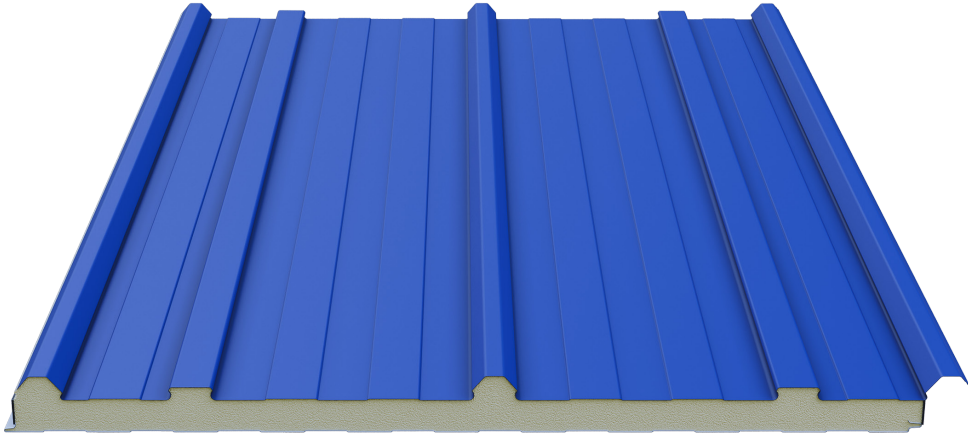


## S5 Solar Roof Panel



### Product Description

With the special clamp system of S5 Solar Roof Panel, the solar panels can be mounted directly without drilling the sandwich panel surface. In this way, the risks of corrosion and waterproofing caused by screw holes in the structures are eliminated, thus protecting the structural integrity of the roofs and extending the life of the building. One of the biggest advantages is that it can be assembled quickly thanks to the panel combination with lateral overlap. It ensures safe passage of wide openings with its indented form. It has a structure compatible with 60 and 72 cell photovoltaic modules with its special indented form.

### Production Location

Iskenderun

### 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.



Assan Panel reserves the right to change the features of its products. The property rights of third parties must be respected. Acceptance of all orders is based on our current terms of sale and shipping. Users should always consider the latest edition of the Local Product Information Sheet for the relevant product, which can be obtained by contacting Assan Panel.

## Performance Advantages

Has the best thermal insulation values.

Fast and problem-free assembly saves time and labor.

The polyurethane structure does not retain water and allow bacteria and pests to develop.

The use of n-Pentane gas in inflating polyurethane prevent environmental damage.

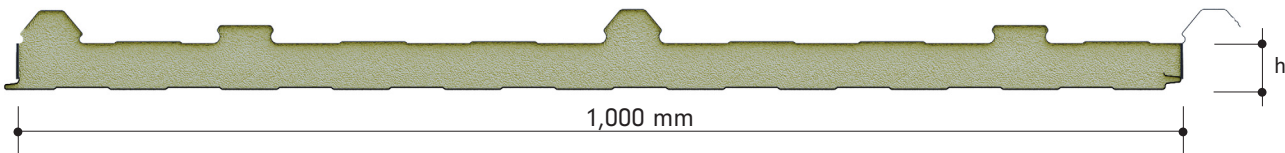
The colorful surface eliminates the need for additional coatings like plaster and paint.

Color options available in the RAL catalogue.

Surface paint options available according to application (Polyester, PvdF, Plastisol, PVC).

Usable as a roof cover for minimum 10% slope.

## Measurements



h: 40-50-60-70-80-100 mm

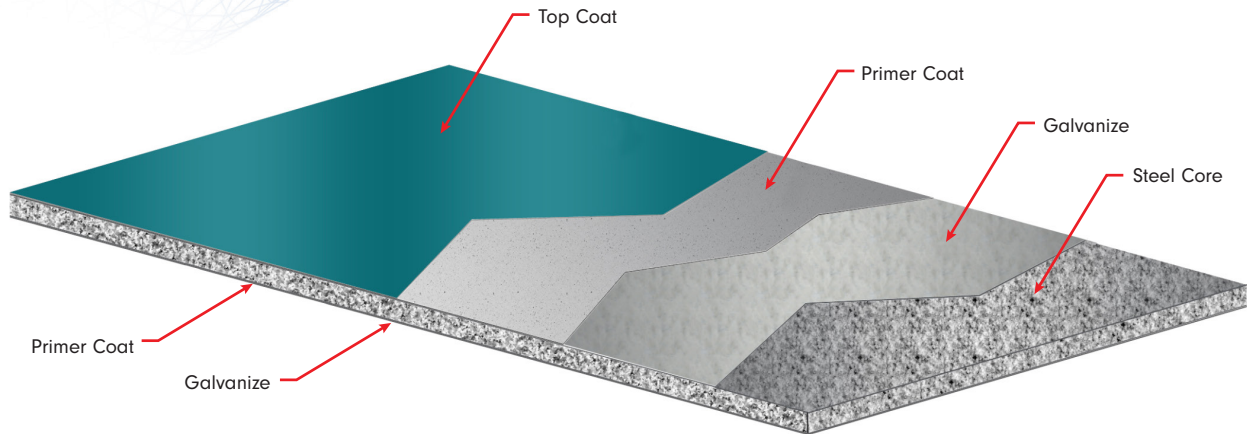
<b>Modular Width</b>	1,000 mm
<b>Minimum Length</b>	3 meter
<b>Maximum Length</b>	Depends on transport conditions.

## Polyurethane (PUR) – Polyisocyanurate (PIR)



<b>Polyurethane (PUR) / Polyisocyanurate (PIR) Density (EN 1602)</b>	PUR: 40 (±2) kg/m <sup>3</sup> // PIR: 41 (±2) kg/m <sup>3</sup>
<b>Polyurethane (PUR) / Polyisocyanurate (PIR) Thickness</b>	40-50-60-70-80-100 mm
<b>Thermal Conductivity (EN 13165)</b>	0.022-0.024 W/mK
<b>Dimensional Stability (EN 13165)</b>	Level DS (TH) 11
<b>Reaction to Fire (13501)</b>	PUR: B-s2,d0 // PIR: B-s1,d0
<b>Water Absorption (EN ISO 354)</b>	By Volume 2% (168 hours)
<b>Closed Cell Percentage (EN 14509)</b>	%95
<b>Vapour Diffusion Resistance (EN 12086)</b>	30-100
<b>Heat Resistance</b>	-200/+110 °C

## Metallic Surface



## Prepainted Galvanized Steel Surface

<b>Metal Type</b>	Prepainted Galvanized Steel
<b>External Facing Thickness</b>	0.50-0.70 mm
<b>Internal Facing Thickness</b>	0.40-0.70 mm
<b>Thickness Tolerance (EN 10143)</b>	Nominal
<b>Thickness Tolerance (EN 10143)</b>	DX51 D+Z Prepainted Galvanized Steel (last coat polyester paint on primer)
<b>Paint Type</b>	Polyester, PvdF, Plastisol, PVC

## Load / Span Table

PPGS	PPGS	Double Span					
External Sheet Thickness (mm)	Internal Sheet Thickness (mm)	PUR-PIR (mm)	150 cm	200 cm	250 cm	300 cm	350 cm
0.5	0.4	40	315	165	101	67	46
0.5	0.4	50	377	209	133	91	65
0.5	0.4	60	438	252	165	116	84
0.5	0.4	70	541	311	203	143	106
0.5	0.4	80	560	339	231	167	126
0.5	0.4	100	682	426	298	226	170

• Load values kg/m<sup>2</sup> • Limit value L/200 • BGS: Painted Galvanized Steel

## Coefficient of Thermal Conductivity

Panel Thickness	U Thermal Conductivity (W/m <sup>2</sup> K)	R Thermal Conductivity (m <sup>2</sup> K/W)	R Thermal Conductivity (ft <sup>2</sup> °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
70 mm	0.298	3.367	19.055
80 mm	0.261	3.831	21.756
100 mm	0.211	4.739	26.911



## Mechanical Properties

<b>Steel Surfaces Yield Strength</b>	min. 220 N/mm <sup>2</sup>
<b>Aluminum Surfaces Yield Strength</b>	min. 140 N/mm <sup>2</sup>
<b>Panel Tensile Strength</b>	min. 0.018 MPa
<b>Core Material Shear Strength</b>	min. 0.11 MPa
<b>Core Material Shear Modulus</b>	min. 2.0 MPa
<b>Core Material Compressive Strength</b>	min. 0.095 MPa
<b>Creep (Yield) Coefficient</b>	t=100,000 hours (Free Load): 7 t=100,000 hours (Snow Load): 2,4
<b>Shear Strength After Sustained Load</b>	t: 1,000 hours min. 0.04 MPa t: 2,000 hours min. 0.03 MPa t: 100,000 hours min. 0.01 MPa
<b>Free Bending Moment Capacity</b>	min. 2.30 KNm/m (Straight) min. 2.00 KNm/m (Reverse)
<b>Free Torsional Stress</b>	min. 100 MPa (Reverse) min. 115 MPa (Straight)

## Tolerance Limits








According to TSE EN 14509

Panel Length	Panel Thickness	Panel Cover Width	Deviation From Squareness
If L ≤ 3,000 mm, then ±5 mm, and if L > 3,000 mm, then ±10 mm	D ≤ 100 mm ± 2 mm	± 2 mm for all profiles	0.6% of s nominal cover thickness / (Width (w) x 0.006)

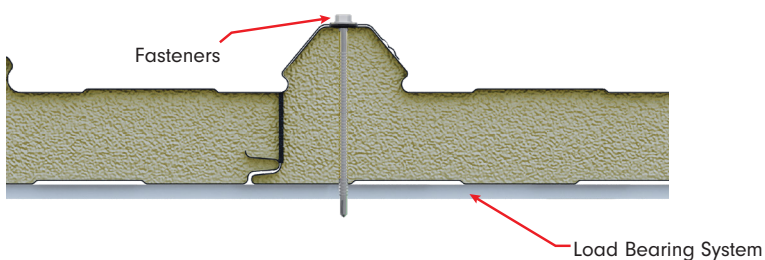
## Standard Package Quantities

Thickness (mm)	40	50	60	70	80	100
Quantity	20	16	14	12	10	8

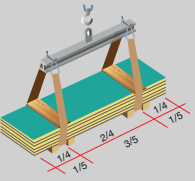
## Standard Color Options

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


## Joint Details



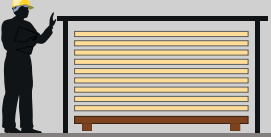
## Transportation and Protection of Sandwich Panel



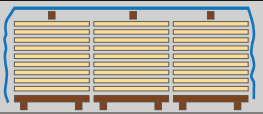
During hoisting take precautions for the sling.




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



Panels to be stored on site for long periods should be stacked in covered areas. When 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 cover, leaving space for ventilation. Place stacks on a simple wedge.



Do not walk on panels.