

BUILD RIGHT



ABOUT US

Assan Panel, a leading organization in the sandwich panel industry, began manufacturing operations in 1990 with its first manufacturing plant in Tuzla, Istanbul. Its manufacturing capacity was 4 million m²/year. Having continued to make investments to increase its production capacity over the years, Assan Panel invested in Iskenderun plant in 2004 with a manufacturing capacity of 3 million m²/year, Balikesir plant in 2009 with a manufacturing capacity of 3 million m²/year, and Jordan plant in 2012 with a manufacturing capacity of 4.5 million m²/year, respectively. Having successfully completed the investment for the second production line in Tuzla, Istanbul plant in 2015 with a capacity of 3.5 million m²/year, it reached a total production capacity of 18 million m²/year. In 2021, Assan Panel invested in Turkic Republics for the first time and Azerbaijan plant began its manufacturing operations with the partnership of STP (Sumgayit Texnologiyalar Park). Assan Panel, a key pioneer in the industry, contributes to the construction of sustainable and environmentally friendly buildings with its sandwich

panel products with PIR and rockwool filling in addition to panels with polyurethane filling for cold room, roof, and exterior wall applications in compliance with fire safety regulations, panels ready for mounting of solar systems, project-specific custom accessories, polycarbonate skylights, fittings consisting of a wide range of screws as well as construction chemicals consisting of sealing and filling products. Assan Panel provides high-quality application services with a wide range of high-quality, safe, innovative, fire-resistant products as well as domestic and international business partners. As a groundbreaking pioneer in the industry, Assan Panel is a leader manufacturer in Turkey with FM Approvals certificate awarded in 2015 by FM Approvals without any height limit in buildings as well as being the holder of many other international certificates. Playing an active role in the global market by exporting to 85 countries around the world under its brands such as AssanPU, Assan Demir, AssanWool, and AssanBoard; Assan Panel is an overall solution partner for industrial buildings.





Heat Insulation in Sandwich Panels

SANDWICH PANELS

Sandwich panels are composite materials produced of two dyed galvanized or aluminum corrugated plates filled (with PIR, PUR) for thermal insulation. Used as coating materials in the roof, wall and internal partition or cold rooms of the buildings, sandwich panels provide a quite high level of thermal, water, sound insulation; prevent moisture condensation. In addition, they are distinguished with their bearing capacity as well. Bearing capacity of the sandwich panel depends on the density, thickness of its filling material and the form of its metal surfaces. Sandwich panel is an economical solution when assessed within the context of cost-benefit analysis. Thickness of the metals (DGS, aluminum) and filling materials is determined in accordance with the area of usage and the amount of load they will bear.

The climate conditions of the region of usage should be taken into account while determining the thickness of the filling material. Sandwich panels set the outer shell of the buildings in an aesthetic and affordable way by providing thermal, water and sound insulation without the need for any coating such as plaster or dye. They are procured with the best prices and used in the buildings whose load-bearing system is of steel and prefabricated concrete, such as industrial buildings, military buildings, social buildings, agricultural buildings, sports facilities, construction sites, silos, hypermarkets, shopping malls, cold storage depots and marketplaces. The products to meet the requirements of any kind of architectural project are produced with aluminum or dyed galvanized sheet metals, in requested amounts and dimensions at Kibar Industry.



Thermal Conductivity of Sandwich Panels as per EN 14509

Thermal conductivity (U) is the amount of heat perpendicularly crossing unit m^2 in 1 hour when thermal difference between the two parallel surfaces of a d(m)-thick material is 1K (Kelvin). Thermal conductivity is considered when the thickness of the filler for the Sandwich Panel is determined.

Heat Transmission Values of Polyurethane			
Polyurethane Thickness	U Heat Transmission Value (W/m ² K)	R Heat Transmission (m ² K/W)	R Heat Transmission (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
70 mm	0,298	3,356	19,055
75 mm	0,275	3,632	20,623
80 mm	0,261	3,830	21,747
100 mm	0,211	4,739	26,911
150 mm	0,143	6,993	39,708

Thermal conductivity of materials

	Polyurethane	XPS	Rockwool	EPS	Glass Wool	Aerated Concrete	Plain Concrete
Thermal Conductivity Coefficient (λ) W/mK)	0.022	0.030	0.035	0.035	0.035	0.20	1.7



Core Materials

Technical Information

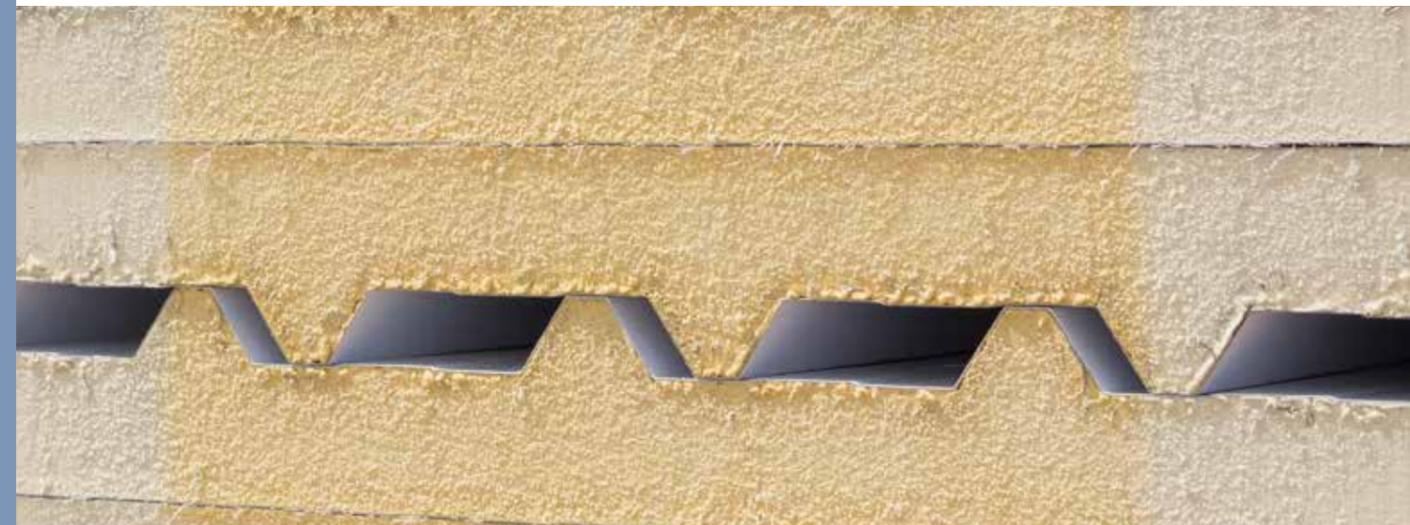
POLYURETANE RIGID FOAM

Density (kg/m ³)	40 (± 2)	EN 1602
Thermal Conductivity Coefficient λ (W/mK)	0.022	EN 13165
Closed cell ratio (%)	95	EN 14509
Steam Diffusiton (μ)	30-100	EN 12086
Dimensional Stability	Level DS(TH) 11	EN 13165
Compression Strength (Mpa) (σ_{10})	min. 0.095	EN 826
Water absorption (by volume %)	2	Manufacturer's Method
Temperature Strength (°C)	-200/110	



Applied (PUR) is the most popular foam employed in sandwich panel construction. It is obtained by mixing four raw materials as polyol, isocyanate, inflating gas (N-pentane) and catalyst.

Applied for around 50 years in sandwich panel construction, polyurethane is known to be the most reliable core material; it does not retain water and host any bacteria or pests. It provides savings up to 40% against the gradually growing heating and cooling costs of structures.





Sound Insulation of Sandwich Panels

Variation of Acoustical Transmission Loss by Frequency (dB) - Frequency (Hz)																			
PUR Thick.	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000
50 mm	7.3	9.3	11.7	8.5	11.4	12.3	13.3	14.1	14.7	15.9	15.3	11.5	11.8	23.4	29.2	32.4	29.8	32.5	36.9
60 mm	8.1	11.2	14.2	14.5	13.0	13.9	13.8	14.6	15.3	16.0	15.3	13.0	18.3	24.2	29.2	32.5	29.8	32.5	36.9

Variation of Acoustical Absorption Coefficient by Frequency (dB) - Frequency (Hz)													
PUR Thick.	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	2000
50 mm	0.08	0.11	0.22	0.2	0.05	0.59	0.09	0.11	0.04	0.07	0.18	0.07	11.8
60 mm	0.14	0.21	0.25	0.49	0.06	0.69	0.12	0.12	0.22	0.08	0.2	0.11	18.3

PIR + INNOVATION



FireStop
Sandwich Panel

Core Materials

PIR Systems

What Is FireStop?

A new macro molecular structure called polyisocyanurate (PIR) is formed by making isocyanate, one of the main components of polyurethane foam, enter into reaction with other isocyanate molecules like itself, and fire resistance of this constructed structure is higher than the current polyurethane systems. Therefore, PIR systems have been more widely used at fire insulation in Europe and all over the world.

High isocyanate rates and fire-retardant additives are decisive in fire performances of PIR foams. For example, the critical fire resistance duration has exceeded 30 minutes, at the tests conducted with foams of certain thicknesses.

PIR structures are constituted of the polyisocyanurate chains (trimer) formed by the reaction of three MDI molecules with each other.

In general, the first reaction in PIR formulation is the reaction of MDI with water and polyols. And then, the liberated MDI groups enter into reaction with each other and perform trimerization. This polymeric structure (PIR) formed is one with three dimensions and many cross-links, and has a very high dissociation energy since it is constructed of a combination of isocyanurates and strong chemical bonds of cross-linked structures. The fact, the higher aromatic content in a material, the better the resistance against fire, is an issue well known by the organic chemistry industry. The required temperature to dissociate the isocyanurate bonds is higher than 400 °C. And this explains why the PIR is a good solution for the applications requiring high heat and fire resistance.

Why FireStop?

- FireStop sandwich panel is designed with features to meet fire regulations.
- Assan Panel FireStop sandwich panel systems help the buildings maintain their integrity during fire.
- It has a high R value (heat flow resistance) and high thermal performance.
- PIR foam used in FireStop sandwich panel systems acts as a burnt apron at the surfaces that are exposed to fire.
- Assan Panel FireStop sandwich panel systems do not contribute in the spread of fire to different areas in the buildings in which they are used.
- FireStop sandwich panels do not contribute in the fire load by not dripping during the fire.
- The smoke resulting from Assan Panel FireStop sandwich panels being affected by fire is less than the smoke resulting from combustion of many conventional construction materials.
- Its dimensional stability value is high.

PIR Formulation

Reactions of isocyanate

with poly-alcohols (–OH groups) **PUR (main) reactions**

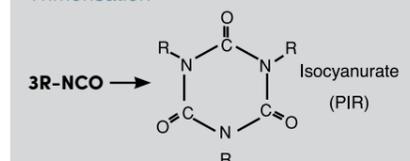


with water (–OH groups)



PIR (main) reactions

Trimerisation





Next Generation Insulation Technology

With its 0.0175 W/mK lambda (λ) value, SmartCore offers thermal efficiency by two times more than mineral fiber and by 20% more than PUR filling material.

Therefore, it has the best lambda value that could be offered by any closed-cell insulating material in the entire world. With SmartCore insulated panels, you can easily have higher thermal performance with less thickness. Panels manufactured by SmartCore technology reduce long hours of labor during assembly, ensure more predictable project planning and management, and reduce installation time.

Offers the highest combined performance in the global industry with its unprecedented specifications.

- Unique energy efficiency
- Superior fire safety
- Advanced environmental features
- The longest performance guarantee

Unmatched Lambda (λ) Value in its Class

With its 0.0175 W/mK lambda (λ) value, SmartCore offers thermal efficiency by **two times more than mineral fiber** and by 20% more than PUR filling material. Therefore, **it has the best lambda value** that could be offered by any closed-cell insulating material in the entire world.

SmartCore technology, which has started to be used in all insulated panel groups produced by Assan Panel, including the solar capped panel compatible with rooftop SPP systems, provides high performance in buildings.

What is the lambda value?

The lambda value (λ) of a product indicates its insulating capacity in terms of the material's level of thermal conductivity. Expressed as watts per meter-Kelvin (W/mK), the lambda value is one factor used to calculate thermal efficiency of buildings, with lower lambda values indicating a higher level of insulation for any given product.

Assan Panel offers unmatched energy efficiency, superior fire safety and longevity in buildings with its insulated panels with SmartCore technology. SmartCore filled sandwich panels are the first and only in the world with a lambda value of 0.0175 W/mK. Thanks to SmartCore insulated panels, less energy consumption, less carbon dioxide emission and high sensitivity to the environment are provided in buildings.

Insulation Materials						
	Mineral Wool	Glass Fiber	EPS	PUR	PIR	Smart Core
λ (W/mK)	0,0380	0,0375	0,0340	0,0230	0,0220	0,0175
U (W/m ² K)	0,370	0,366	0,334	0,230	0,220	0,177
Reference Point		1,09%	10,78%	60,87%	68,18%	109,04%

*Reference Product: Solar Capped Panel / Thickness: 100 mm

INSULATION PERFORMANCE							
Mineral Wool		PUR		PIR		SmartCore	
Panel Thickness	U Thermal Conductivity (W/m ² K)	Panel Thickness	U Thermal Conductivity (W/m ² K)	Panel Thickness	U Thermal Conductivity (W/m ² K)	Panel Thickness	U Thermal Conductivity (W/m ² K)
40mm	0,846	30mm	0,702	30mm	0,675	30mm	0,550
50mm	0,697	40mm	0,543	40mm	0,521	40mm	0,422
60mm	0,592	50mm	0,442	50mm	0,425	50mm	0,343
80mm	0,456	60mm	0,373	60mm	0,358	60mm	0,288
100mm	0,370	80mm	0,285	80mm	0,273	80mm	0,219
120mm	0,312	100mm	0,230	100mm	0,220	100mm	0,177
150mm	0,252	120mm	0,193	120mm	0,185	120mm	0,148
200mm	0,191	150mm	0,155	150mm	0,149	150mm	0,119
		200mm	0,117	200mm	0,112	200mm	0,090
$\lambda_{\text{Mineral Wool}} = 0,0380$ (W/m K)		$\lambda_{\text{PUR}} = 0,0230$ (W/m K)		$\lambda_{\text{PIR}} = 0,0220$ (W/m K)		$\lambda_{\text{SmartCore}} = 0,0175$ (W/m K)	

Product: Solar Capped Panel

Sustainable Designs and Eco-Friendly Buildings

Assan Panel's roof and exterior wall panels manufactured by SmartCore technology offer a higher thermal performance in less thickness. **With SmartCore insulated panels, we design high-performance buildings that consume less energy, cause less carbon emissions, and are more responsible towards the environment** during their economic life by adopting an integrated design approach.

Unrivalled Building Performance

Our systems and solutions protected by industry-leading warranty conditions offer unrivalled performance with up to 20-year warranty.

QUICK INSTALLATION

With quick and easy installation, it reduces the time required for working at heights, makes project planning and management more predictable, and saves time to be spent in installation.

SUPERIOR FIRE INSULATION PERFORMANCE

In addition to providing excellent thermal insulation and lifelong performance, our insulated panels manufactured with SmartCore technology also offer superior fire insulation performance with b.s.l.d0 fire class as proven by reaction to fire testing.

MORE LIVING SPACE

With its 0.0175 W/mK lambda (λ) value, SmartCore offers better performance by 30% as compared to a PIR insulation of the same thickness without any decrease in the final U value to provide you with a finer and larger living space.



LOWER COST OF TRANSPORTATION

By increasing the number of panels transported per truck, SmartCore Insulated Panels help you reduce the number of trucks that enter your site and therefore reduce the cost of transportation.

FINER & HIGHER PERFORMANCE

With a finer and lighter solution, SmartCore offers higher thermal performance. With these characteristics, it offers cost savings during installation and transportation.

SMARTCORE FOR MORE

SmartCore Next Generation Insulation Technology helps achieve better performance in "green building" rating systems.

SmartCore insulated panels offer a more modern solution as compared to the other insulating materials due to its characteristics such as indoor space optimization as well as easy handling during transportation and installation.

With its unique characteristics, it allows for optimization of resource productivity.



ROOF PANELS

Roofs are coating coverings used at buildings in order to enable an effective protection against natural snow, rain and storm which vary to reach the aesthetic harmony with geographical state and building architecture. Roofs vary according to their bearing systems, slopes and coating material. Roof coating must enable the thermal, water and sound insulation; be economical, aesthetic and of good quality; and at the same time, perform its functions of safely protecting the building from the conditions of the outer environment. The most preferred coating materials in the roof systems are sandwich panels comprising of inner and outer metallic sheet and insulation center. Sandwich panels are lately used in our country as coating material in roofs, walls, internal partitions or cold rooms of many buildings such as construction site buildings, social and

industrial buildings, factories and storage rooms, etc. Sandwich panels are distinguished in the architectural preferences with their high isolation capacity in addition to the opportunity of fast production and installation, bearing capacity and light construction.

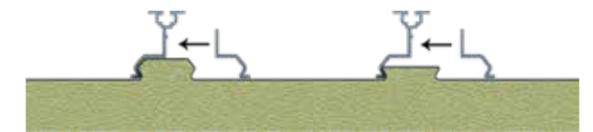
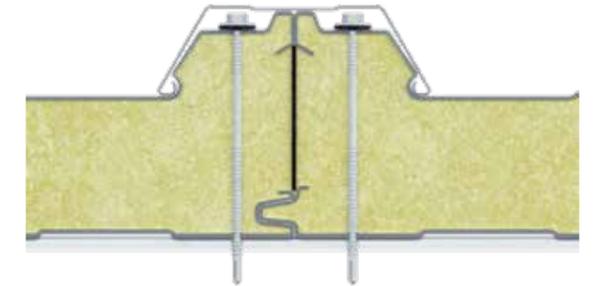
At Kibar Industry, sandwich panels are produced for colorful, tough, aesthetic, fast, economic and environmental solutions at roof coatings to meet the needs of all kinds of architectural projects. Sandwich panels are produced with metallic surfaces of different shapes and rich color options, by using filling materials (PUR, PIR) of different thicknesses and features at Assan Panel, the most preferred brand of the sandwich panel market, which sets the objective as to add value in Jordan.



Roof Panels / Solar Capped Panel



Location - Jordan
 Application - Roof Claddings
 Net Coverage Width - 1000 mm
 Minimum Length - 2.40 m
 Maximum Length - Depends on Transportation Conditions
 Density (EN 1602) - PUR: 40 (±2) kg/m³ / PIR: 41 (±2) kg/m³
 PIR/PUR Thickness: - 40-50-60-70-80-100 mm
 Reaction to Fire (EN 13501) - B-s2,d0, PIR Firestop: B-s1,d0
 Metal Type - PPGS or Aluminium or Prepainted Aluminium



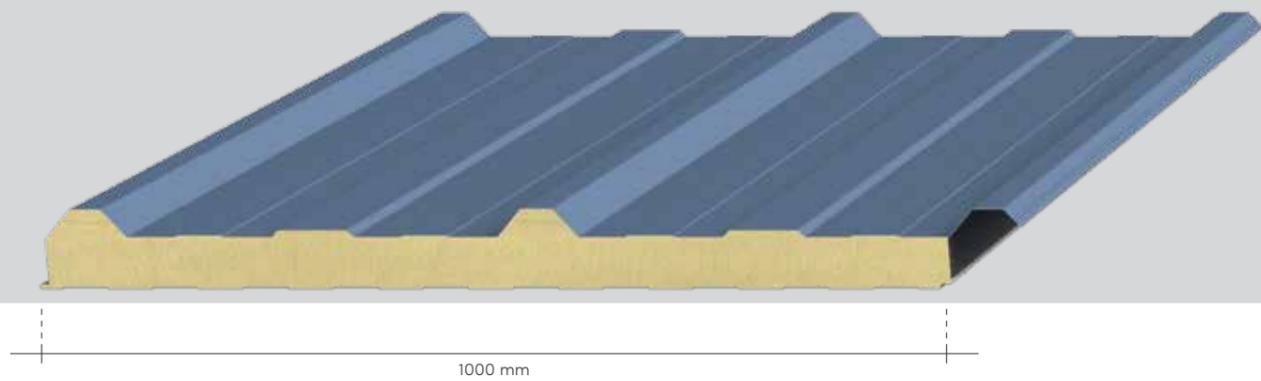
- Excellent sealing thanks to original and patented capping profile
- Extra-sound tongue-and-groove joint
- New 4-rib extra-sound design and construction
- Fully protected fittings
- Superior performance in low-gradient roofs thanks to the original and patented joint detail.
- High-density PUR/PIR foam fill ensuring maximum thermal insulation. (λ: 0.022-0.024 w/mK)
- Original supplemental materials and flashings that may be manufactured in length of 6 m.
- Superior fire strength certified by TS/EN 13501 (PUR: B-s2,d0 PIR Firestop: B-s1,d0).

Load Span Table

PPGS External Sheet Thickness (mm)	PPGS Internal Sheet Thickness (mm)	PUR/PIR mm	Multi Span				
			150 cm	200 cm	250 cm	300 cm	350 cm
0.5	0.4	40	353	176	104	67	45
0.5	0.4	50	385	198	121	80	56
0,5	0.4	60	413	219	136	92	66
0.5	0.4	70	448	240	147	103	75
0,5	0.4	80	470	259	167	118	86
0.5	0.4	100	713	433	297	218	166

• Load Values kg/m² •Limit Value L/200 •PPGS: Prepainted Galvanized Sheet

Roof Panels / 1000 JR 3



Location - Jordan
 Application - Roof Claddings
 Net Coverage Width - 1000 mm
 Minimum Length - 2.40 m
 Maximum Length - Depends on Transport Conditions
 Density (EN 1602) - PUR: 40 (±2) kg/m³ / PIR: 41 (±2) kg/m³
 PIR/PUR Thickness: 30-40-50-60-75-80-100-150
 Reaction to Fire (EN 13501) PUR: B-s2,d0, PIR Firestop: B-s1,d0
 Metal Type - PPGS or Aluminium or Prepainted Aluminium

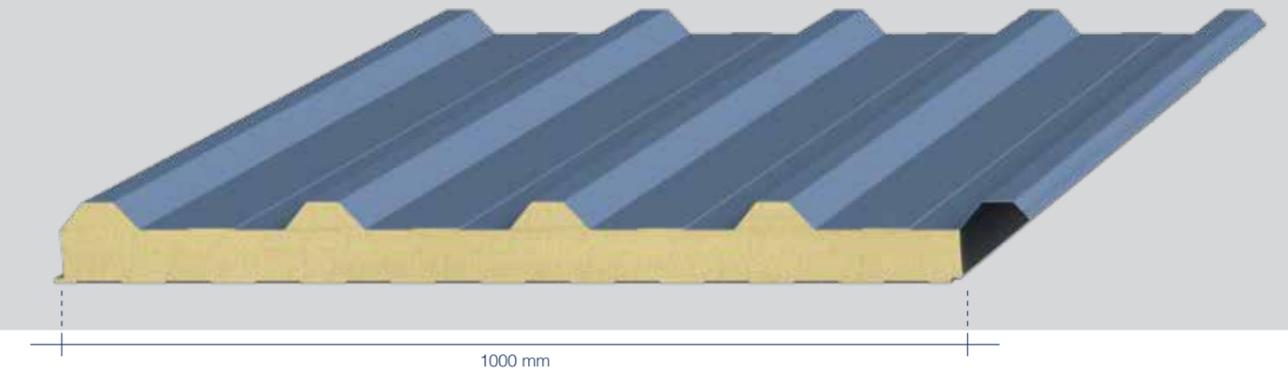
- Original 3-rib design
- Optimized sound construction
- High-performance in low-gradient roofs
- Effective thermal insulation thanks to high-density PIR/PUR (λ : 0.022-0.024 w/mK)
- Extra effective fire strength certified with the EN 13501 (PUR: B-s2,d0, PIR Firestop: B-s1,d0) rating
- Aesthetics and different color options

Load Span Table

PPGS	PPGS	Multi Span					
		PUR/PIR mm	150 cm	200 cm	250 cm	300 cm	350 cm
External Sheet Thickness (mm)	Internal Sheet Thickness (mm)						
0.5	0.4	30	280	132	74	46	31
0.5	0.4	40	361	184	110	72	50
0.5	0.4	50	424	229	142	96	68
0.5	0.4	60	485	271	174	121	88
0.5	0.4	75	574	333	222	158	117
0.5	0.4	80	607	358	240	173	129
0.5	0.4	100	730	447	308	227	173
0.5	0.4	150	1023	664	477	363	286

• Load Values kg/m² •Limit Value L/200 •PPGS: Prepainted Galvanized Sheet

Roof Panels / 1000 JR 5



Location - Jordan
 Application - Roof Claddings
 Net Coverage Width - 1000 mm
 Minimum Length - 2.40 m
 Maximum Length - Depends on Transport Conditions
 Density (EN 1602) - PUR: 40 (±2) kg/m³ / PIR: 41 (±2) kg/m³
 PIR/PUR Thickness: 30-40-50-60-75-80-100-150 mm
 Reaction to Fire (EN 13501) PUR: B-s2,d0, PIR Firestop: B-s1,d0
 Metal Type - PPGS or Aluminium or Prepainted Aluminium

- Original 5-rib design
- Extra-sound construction for wide clearances
- High performance in low-gradient roofs
- Fast and seamless installation
- Maximum thermal insulation thanks to the high-density PUR/PIR foam fill. (λ : 0.022-0.024 w/mK)
- Extra fire strength certified with EN 13501 (PUR: B-s2,d0, PIR Firestop: B-s1,d0) fire rating
- Aesthetics and different color options

Load Span Table

PPGS	PPGS	Multi Span					
		PUR/PIR mm	150 cm	200 cm	250 cm	300 cm	350 cm
External Sheet Thickness (mm)	Internal Sheet Thickness (mm)						
0.5	0.4	30	355	164	91	56	38
0.5	0.4	40	437	217	127	82	56
0.5	0.4	50	501	261	160	106	75
0.5	0.4	60	562	304	195	131	95
0.5	0.4	75	647	366	240	168	124
0.5	0.4	80	684	392	259	184	137
0.5	0.4	100	808	481	327	238	181
0.5	0.4	150	1110	697	492	370	289

• Load Values kg/m² •Limit Value L/200 •PPGS: Prepainted Galvanized Shee

WALL PANELS

Kibar Industry sandwich wall panels provide thermal, water and sound insulation, fire safety in accordance with the insulation structure at the buildings which meet the needs of the industrial sector, make life easier and comfortable. At the same time, the fact that they are economical, aesthetic and of good quality, helps performing its functions of safely protecting the building from the conditions of the outer environment. Sandwich wall panels are lately used in our country as coating material in walls, internal partitions or cold rooms of many buildings such as social and industrial buildings, factories and storage rooms, shopping materials, etc.

It maintains with diligence its values including raw material quality, authorized dealers network and effective installation service, and quality control in each step starting from production of good quality and raw material entry to delivery, in conformity with TSE, EN and ISO standards, present in the manufacturing process of production of sandwich panels. Along this mentality, it has become one of the pioneering institutions leading the industry.

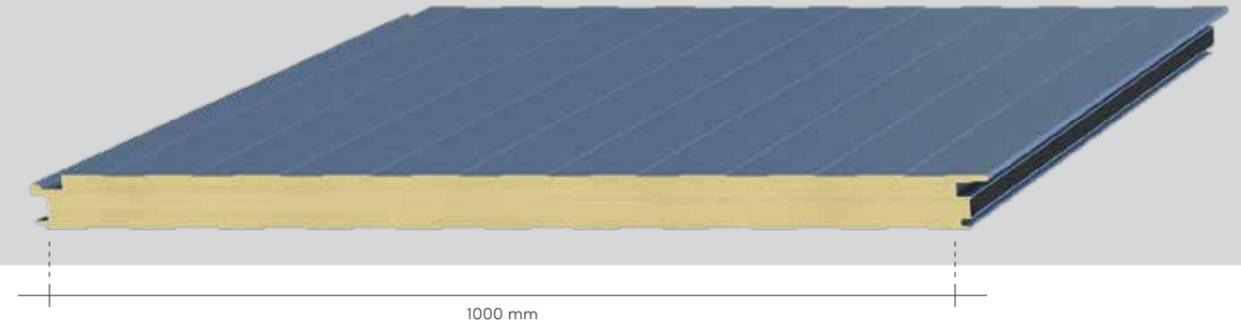
Kibar Industry sandwich wall panels are manufactured in the forms with secret screw and external screw and designed to meet any type of need.

Galvanized sheet and aluminum sheet of different forms are used in sandwich wall panels. Dyed metallic sheet coils produced in accordance with the ECCA (European Coil Coating) standards are given form on the sandwich panel line. Depending on the intended use of insulation material and need for insulation, Polyurethane (PUR) and Polyisocyanurate (PIR) are the most preferred filling materials at the sandwich wall panel.

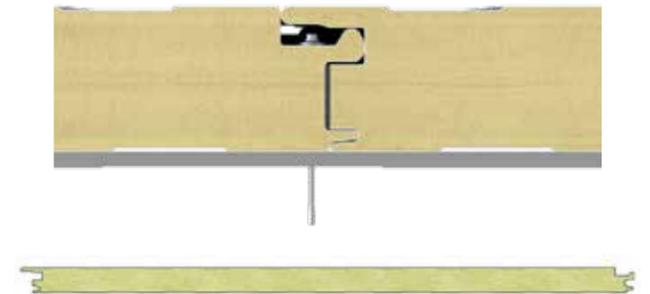
The wall panels in our company are world class and we offer the most exquisite sandwich wall panels of our country, to you, our valued customers.



Wall Panels / 1000 JW



Location - Jordan
Application - Wall Claddings
Net Coverage Width - 1000 mm
Minimum Length - 2.40 m
Maximum Length - Depends on Transport Conditions
Density (EN 1602) - PUR: 40 (±2) kg/m³ / PIR: 41 (±2) kg/m³
PIR/PUR Thickness: 40-50-60-70-75-80-100 mm
Reaction to Fire (EN 13501) PUR: B-s2,d0, PIR Firestop: B-s1,d0
Metal Type - PPGS or Aluminium or Prepainted Aluminium



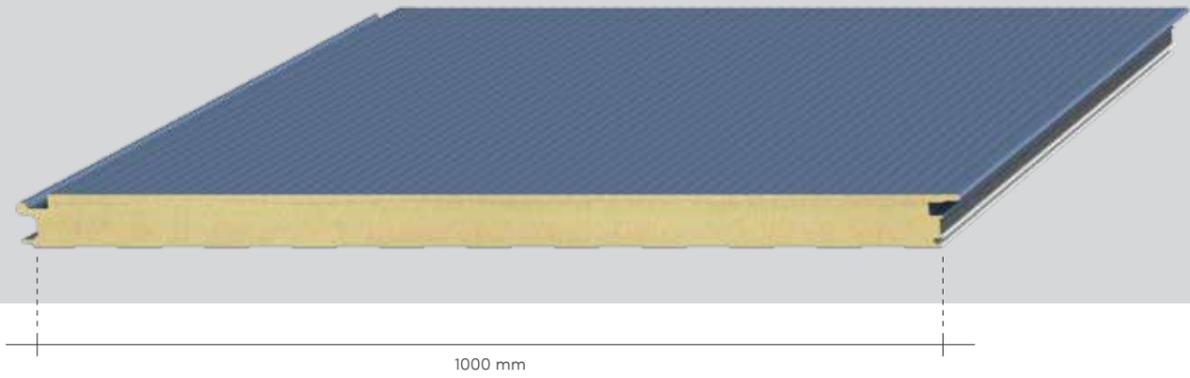
- Excellent strength thanks to original double tongue-and-groove design
- Original double tongue-and-groove joint guaranteeing excellent water insulation performance in horizontal wall panel applications
- Aesthetic flush design of fittings
- Fast and seamless installation
- Maximum thermal insulation thanks to the high-dense PUR/PIR foam fill. (λ : 0.022-0.024 w/mK)
- Extra fire strength certified with EN 13501 (PUR: B-s2,d0, PIR Firestop: B-s1,d0) fire rating
- Aesthetics and different color options

Load Span Table

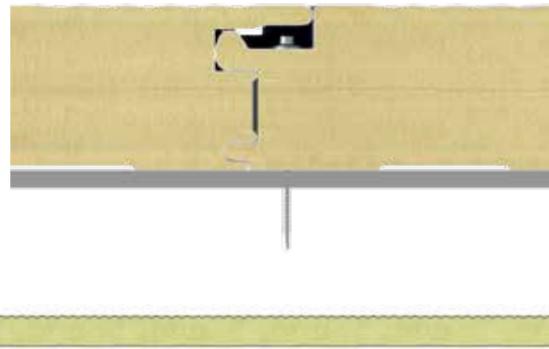
PPGS	PPGS	PUR/PIR mm	Multi Span			
			100 cm	150 cm	200 cm	250 cm
Internal Sheet Thickness (mm)	External Sheet Thickness (mm)					
0.4	0.5	40	320	191	127	90
0.4	0.5	50	425	258	174	125
0.4	0.5	60	521	319	219	159
0.4	0.5	70	547	338	233	171
0.4	0.5	75	609	377	261	192
0.4	0.5	80	715	444	308	227
0.4	0.5	100	806	506	355	265

• Load Values kg/m² • Limit Value L/200 • PPGS: Prepainted Galvanized Sheet

Wall Panels / 1000 JW Micro



Location - Jordan
 Application - Wall Claddings
 Net Coverage Width - 1000 mm
 Minimum Length - 2.40 m
 Maximum Length - Depends on Transport Conditions
 Density (EN 1602) - PUR: 40 (±2) kg/m³ / PIR: 41 (±2) kg/m³
 PIR/PUR Thickness: 40-50-60-70-75-80-100 mm
 Reaction to Fire (EN 13501) PUR: B-s2,d0, PIR Firestop: B-s1,d0
 Metal Type - PPGS or Aluminium or Prepainted Aluminium



- Aesthetic results with micro-form surface construction
- Excellent strength thanks to the original double tongue-and-groove joint
- Original double tongue-and-groove joint guaranteeing excellent water insulation performance in horizontal wall panel applications
- Aesthetic flush design of fittings
- Fast and seamless installation
- High-density PUR/PIR foam fill ensuring maximum thermal insulation. (λ : 0.022-0.024 w/mK)
- Extra fire strength certified with EN 13501 (PUR: B-s2,d0, PIR Firestop: B-s1,d0) fire rating
- Aesthetics and different color options

Load Span Table

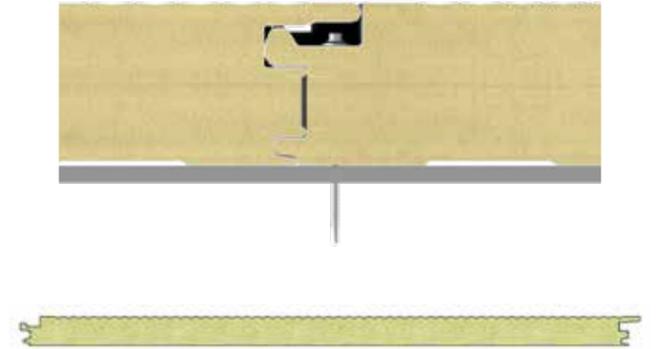
PPGS	PPGS	PUR/PIR mm	Multi Span			
			100 cm	150 cm	200 cm	250 cm
External Sheet Thickness (mm)	Internal Sheet Thickness (mm)					
0.5	0.4	40	320	191	127	90
0.5	0.4	50	425	258	174	125
0.5	0.4	60	521	319	219	159
0.5	0.4	70	547	338	233	171
0.5	0.4	75	609	377	261	192
0.5	0.4	80	715	444	308	227
0.5	0.4	100	806	506	355	265

• Load Values kg/m² •Limit Value L/200 •PPGS: Prepainted Galvanized Sheet

Wall Panels / 1000 JW Microline



Location - Jordan
 Application - Wall Claddings
 Net Coverage Width - 1000 mm
 Minimum Length - 2.40 m
 Maximum Length - Depends on Transport Conditions
 Density (EN 1602) - PUR: 40 (±2) kg/m³ / PIR: 41 (±2) kg/m³
 PIR/PUR Thickness: 40-50-60-70-75-80-100 mm
 Reaction to Fire (EN 13501) PUR: B-s2,d0, PIR Firestop: B-s1,d0
 Metal Type - PPGS or Aluminium or Prepainted Aluminium



- Aesthetic results with micro-form surface construction
- Excellent strength thanks to the original double tongue-and-groove joint
- Original double tongue-and-groove joint guaranteeing excellent water insulation performance in horizontal wall panel applications
- Aesthetic flush design of fittings
- Fast and seamless installation
- High-density PUR/PIR foam fill ensuring maximum thermal insulation. (λ : 0.022-0.024 w/mK)
- Extra fire strength certified with EN 13501 (PUR: B-s2,d0, PIR Firestop: B-s1,d0) fire rating
- Aesthetics and different color options

Load Span Table

PPGS	PPGS	PUR/PIR mm	Multi Span			
			100 cm	150 cm	200 cm	250 cm
External Sheet Thickness (mm)	Internal Sheet Thickness (mm)					
0.5	0.4	40	320	191	127	90
0.5	0.4	50	425	258	174	125
0.5	0.4	60	521	319	219	159
0.5	0.4	70	547	338	233	171
0.5	0.4	75	609	377	261	192
0.5	0.4	80	715	444	308	227
0.5	0.4	100	806	506	355	265

• Load Values kg/m² •Limit Value L/200 •PPGS: Prepainted Galvanized Sheet

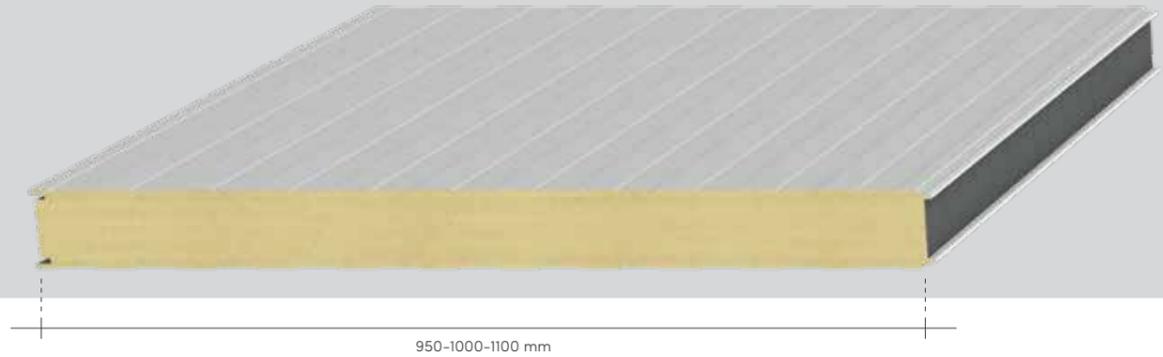
COLD STORE PANELS

Kibar Industry offers affordable and hygienic, fast solutions with best and high capacity thermal insulation, with its cold storage panels, to laboratories, hospitals, meat plants, meat processing plants, dairy, frozen food plants, seafood processing and packing plants as well as big industrial cold storage rooms.

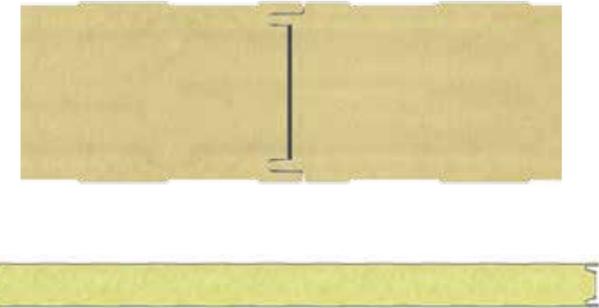
The Kibar Industry CS product can be used in cold storage rooms with the specially painted surface that provides full protection against bacteria. They provide an advantage in thermal insulation with strongly fitting double tongue-and-groove joints. In addition to cold storage wall coatings they are applicable as ceiling coatings.



Cold Store Panels / 1100 JCS



Location - Jordan
Application - Roof and Wall Claddings
Net Coverage Width - 950 - 1000 - 1100 mm
Minimum Length - 2.40 m
Maximum Length - Depends on Transport Conditions
Density (EN 1602) - PUR: 40 (±2) kg/m³ / PIR: 41 (±2) kg/m³
PIR/PUR Thickness: 40-50-80-100-150-200 mm
Reaction to Fire (EN 13501) PUR: B-s2,d0, PIR Firestop: B-s1,d0
Metal Type - PPGS or Aluminium or Prepainted Aluminium



- Excellent sealing and thermal insulation thanks to the original double tongue-and-groove joint
- Excellent strength thanks to the original double tongue-and-groove joint
- Applicability as facade cladding
- Fast and seamless installation
- Maximum thermal insulation thanks to the high-dense PUR/PIR foam fill. (λ : 0.022-0.024 w/mK)
- Extra fire strength certified with the EN 13501 (PUR: B-s2,d0, PIR Firestop: B-s1,d0) rating
- Aesthetics and different color options

Installation Lengths

External Sheet Thickness (mm)	Internal Sheet Thickness (mm)	PUR / PIR mm	Max. Interior Wall (m)	Ceiling Span (m)
0.5	0.5	80	6,5	4,0
0.5	0.5	100	8,0	5,0
0.5	0.5	150	12,0	7,0
0.5	0.5	200	13,0	8,0

Coefficient of Thermal Conductivity

		Temperature Difference Between Inner and Outer Surface (°C)														
PUR (mm)	UCS Panel (W/m ² K)	10	15	20	25	30	35	40	45	50	55	60	65	70	80	90
80	0.2470	2.5	3.7	4.9	6.2	7.4	8.6	9.9	< 10 W/m ²							
100	0.1993	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	< 10 W/m ²						
150	0.1343	1.3	2.0	2.7	3.4	4.0	4.0	5.4	6.0	6.7	7.4	8.1	8.7	9.4	< 10 W/m ²	
200	0.1013	1.0	1.5	2.0	3.0	3.0	3.0	4.1	4.6	5.1	5.6	6.1	6.6	7.1	8.1	< 10 W/m ²

PUR thickness is determined under values of 10 W/m² heat transmission

SOLUTIONS



Engineering Procurement and Construction

Kibar Industry provides all-inclusive, custom-designed turnkey solutions with its partners to meet all your requirements

Planning and construction of a new manufacturing plant or renovation of current plants require a wide variety of knowledge, experience, and reliable expertise.

We provide a wide range of services covering engineering, planning, supply, logistics, construction, and installation processes required for ideal planning

and design of the system as well as completion and commissioning of the system in due time to be delivered to the investor on time to ensure maximum performance with optimal costs by our specialized engineering and technical staff whose efficiency and competence are proven with experience over the years.



How can we help you?

We efficiently manage all processes in the project on behalf of our customer, coordinate all design, supply, and construction works, and complete the project by the required quality and cost levels on a timely basis. We ensure that our customers save time and money, mitigate risks, and increase productivity thanks to our outstanding experience.

With our EPC expertise combining turnkey project solutions with powerful engineering, supply, and installation services, your entire project is guaranteed by Assan Panel's specialized teams.

We guarantee your optimal system efficiency with our commitments for sustainable high quality, planning, and time management. As part of our maintenance and operation agreement, we also guarantee problem-free operation of your system during the entire operating life. With our comprehensive and accurate quality control assurance and outstanding EPC competency, we provide guarantee for long-term product and system performance to ensure your solar energy investments.



SOLAR POWER PLANTS

We offer sustainable modern energy solutions with Solar Capped Panel and rooftop SPP applications

Rooftop solar energy systems are the most ideal solution to reduce your costs by generating required power to use on-site in your facilities or manufacturing plants. With various solutions designed by our expert engineers, we develop customized rooftop solar power system projects suitable for any kind of roof applications.

On-Grid Systems are defined as systems where the power grid is supplied by electricity generated by solar power as soon as and where it is generated without requirement for any additional storage interface (e.g. battery packs, batteries, etc.) and instantly used.



Electric power generated in these systems are directly transferred to public Power Grid. Any excess electric power generated in the system can be sold to the power grid. Within this scope, governments may stipulate special laws, regulations, terms for guarantee of purchase, and tariffs depending on applicable conditions.

In cases where electricity generated by solar power is low or inadequate, during hours or days with cloudy weather, or during the night, the rest of the required electric power is possible to be automatically supplied by the public power grid. Remote monitoring and visualization of the system as well as communicating with the system are also possible (optional). Central system supervision and control on a 24/7 basis allow for support for maintenance and operating services. The system can be monitored locally or online via the Internet, and data may be provided through web and graphics. GPRS data transmission allows for transmission of data to remote displays without requirement for wiring on-site where the solar system is installed. Daily, weekly, monthly, and yearly system performance as well as generated power and profit can be viewed and recorded. Advanced high technology features such as remote configuration, monitoring, control, and receiving notifications provide the investors and facility operators with comfort and ease of use.

Advantages of Solar Power

Electric power generation from the moment of initial installation

The greatest advantage of solar panels is quite simple: when you install a solar power system, you instantly begin generating your own power, become less dependent on electric utility services, and reduce the amount of your monthly electric utility bills. A solar panel system typically lasts for a period from 25 to 40 years, which means that you can reduce your electric power costs for several decades by simply switching to solar power.

Reduction of power lines by distributed power systems

Solar power systems are self-sustaining systems able to operate other systems independent from the public power grid, and can be implemented based on the principle of on-site generation and consumption. Petroleum, coal, and gas that are used to centrally generate high capacity electric power by using traditional methods are generally transferred from the relevant power plant to the point of consumption using transmission and distribution lines. This transmission process involves numerous additional costs and none of such costs is incurred in solar power systems. This advantage allows for more sustainable operation of solar power systems.

Power generation independent from the power grid

In traditional power grid architecture, major power plants where the power is generated are located considerably far from the points of power consumption. Distributed power generation is used in multiple locations near the load to generate small-scale power. As solar power systems gain more popularity in applications, distributed power generation will significantly reduce power grid investments and lower the total costs related to power generation using traditional methods.



HEALTHCARE FACILITIES

High-quality healthcare facilities provided by Kibar Industry ensure quick installation

Healthcare facilities can be used safely and give agility and dynamism to your projects with comfort, practical installation, high temperature, and acoustic insulation. They can easily be disassembled and transferred to another location to be comfortably used to meet your needs in different locations. We provide integrated solutions with different models such as field hospital and mobile hospital models to meet all of your requirements.

The basic feature of prefabricated field hospital structures is the expectation for construction of emergency healthcare facilities and buildings as fast as possible to be put into service. Especially in cases such as the lack of adequate number of other hospitals in the regions where healthcare services are provided, need for specialized hospital emergency departments required during pandemics such as coronavirus, requirement for building an emergency public health center, etc. Field Hospitals are the only alternative structural model thanks to its technological fast production and installation ready for use.

We design prefabricated field hospital model with expertise by taking into consideration healthcare facilities building regulations of Turkish Ministry of Health as well as applicable standards of international organizations such as WHO (World Health Organization). Rather than designing the project just in terms of structure, we design our model by taking into consideration the general hospital premises, ambulance helicopter pad, and a series of ambulance entrances. Being crucial in field hospital models, hospital emergency entrance areas, stretcher areas, emergency examination rooms, MRI, X-ray, and CAT scan rooms, analytical laboratories, emergency operating rooms, and emergency patient observation rooms are designed based on the ergonomics of intensively used areas with high traffic.



MODULAR BUILDINGS

Modular Buildings with High Energy Efficiency!

As Assan Panel, we provide you with prefabricated housing concepts with experience for over 30 years to make sure that you can have your dream house with minimal efforts. With a wide variety of innovative and modern prefabricated building models featuring various specifications, we provide custom solutions for everyone, envisioning design, comfort, and functionality as an integral part of our buildings, because everyone deserves to live wherever and however they dream to live.

- Grade 1 earthquake resistant prefabricated buildings.
- Flexible and lightweight buildings. They just shake a little but they are not demolished even in case of the most powerful earthquakes.

- Installation time of modular buildings are shorter compared to reinforced concrete buildings. In addition, prefabricated houses can be demounted and mounted many times.
- Manufactured in line with any kind of climatic conditions with thermal and static calculations.
- As the entire load-bearing system is manufactured from high-density galvanized steel, they are stainless and resistant to deformation, you can safely use your modular buildings for many years to come

Modular Buildings Technical Specifications

- The technical specifications of modular buildings having perfect thermal insulation are as follows:
- Seismic resistance to Grade 1 earthquake zone with active ground acceleration coefficient of 0.40;
- Production based on climatic zone 3;
- 75 kg/m² resistance to snow load;
- 80 km/s wind velocity;
- External panel thickness: 10 cm, inner panel thickness: 6 cm, panel height: 250 cm;
- U and H profiles are made of stainless galvanized

sheet. They are joint by special clamping system, stainless.

- All glasses are double glazed. Double-glazing thermopane is used.

You can use modular buildings to be chosen among dozens of prefabricated building models specially designed for every need and individual preferences as a permanent living space.



REFERENCES

We build a sustainable future with high-performance insulation and building envelope solutions.

BUILD RIGHT



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