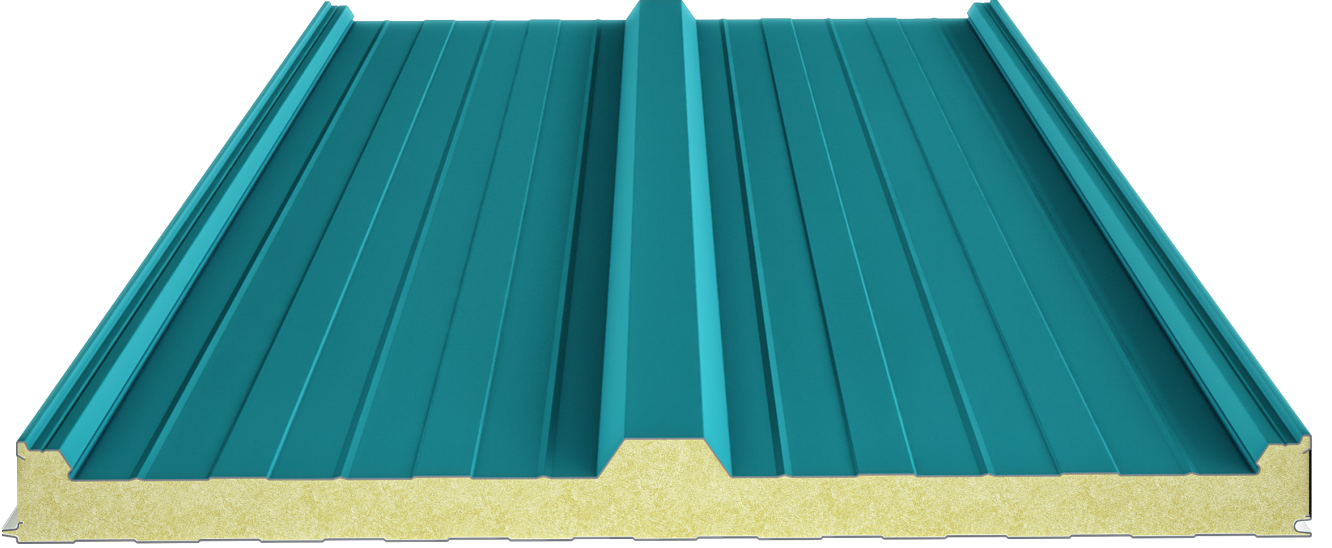


R3 Roof Panel



Product Description

It is the first, single and real capped sandwich panel produced in Turkey. The greatest advantage of the R3 capped panel is that the panel link elements are protected from external factors thanks to the cap profile that covers the panel connection points and the prevention of the water leakage problems that can be experienced over time in connecting components. Also the ability to make the cap profiles in different colors by preference provides an advantage for appearance. By using the R3 panels, roofs with a 5% gradient can be built; while the ability to cover the connecting components makes them usable for façade paneling.

Production Plant

İskenderun

Uygulama Alanları

- 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.

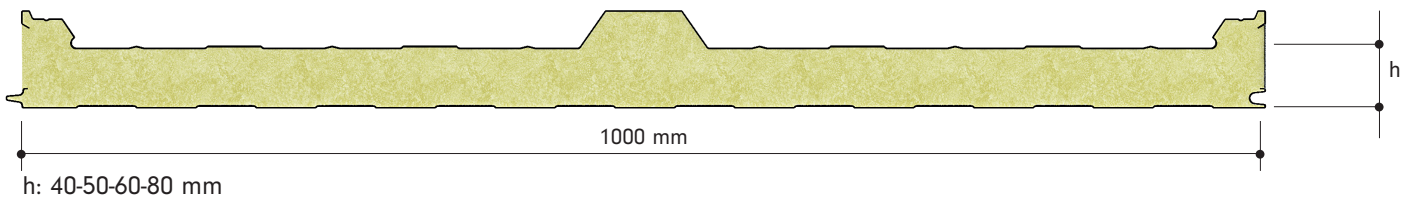
The colorful surface does not require additional coating like plaster or paint.

Color can be selected from the RAL catalogue.

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

Usable as a roof cover for minimum 5% slope.

Measurements



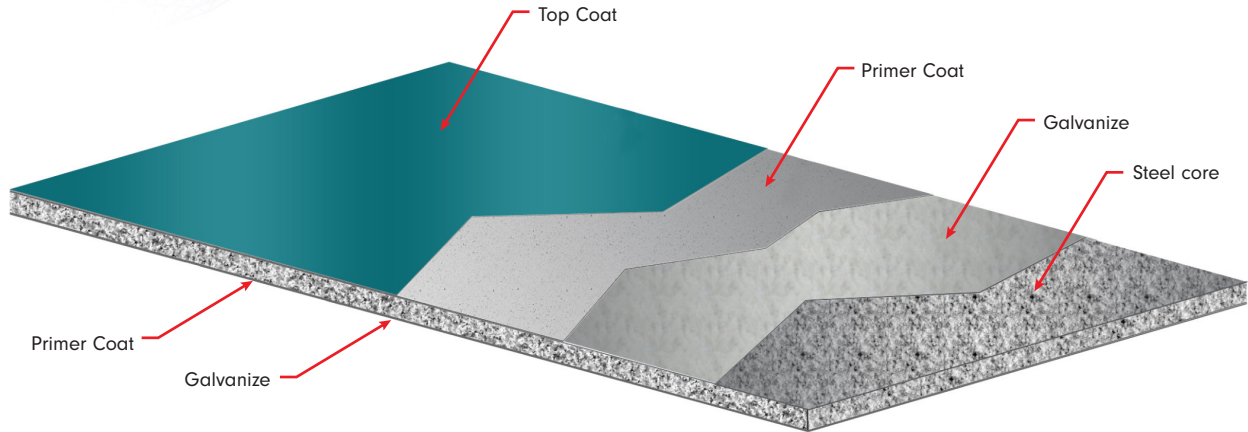
Favourable Width	1000 mm
Minimum Length	3 meters
Maximum Length	Depends on Transport Conditions

Polyurethane (PUR) – Polyisocyanurate (PIR)



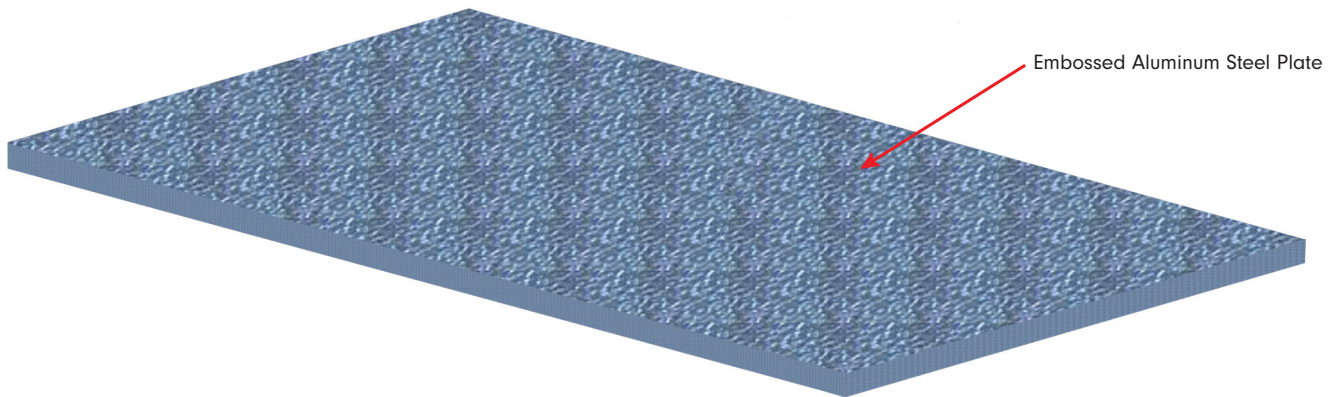
Polyurethane/Polyisocyanurate Density (EN 1602)	PUR: 40 (±2) kg/m ³ / PIR: 41 (±2) kg/m ³
Polyurethane Thickness	40-50-60-80 mm
Thermal Conductivity (EN 13165)	0,022-0,024 W/mK
Dimensional Stability (EN 13165)	Seviye DS (TH) 11
Reaction to Fire (13501)	B.s2.d0 / B.s1.d0
Water Absorption (EN ISO 354)	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	0,50-0,70 mm
Internal Facing Thickness	0,40-0,70 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



Aluminum Steel Surface

Type	Aluminum
External Facing Thickness	0,50-0,70 mm
Internal Facing Thickness	0,40-0,70 mm
Thickness Tolerance (EN 485-4)	Nominal
Steel Quality (EN 485-2)	High Conditioned AW 3000 series aluminum manufactured by Assan Aluminum
Condition (EN 485-2)	H16 - H26
Alloy (EN 485-2)	AW 3000 series
Surface Appearance	Embossed or Prepainted
Temperature Resistance	-200/+110 °C

Load Bearing Tables

BGS	BGS	Double Span									
External Sheet Thickness (mm)	Internal Sheet Thickness (mm)	PUR (mm)	150 cm	175 cm	200 cm	225 cm	250 cm	275 cm	300 cm	325 cm	350 cm
0,5	0,4	40	353	283	230	186	157	129	111	94	81
0,5	0,4	50	488	390	316	259	217	179	153	130	111
0,5	0,4	60	624	498	404	327	279	229	194	162	141
0,5	0,4	80	849	678	550	449	377	314	266	224	195
0,5	0,5	30	260	212	174	143	122	102	87	75	65
0,5	0,5	40	348	282	232	191	162	135	115	100	88
0,5	0,5	50	465	378	311	256	217	182	155	133	117
0,5	0,5	60	579	471	386	318	269	224	190	164	143
0,5	0,5	80	771	628	516	426	361	301	256	222	194

Aluminum	Aluminum	Double Span									
External Sheet Thickness (mm)	Internal Sheet Thickness (mm)	PUR (mm)	150 cm	175 cm	200 cm	225 cm	250 cm	275 cm	300 cm	325 cm	350 cm
0,5	0,4	40	280	209	162	126	101	83	66	55	46
0,5	0,4	50	371	245	212	166	135	109	89	73	61
0,5	0,4	60	459	298	259	203	168	131	108	90	74
0,5	0,4	80	619	407	353	278	226	183	151	122	102
0,7	0,5	30	276	205	158	123	98	78	64	53	44
0,7	0,5	40	410	306	236	183	147	117	96	79	67
0,7	0,5	50	537	400	308	239	191	153	125	104	88
0,7	0,5	60	671	502	381	298	237	197	154	129	109
0,7	0,5	80	895	668	515	400	320	256	209	174	146

• Load: kg/m² • Deflexion: L/200 • BGS: Prepainted Galvanized Sheet

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

Mechanical Properties

Steel Surface Yield Strength	min. 220 N/mm ²
Aluminum Surface Yield Strength	min. 140 N/mm ²
Panel Tensile Strength	min. 0,018 Mpa
Panel Tensile Modulus at Elevated Temperature	min. 0,04 Mpa
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
Yield Coefficient	t=100.000 (hrs (Free Load): 7 t=100.000 (hrs (Snow Load): 2,4
Sheer Strength After Long-Continued Loading	t:1.000 saat min. 35% t:2.000 saat min. 30% t:100.000 saat min. 7%
Bending Moment Capacity in Span	min. 2,5 KNm/m (Düz) min. 1,5 KNm/m (Ters)
Torsion Stress in span	min. 100 Mpa

According to TSE EN 14509 .

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)

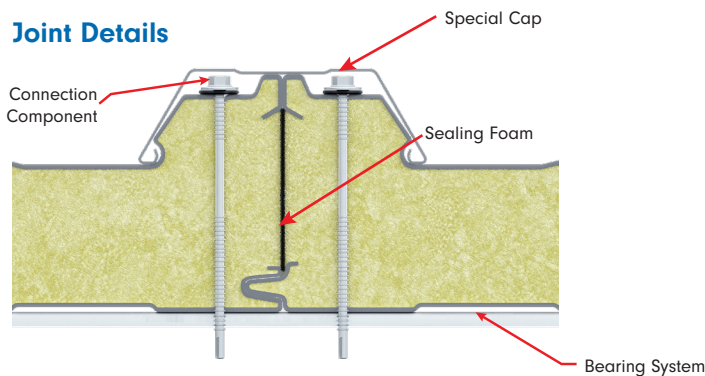
Standard Package

Thickness (mm)	40	50	60	80
Number	20	16	14	10

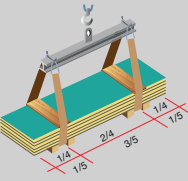
Standard Colour Options

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

Joint Details



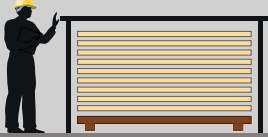
Transportation and protection of sandwich panel



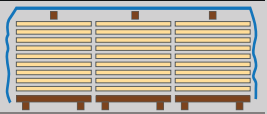
During hoisting take precaution for the sling.



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.