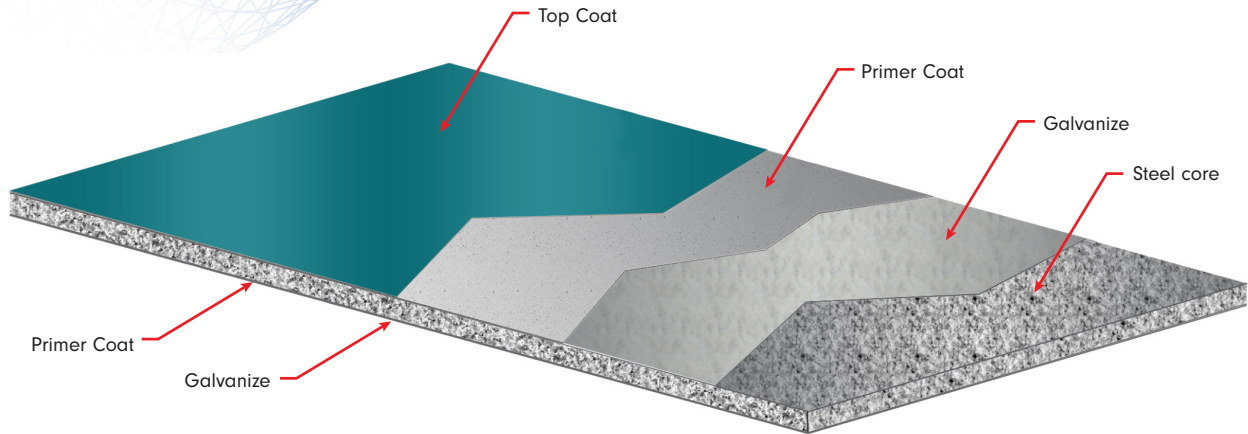
Favourable Width	1000 mm
Minimum Length	3 meters
Maximum Length	Depends on Transport Conditions

Polyurethane (PUR) – Polyisocyanurate (PIR)



Polyurethane/Polyisocyanurate Density (EN 1602)	PUR: 40 (±2) kg/m ³ / PIR: 41 (±2) kg/m ³
Polyurethane/Polyisocyanurate Thickness	40-50-60-80-100 mm
Thermal Conductivity (EN 13165)	0,022-0,024 W/mK
Dimensional Stability (EN 13165)	Level DS (TH) 11
Reaction to Fire (13501)	B. S2 . d0/B.S1.d0
Water Absorption (EN ISO 354)	By Volume 2% (168 hours)
Closed Cell Percentage (EN 14509)	%95
Vapour Diffusion Resistance (EN 12086)	30-100
Heat Resistance	-200 /+110 °C

Metal Surfaces



Prepainted Galvanized Steel Surface

Type	Prepainted Galvanized Steel
External Facing Thickness	0,50-0,8 mm
Thickness Tolerance (EN 10143)	Nominal
Steel Quality (EN 10327)	Dx51 D+Z Prepainted Galvanized Steel (last coat polyester paint on primer)
Hot Dipped Coated Steel Grade (EN 10327)	100-275 gr/m ²
Paint Type	Polyester, PvdF, Plastisol, PVC
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PVC Membrane

Thickness	1,2 mm
Unit Weight on Field	1,55 kg/m ² ±5%
Tensile Strength	≥500 N/cm
Puncture Strength	≥450
Alongation at Break	≥80%
Tensile at 80 °C after 6 hours	≤-0,1%
Soğukta Bükülme	≤-20 °C
Hızlandırılmış Işın Yaşlanması (18.000 MJ/m ²)	No Cracks
Behaviour Under Hydrostatical Pressure, at 2 bar 24 hrs	Impermeable
Accelerated Ray Aging at 80 °C	≤-2,5%
Standard Appearance	Light grey, matte

Load Bearing Tables

PVC External Membrane (mm)	BGS Internal Sheet Thickness (mm)	Span				
		150 cm	200 cm	250 cm	300 cm	325 cm
1,2	0,5	232	126	80	56	-
1,2	0,6	272	158	100	63	-
1,2	0,7	328	188	121	84	59
1,2	0,8	385	220	140	98	72

• Load: kg/m² • Deflexion: L/200 • BGS: Prepainted Galvanized Sheet • 40, 50, 60, 80, 100 mm for Polyurethane thicknesses.

Thermal Conductivity Values

Panel Thickness	U Thermal Conductivity W/m ² K	R Thermal Conductivity (m ² K/W)	R Thermal Conductivity (ft ² °F h/Btu)
40 mm	0,497	2,011	11,418
50 mm	0,406	2,465	14,000
60 mm	0,342	2,921	16,584
80 mm	0,261	3,830	21,747
100 mm	0,211	4,739	26,911

According to TSE EN 14509

Mechanical Properties

Yield Strength of Core Material	min. 220 N/mm ²
Shear Strength of Core Material	min. 0,11 Mpa
Shear Modulus of Core Material	min. 1,5 Mpa
Compressive Strength of Core Material	min. 0,095 Mpa








Tolerance Values

Panel Length	Panel Thickness	Panel Cover Width	Rectangularity
If L ≤ 3000 mm., ±5mm If L > 3000 mm., ± 10mm	D ≤ 100mm ±2mm	± 2mm for all profiles	0.6% of s ≤ nominal cover thickness (Width x 0.006)

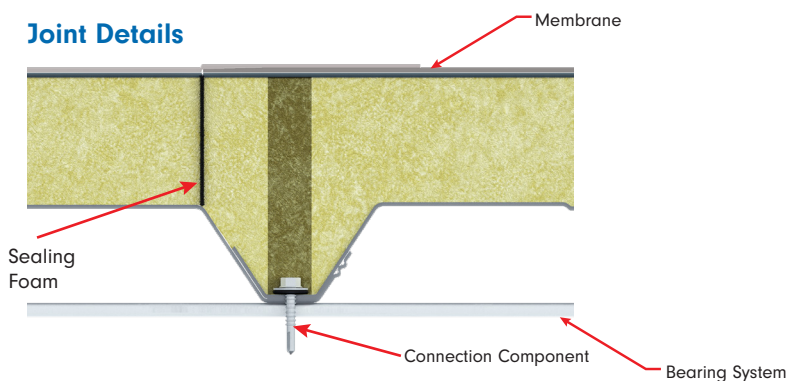
Standard Package

Thickness (mm)	40	50	60	80	100
Number	16	14	13	10	9

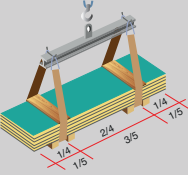
Standard Color Options

RAL 3009	RAL 5010	RAL 5018	RAL 6021	RAL 7016	RAL 9002	RAL 9006
						


Joint Details



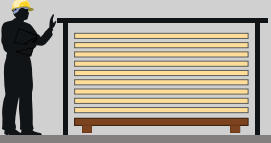
Transportation and Protection of Sandwich panel



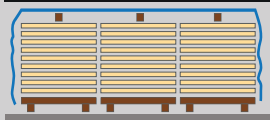
During hoisting take precaution for the sling.




Do not drag panel's in a pile, or on the roof purlins. Lift panel's from both ends when moving or laying in place.



Panel's to be stored on site for long periods should be stacked in covered areas. Wherever possible, always place stacks preferably on wooden wedges, against ground water.



For shorter periods stacks should be arranged on sloppy areas with a simple scaffolding and polyethilen coverleaving space for ventilation. Place stacks on a simple wedge.



Do not walk on panels.