SEASHORE PANEL FACTORY

Delivering Excellence in roofing solutions

PRODUCT CATALOGUE

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About Us

SEASHORE PANEL FACTORY

QATAR'S LEADING MANUFACTURER OF HIGH-QUALITY SANDWICH PANELS

Seashore Panel Factory, a flagship division of Seashore Group, stands as Qatar's premier manufacturer of innovative and durable sandwich panels. Established with a commitment to excellence, our state-of-the-art facility leverages advanced production techniques and industry expertise to deliver world-class insulated panels for a wide range of applications. From industrial warehouses to commercial buildings and cold storage facilities, Seashore Panel Factory is renowned for its precision engineering, energy-efficient solutions, and adherence to the highest international standards. With a focus on quality, sustainability, and customer satisfaction, we are proud to support Qatar's dynamic construction industry with products that meet the most demanding requirements.

Overview

Seashore is an ISO 9001 :2015 certified company and follows stringent quality procedures in manufacturing products to international standards. Seashore also manufactures custom made products to specific customer requirements. In addition to manufacturing its diverse range of products, Seashore offers a range of services that include commissioning of cold stores and prefabricated warehouses. The building materials manufactured are fire rated and has individual product specifications.

Contents

Message
FROM THE VICECHAIRMAN

Mr. Salem Saeed SA AL Mohannadi

"Seashore Panel Factory is one of our latest ventures from the trusted industrial conglomerate, Seashore Group of companies. Our state-of-the-art manufacturing facility is a testament to our commitment to Qatar National Vision 2030, and we are proud to contribute to Qatar's economic growth and self-sufficiency.

We are committed to staying at the forefront of industry advancements by investing in cutting-edge technology, research, and development. Our team of skilled professionals works tirelessly to ensure that our products meet and exceed industry standards while minimizing our environmental footprint. We believe in building a legacy of excellence and are proud to be a part of Qatar's dynamic growth. Together, we are shaping a sustainable future through our innovative solutions and commitment to quality."

Message
FROM THE CEO

Mr. Ashique P.K

Welcome to Seashore Panels, where quality is our cornerstone. As a leader in manufacturing industrial warehouse solutions, we're dedicated to delivering innovative, sustainable, and high-performance products.

We're proud to be the first company in Qatar to achieve FM approval for our sandwich panels, a testament to our dedication to quality and innovation. Our products undergo stringent testing and certification processes, including NFPA 259 and ASTM E1359 from US Laboratory, ensuring they meet the highest safety requirements. We follow Qatar Quality Standards and we have obtained certifications from Qatar Civil Defense for Fire Safety, ensuring our products meet the highest industry standards.

Our success is driven by the passion and dedication of our talented workforce, trained with high-end coaching to ensure they stay at the forefront of industry trends, and we are grateful for the trust and support of our partners and clients. We're proud to contribute to Qatar's progress and look forward to serving our customers with exceptional products and services."

Clientele

Seashore Group has taken part in acheiving the development visions in Qatar and successfully completed the projects of the below mentioned clienteles in both public and private sectors.

At Seashore Panel Factory, our clientele encompasses a diverse spectrum of esteemed organizations within the construction and architectural sectors. We proudly collaborate with leading construction firms, renowned architects, and innovative developers who recognize the importance of quality and durability in their projects.

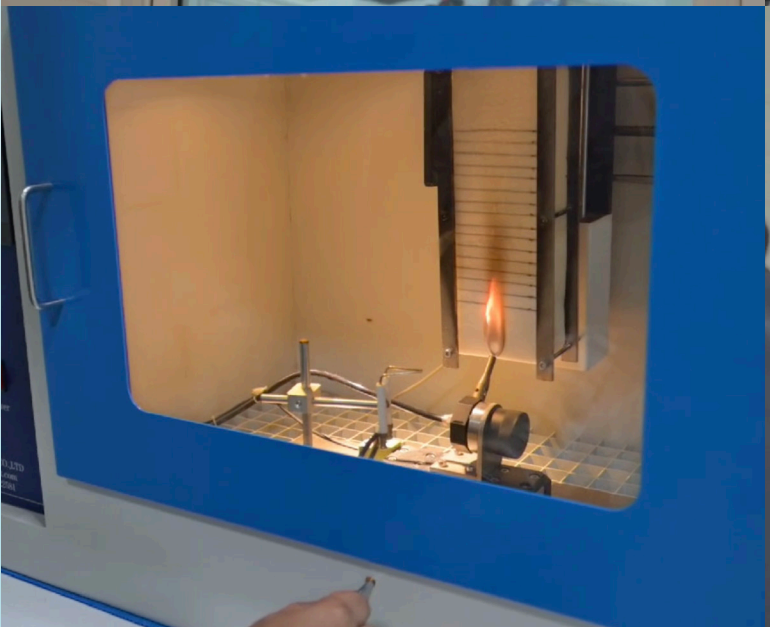
Our partners include both local industry leaders and international entities, allowing us to contribute to a wide array of ambitious projects across various sectors, from residential and commercial developments to large-scale infrastructure initiatives. Each client we work with values our commitment to sustainability and cutting-edge technology, which aligns with their goals of delivering exceptional, eco-friendly structures.

Quality Assurance

Seashore Panels meets the requirements of ISO 9001:2008 standard and is regularly audited by foreign entitiies.

SPF is committed to providing clients with quality products and service through having the following systems in place:

- Well equipped laboratory with high technology content
- An effective Quality Management System
- Preset quality objectives and a system of continuous review
- A team of qualified and experienced personnel
- Extensive interaction program with customers
- A motivation program for the employees to achieve optimum results



Fire Safety

Seashore panels are engineered with comprehensive fire safety measures that prioritize the protection of both occupants and property. Key features include:

Fire-Resistant Materials: Our panels are constructed using high-quality materials that are inherently fire-resistant, significantly reducing the risk of flame spread.
Compliance with Standards: We adhere to rigorous fire safety regulations and industry standards, ensuring our products meet or exceed local and international safety requirements.
Thermal Performance: The panels are designed to provide excellent thermal insulation, helping to contain heat during a fire and prevent structural damage.
Testing and Certification: Our products undergo extensive testing and are certified by relevant authorities to guarantee their fire safety performance.
Design Flexibility: The fire safety features are integrated into our panels without compromising design aesthetics, making them suitable for a variety of architectural styles.

By prioritizing these fire safety elements, Seashore panels not only enhance the overall safety of buildings but also provide peace of mind to architects, developers, and end-users alike.

FM Certification

FM Global (Factory Mutual) is the world's leading commercial insurance body that provides client risk management through product certification systems to safeguard clients' properties. FM Approvals is a material testing and certification body which carefully appraise the construction methods vital to fire protection system certification. FM systems are widely recognized by investors, property insurers, designers and constructors for their superior fire engineered performance thus reducing fire risks.

FM Approvals

Certificate of Compliance

This certificate is issued for the following:

4880: SP Cold Room Storage Panel
4880 & 4881: SP Concealed Panel
4880 & 4881 & 4471: SP 38/200 Sandwich Panel

Prepared for:

Seashore Panel Factory
Gate 295, Street 11, Zone 81
New Industrial Area
41100
Doha,
Qatar

FM Approvals Class: 4880, 4881, 4471

Approval Identification: PR458912 Approval Granted: 13 September 2024

To verify the availability of the Approved product, please refer to www.approvalguide.com or www.roofnav.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

Phillip J. Smith
VP - Manager of Materials
FM Approvals
One Technology Way
Norwood, MA 02062

FM APPROVED

Seashore panels have received FM Approval as Class 1 insulated panels with no height restriction in accordance with FM Approvals standards 4880, 4881 and 4471.

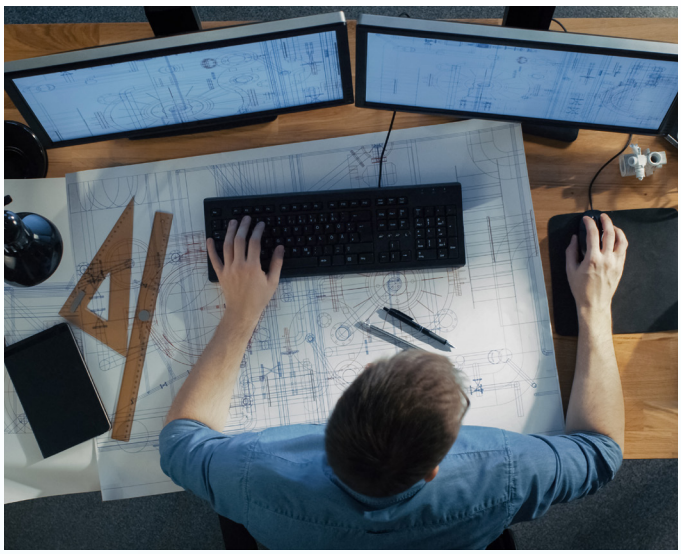
Seashore panels contain a special polyisocyanurate (PIR) insulation core offering superior fire performance when compared to most alternative standard insulation materials. PIR is a thermosetting material, which means that it will permanently become hard and rigid when heated. It will therefore not melt or drip when exposed to fire. The foam core forms a strong carbonaceous char creating a protective layer from the fire. With these unique properties, spread of fire within the panel is prevented. Seashore PIR panels do not contribute to the fire and have been proven to help reduce the risk of critical building loss.

With the successful results from tests, it is proven that when exposed to a real life fire situation, Seashore Panels :

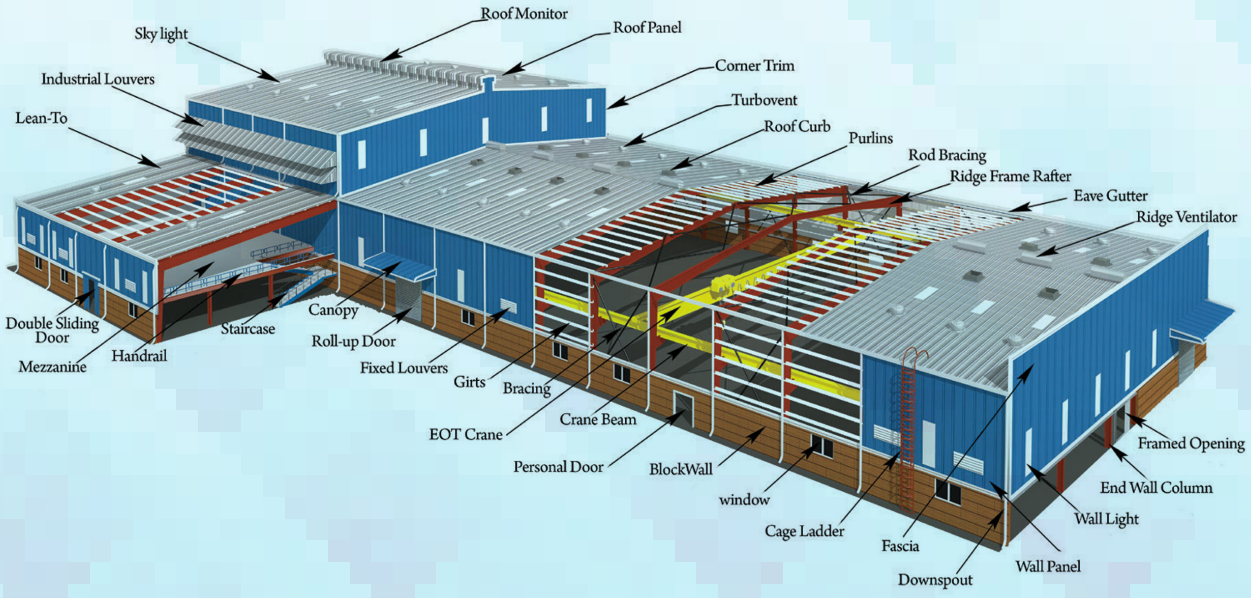
- Do not contribute to the fire or act as fuel to it
- Do not spread flame on their surface
- Give off minimal smoke
- Preserve their insulation properties:
- Preserve their structural integrity'
- Self-extinguish when the fire source is removed

Seashore Engineering Department & Services

At Seashore Engineering, we are deeply committed to our clients, ensuring that every project benefits from the highest quality of service and precision. Our dedicated engineering department specializes in preparing detailed shop and erection drawings, along with precise cut lengths, which significantly reduce material wastage and enhance cost-effectiveness. From the initial stages, we provide thorough estimation and budgeting services, allowing our clients to make informed decisions and manage resources efficiently. By focusing on accuracy and efficiency throughout the process, we help our clients streamline their construction efforts and achieve their project goals without compromising on quality. Our attention to detail not only fosters trust but also delivers substantial savings, reinforcing our role as a reliable partner in every phase of the building process.



Flashing:		Accesories :	
Top ridge flashing	Cover strip	Screw with EPDM Washers	Louvers
Bottom ridge flashing	Drip wall flashing	Solar Panel Mounting Bracket	Saddle Washer
Drip roof flashing	Wall opening flashing	Down Spot & Down Take Pipe.	Ducktite
Eaves flashing	Ridge Ventilator	Butyl Sealant Tape	Silicon Tube
Side ridge flashing	Eve Gutter	Purlin Tape	Filler Block
Joint flashing	Valley Gutter	Rivet	Screw Cap
Vertical flashing	Insulated Gutter	Skylight	Shear Stud
External corner flashing	Expansion Joint Trim	Roof Curb	Sag Rod

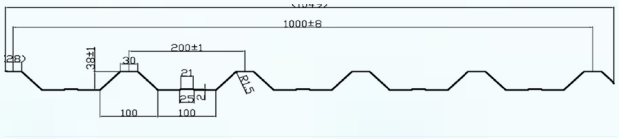


Product

1 CORRUGATED SHEETS 38/200

Seashore Panels SP38/200 Profile is a leading-edge roofing solution, offering exceptional strength, durability, and adaptability. With a 38 mm corrugation depth and 200 mm pitch, Prepainted galvanized steel or aluminum option. Production in various color options. Production flexibility at any ordered length between 2 m - 16 m sheet thickness options 0,40-0,50-0,60-0,70-0,80- 0,90 -1.20mm.

Applications:



COATING TYPE AND SPECIFICATION

Polyester Coatings

Thanks to their variety of color and gloss options and being an economic solution, the usage areas of polyester coatings are very wide. Moreover, polyester coatings are highly resistant towards flexibility, abrasion, corrosion, humidity, and impact. The application thicknesses vary between 20-25 µm and 60 µm according to the place of usage and the expected performance.

PvDF Coatings

The strongest feature of PvDF coatings is that their resistance towards color, gloss, chalking, and many chemicals is high. Moreover, their resistance towards impact and abrasion, as well as their flexibility is very good. On the other hand, PvDF coatings are less scratch resistant, and their color and gloss options are limited when compared to polyester coatings. Application thicknesses vary between 25 µm and 28 µm.

Plastisol Coatings

Plastisol coatings have higher application thicknesses when compared to other coating types. Dry film thicknesses varying between 100 and 120 µm are widely used. Their strongest feature is high corrosion and humidity resistance. Moreover, they are suitable for embosser application. On the other hand, plastisol coatings are less color and gloss resistant when compared to other coating types. That is why they are preferred in cold storage applications or cold and humid climate conditions in which sun rays are not too effective and UV

SECTION PROPERTIES; Base Metal -Steel; Grade-SS340(50)

38-200 profile Single Skin Roof & Wall Profile/340Mpa (Steel)											
Profile Thickness mm	Weight kg/m2	Area cm2	IX cm4	Top in Compression				Bottom in Compression			
				IXeff cm4	ZX-Top cm3	ZX-Bottom cm3	Ma Kn.m	IXeff cm4	ZX-Top cm3	ZX-Bottom cm3	Ma Kn.m
0.40	3.70	4.94	9.81	8.73	3.67	6.15	0.823	7.65	5.39	3.21	0.721
0.50	4.62	6.17	12.67	11.65	4.90	8.21	1.099	10.39	7.32	4.36	0.979
0.60	5.55	7.41	15.86	15.22	6.40	10.72	1.435	13.64	9.60	5.73	1.286
0.70	6.47	8.64	18.87	18.50	7.77	13.03	1.744	16.80	11.83	7.06	1.584
0.80	7.39	9.88	21.79	21.57	9.06	15.19	2.034	20.05	14.12	8.42	1.890
0.90	8.31	11.11	24.51	24.27	10.20	17.09	2.288	23.29	16.40	9.78	2.196
1.00	9.23	12.34	27.50	27.50	11.55	19.37	2.593	26.68	18.79	11.21	2.515
1.20	11.08	14.81	32.99	32.99	13.86	23.23	3.110	32.99	23.23	13.86	3.110
fy=	34	Kn/cm2									
E=	200000000	Kn/cm2									

STEEL SS340-Permissible Span (0.7mm)

Allowable uniform load(KN/M2) of 38-200 profile Single Skin Steel Roof & Wall Profile/340Mpa										
Nominal Thickness (T) in mm	No. of Spans	Load case	Span in meters								
			1.00	1.25	1.5	1.75	2	2.25	2.5	2.75	3
0.7	1	DL+LL	13.95	8.08	4.67	2.94	1.97	1.38	1.01	0.75	0.58
0.7	1	WS	12.67	7.33	4.24	2.67	1.79	1.25	0.91	0.68	0.53
0.7	2	DL+LL	13.95	8.92	6.20	4.55	3.48	2.75	2.23	1.82	1.40
0.7	2	WS	15.83	10.13	7.03	5.17	3.95	3.03	2.20	1.66	1.27
0.7	3	DL+LL	17.44	11.16	7.75	5.56	3.72	2.61	1.90	1.43	1.10
0.7	3	WS	19.79	12.67	8.01	5.04	3.38	2.37	1.73	1.30	1.00

SECTION PROPERTIES; Base Metal -Aluminium; (AA3105-H16)

38-200 profile Single Skin Roof & Wall Profile/170Mpa (AA3105-H16)											
Panel Thickness mm	Weight kg/m2	Area cm2	IX cm4	Top in Compression				Bottom in Compression			
				IXeff cm4	ZX-Top cm3	ZX-Bottom cm3	Ma Kn.m	IXeff cm4	ZX-Top cm3	ZX-Bottom cm3	Ma Kn.m
0.50	1.59	6.17	13.77	11.70	4.92	8.24	0.317	10.47	7.37	4.40	0.283
0.60	1.91	7.41	16.52	14.87	6.25	10.47	0.402	13.22	9.31	5.55	0.358
0.70	2.23	8.64	19.26	17.91	7.53	12.61	0.485	15.99	11.26	6.72	0.433
0.80	2.55	9.88	22.01	21.13	8.88	14.88	0.572	18.93	13.33	7.95	0.512
0.90	2.87	11.11	24.76	24.26	10.20	17.09	0.657	21.79	15.34	9.15	0.590
1.00	3.19	12.34	27.50	27.09	11.38	19.08	0.733	24.75	17.43	10.40	0.670
1.20	3.83	14.81	32.99	32.66	13.72	23.00	0.884	31.11	21.91	13.07	0.842
fy=	17	Kn/cm2									
E=	6.90E+03	Kn/cm2									

Aluminium AA3105 -Permissible Span (0.7mm)

Allowable uniform load(KN/M2)of 38-200 profile Single Skin AA 3105-H16 Roof & Wall Profile/170Mpa										
Nominal Thickness (T)	No. of Spans	Load case	Span in meters								
			1.00	1.25	1.5	1.75	2	2.25	2.5	2.75	3
0.7	1	DL+LL	3.85	2.48	1.56	0.98	0.65	0.45	0.33	0.25	0.19
0.7	1	WS	4.25	2.76	1.65	1.05	0.70	0.49	0.36	0.27	0.20
0.7	2	DL+LL	3.85	2.48	1.72	1.26	0.96	0.76	0.62	0.51	0.43
0.7	2	WS	5.40	3.45	2.40	1.75	1.35	1.06	0.86	0.65	0.50
0.7	3	DL+LL	4.83	3.10	2.15	1.57	1.21	0.85	0.62	0.51	0.43
0.7	3	WS	6.74	4.32	3.00	1.98	1.35	1.06	0.86	0.65	0.50

2 WHY SEASHORE SANDWICH PANELS ?

Seashore Panel Factory's Sandwich Panels provide excellent thermal insulation, durability, and fire resistance. Featuring an insulating core between steel or aluminum layers, they are light-weight, energy-efficient, and easy to install. Ideal for walls, roofs, and cold storage, these panels offer customizable solutions for a range of building applications.

The modular metallic components manufactured by Seashore Panels include high quality corru-gated metal sheets and polyurethane pre-insulated composite panels. These products are man-ufacured to meet the prescribed specifications of design engineers and building contractors. The components manufactured by Seashore Panels are aesthetically pleasant, weatherproof, provide thermal insulation as well as resistance to fire, fungi and mildew.

The panels are manufactured to the exact measurement to fit perfectly and are mounted without mastic (dry joints) assuring short, cost- saving construction time.

Welcome to Seashore Panel Testing and Quality Check, where we ensure excellence in our sandwich panels through rigorous testing and quality assurance. Our panels are evaluated abroad to meet international standards, and our production line undergoes regular audits to ensure consistent quality. With advanced testing facilities and a skilled team, we meticulously assess each panel for structural integrity and durability. At Seashore, quality is our priority, ensuring our clients receive the very best.

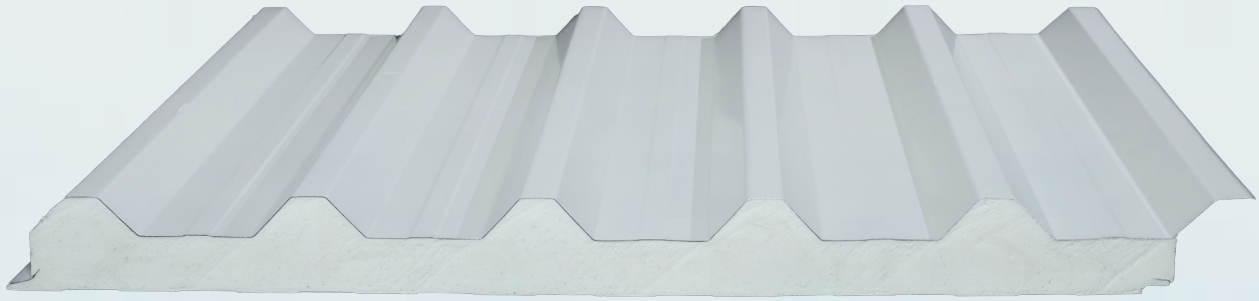
SEASHORE PANEL FACTORY- INTERNATIONAL THIRD-PARTY TESTS APPROVALS

- **ISO 9001 : 2015, ISO 14001 : 2015, ISO 45001 : 2018**
- **FM Approvals (Completed from FM Approvals USA)**
  - 4880: SP Cold Room Storage Panel
  - 4880 & 4881: SP Concealed Panel
  - 4880 & 4881 & 4471: SP 38/200 Sandwich Panel
- **ASTM E1354 (Completed from VTEC Laboratories Inc. New York, USA)**
  - Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter - Cone Calorimeter Testing
- **NFPA 259 (Completed from VTEC Laboratories Inc. New York, USA)**
  - Standard Test Method for Potential Heat of Building Materials - Oxygen Bomb Calorimeter - Gross Calorific Value Testing
- **EN1365-2 (Completed from Efectis Era Avrasya, Turkey)**
  - Fire resistance tests for loadbearing elements- Roofs
- **ASTM E 283-04 :- Air Infiltration Test - Wall (Completed from Thomas Bell Wright UAE)**
  - Standard Test Method for Determining Rate of Air Leakage Under Specified Pressure Differences
- **ASTM E84-22 :-Roof Panels (Completed from Thomas Bell Wright UAE)**
  - Standard Test Method for Surface Burning Characteristics of Building Materials
- **ASTM E 331-00 :- Static Water Penetration Test – Wall (Completed from Thomas Bell Wright UAE)**
  - Standard Test Method for Water Penetration by Uniform Static Air Pressure Differences
- **BS 476-22 (Completed from TURKISH STANDARDS INSTITUTION, TSE, Turkey)**
  - Determination of the Fire Resistance of Non-Loadbearing Elements of Construction
- **EN 1364-1:2015 (Completed from Efectis Era Avrasya, Turkey)**
  - Fire resistance tests for non-loadbearing elements – Walls
- **ASTM E84-21a :-Wall Panels (Completed from Thomas Bell Wright UAE)**
  - Standard Test Method for Surface Burning Characteristics of Building Materials
- **ASTM E 283-04 :- Air Infiltration Test – Roof (Completed from Thomas Bell Wright UAE)**
  - Standard Test Method for Determining Rate of Air Leakage Under Specified Pressure Differences
- **ASTM E84-21a :-Cold store Panels (Completed from Thomas Bell Wright UAE)**
  - Standard Test Method for Surface Burning Characteristics of Building Materials
- **ASTM E 331-00 :- Static Water Penetration Test – Roof (Completed from Thomas Bell Wright UAE)**
  - Standard Test Method for Water Penetration by Uniform Static Air Pressure Differences

A

PUR SANDWICH PANELS

Seashore Panel Factory's PUR Sandwich Panels are composed of a rigid polyurethane (PUR) foam core, offering superior thermal insulation, energy efficiency, and structural integrity. Encased in steel or aluminum sheets, these panels are ideal for applications in industrial, commercial, and residential construction, including roofing, wall cladding, and cold storage facilities. Thickness - 30-50-75-100-150 mm. Length 2-16 metres. Width 1Metre. Painting Coating : Polyster paint 25 µm. Density : 38 kg/m3.



ADVANTAGES :

- **High Thermal Insulation**: Excellent energy efficiency due to the low thermal conductivity of PUR.
- **Lightweight:** Easy to handle and install, reducing construction time and costs.
- **Durability:** Resistant to moisture, corrosion, and harsh weather conditions.
- **Fire Resistance:** Compliant with fire safety standards, offering enhanced protection.
- **Versatile Applications:** Suitable for roofing, walls, and insulation in various building types.
- **Low Maintenance:** Long-lasting performance with minimal upkeep required.

Specifications (Options)

- Aluminium alloy A3105, H-16,
- Galvanized iron (GI) sheets conforming to ASTM A653,
- Galvanized iron (GI) sheets conforming to ASTMA 653,
- Alu-zinc alloy coated steel sheets conforming to ASTM A792.

Surface Coating (Options)

- Metallic top skin and the liner material (other than the aluminium foil can be supplied with surface coating as follows:-
- Top coat 20 micron regular modified polyester (RMP) over 5 micron primer on the outer surface (weathering side) and 5 to 7 micron primer on the reverse. PVDF, Platisol, HDP shall be applicable on request.

Section Properties (per meter width) Base Metal: Steel /Aluzinc

Thickness (T) (mm)	Cover Width (mm)	Nominal Weight (kg/ m^2)	Area (cm^2)	Full Sect. Ix (cm^4)	Elastic Modulus (E)(kN/ cm^2)	Top in Compression				Bottom in Compression			
						Ixet (cm^4)	Sx-Top (cm^3)	Sx-Bot (cm^3)	Ma $_{bx}$ (kNm)	Ixeb (cm^4)	Sx-Top (cm^3)	Sx-Bot (cm^3)	Ma $_{bx}$ (kNm)
0.40	1000	3.83	4.84	14.66	20300	11.20	3.40	9.03	0.46	10.82	4.45	5.12	0.60
0.50	1000	4.79	6.05	18.32	20300	15.66	4.95	11.28	0.67	14.18	5.65	6.95	0.77
0.60	1000	5.75	7.26	21.99	20300	20.54	6.74	13.58	0.92	17.63	6.86	8.86	0.93
0.70	1000	6.70	8.47	25.65	20300	24.85	8.52	15.92	1.12	21.21	8.08	10.91	1.10
0.80	1000	7.66	9.68	29.31	20300	28.69	9.55	18.19	1.30	24.90	9.30	13.08	1.27
0.90	1000	8.62	10.88	32.97	20300	32.56	10.86	20.45	1.48	28.70	10.54	15.37	1.44
1.00	1000	9.58	12.09	36.63	20300	36.39	12.14	22.68	1.65	32.57	11.77	17.76	1.60
1.20	1000	11.49	14.51	43.96	20300	43.85	14.61	27.10	1.99	40.56	14.26	22.83	1.94

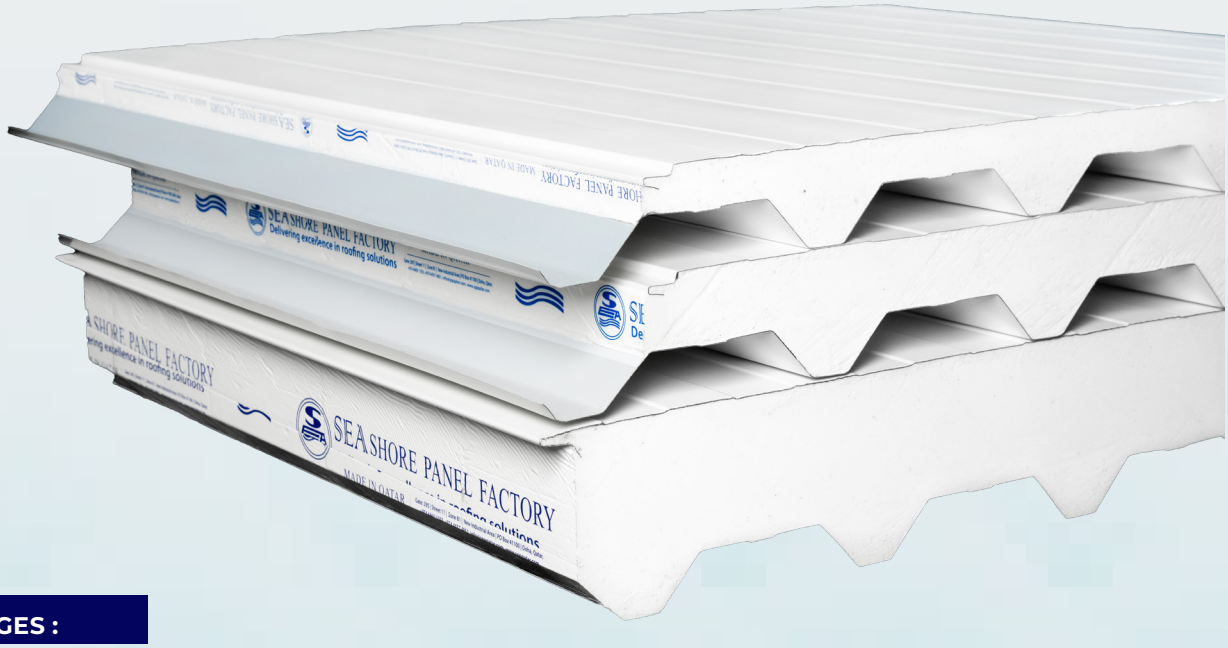
Section Properties (per meter width) Base Metal: Aluminum

Thickness (T) (mm)	Cover Width (mm)	Nominal Weight (kg/ m^2)	Area (cm^2)	Full Sect. Ix (cm^4)	Elastic Modulus (E)(kN/ cm^2)	Top in Compression				Bottom in Compression			
						Ixet (cm^4)	Sx-Top (cm^3)	Sx-Bot (cm^3)	Ma $_{bx}$ (kNm)	Ixeb (cm^4)	Sx-Top (cm^3)	Sx-Bot (cm^3)	Ma $_{bx}$ (kNm)
0.40	1000	1.33	4.84	14.66	6900	9.52	2.73	9.00	0.24	9.44	4.26	4.06	0.35
0.50	1000	1.67	6.05	18.32	6900	13.37	3.98	11.23	0.35	12.67	5.41	5.73	0.47
0.60	1000	2.00	7.26	21.99	6900	17.62	5.42	11.46	0.47	15.84	6.58	7.35	0.57
0.70	1000	2.33	8.47	25.65	6900	22.21	7.04	15.70	0.61	19.12	7.76	9.07	0.68
0.80	1000	2.66	9.68	29.31	6900	27.09	8.82	17.96	0.76	22.45	8.95	10.83	0.78
0.90	1000	3.00	10.88	32.97	6900	31.59	10.42	20.27	0.91	25.88	10.14	12.70	0.88
1.00	1000	3.33	12.09	36.63	6900	35.62	11.79	22.55	1.02	29.42	11.34	14.65	0.99
1.20	1000	4.00	14.51	43.96	6900	43.33	14.37	26.99	1.25	36.75	13.76	18.84	1.20

B

PIR SANDWICH PANELS

Seashore Panel Factory's PIR Sandwich Panels feature a rigid polyisocyanurate (PIR) foam core, known for its exceptional thermal insulation and energy efficiency. Sandwiched between durable steel or aluminum sheets, these panels provide excellent performance in roofing, wall cladding, and cold storage applications.
Technical : Density 44kg/m3.



ADVANTAGES :

- **Superior Thermal Insulation:** High thermal resistance, reducing energy costs and improving efficiency.
- **Water Tightness:** Engineered to prevent water infiltration, ensuring protection against leaks and moisture damage.
- **Air Infiltration Resistance:** Effective at sealing out air, maintaining indoor climate control and reducing energy loss.
- **Lightweight:** Easy to handle and install, which speeds up construction and lowers costs.
- **Durability:** Resilient against harsh weather conditions and corrosion.
- **Fire Resistance:** Meets stringent fire safety standards for added protection.

Seashore PIR Sandwich Panels offer exceptional Water Tightness and air infiltration resistance. Engineered to prevent water leaks and seal out air, these panels ensure effective climate control and protect against moisture damage, contributing to energy efficiency and long-lasting performance.

FIRE SAFETY OF SEASHORE PANELS

FM APPROVED

Do not contribute to the fire or act as fuel to it
Do not spread flame on their surface
Give off minimal smoke
Preserve their insulation properties:
Preserve their structural integrity'
Self-extinguish when the fire source is removed

- **4880**
- **4881**
- **4471**

EN 13501-1	Fire Classification of Non-Load Bearing Walls
EN 13501-2	Fire Resistance of Non-Load Bearing Elements
NFPA 255 (ASTM E84)	Surface Burning Characteristics of Building Materials
NFPA 285	Fire Propagation Characteristics of Exterior Non-Load Bearing Walls

Direct Design Tables

Steel sheet | Thicknesses 0,4/0,4

Simple support conditions

Thickness mm	Load	Uniformly distributed loads [kN/m²] Span L [m]														
		1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50	4,75	5,00
30	▲	2,70	2,12	1,72	1,43	1,21	1,04	0,90	0,75	0,62	0,51	0,43	0,37	0,32		
	▼	2,28	1,77	1,41	1,15	0,95	0,77	0,52	0,34							
40	▲	3,21	2,58	2,12	1,78	1,52	1,31	1,15	1,01	0,85	0,71	0,60	0,51	0,44	0,39	0,34
	▼	2,72	2,15	1,75	1,44	1,21	1,02	0,81	0,57	0,39						
50	▲	3,76	3,07	2,56	2,17	1,86	1,62	1,42	1,25	1,11	0,95	0,81	0,69	0,60	0,52	0,46
	▼	3,18	2,56	2,11	1,76	1,49	1,27	1,10	0,85	0,62	0,45	0,31				
60	▲	4,33	3,58	3,02	2,58	2,23	1,94	1,71	1,51	1,35	1,21	1,05	0,90	0,78	0,68	0,60
	▼	3,66	2,99	2,49	2,10	1,79	1,54	1,33	1,16	0,89	0,67	0,50	0,36			
80	▲	5,51	4,65	3,97	3,44	3,00	2,63	2,31	1,97	1,69	1,48	1,30	1,16	1,03	0,93	0,85
	▼	4,66	3,89	3,29	2,82	2,43	2,11	1,84	1,62	1,43	1,20	0,95	0,74	0,58	0,44	0,33
100	▲	6,47	5,53	4,83	4,28	3,80	3,27	2,74	2,33	2,01	1,75	1,54	1,37	1,23	1,11	1,00
	▼	5,69	4,82	4,13	3,56	3,10	2,71	2,38	2,11	1,87	1,67	1,49	1,21	0,98	0,79	0,63

▲ Ascending load ▼ Descending load

Multiple support conditions

Thickness mm	Load	Uniformly distributed loads [kN/m²] Span L [m]														
		1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50	4,75	5,00
30	▲	2,70	2,09	1,63	1,31	1,09	0,92	0,80	0,70	0,62	0,55	0,50	0,46	0,42	0,39	0,36
	▼	2,28	1,77	1,41	1,15	0,95	0,79	0,67	0,57	0,49	0,42	0,37	0,32			
40	▲	3,06	2,30	1,81	1,47	1,23	1,05	0,91	0,80	0,71	0,64	0,58	0,53	0,49	0,45	0,42
	▼	2,72	2,15	1,75	1,44	1,21	1,02	0,87	0,75	0,65	0,57	0,50	0,44	0,39	0,34	0,30
50	▲	3,37	2,55	2,01	1,64	1,38	1,18	1,02	0,90	0,81	0,73	0,66	0,61	0,56	0,52	0,49
	▼	3,18	2,56	2,11	1,76	1,49	1,27	1,10	0,95	0,83	0,73	0,64	0,57	0,50	0,45	0,40
60	▲	3,55	2,71	2,14	1,75	1,47	1,26	1,09	0,96	0,86	0,78	0,71	0,65	0,60	0,56	0,52
	▼	3,66	2,99	2,49	2,04	1,68	1,41	1,20	1,04	0,91	0,80	0,71	0,63	0,56	0,51	0,46
80	▲	4,22	3,15	2,48	2,03	1,72	1,49	1,31	1,17	1,06	0,97	0,90	0,84	0,78	0,74	0,70
	▼	4,66	3,82	2,96	2,38	1,96	1,67	1,45	1,27	1,12	1,00	0,90	0,82	0,75	0,68	0,63
100	▲	4,45	3,36	2,64	2,16	1,82	1,57	1,38	1,23	1,12	1,02	0,94	0,88	0,82	0,77	0,73
	▼	5,34	3,99	3,09	2,48	2,04	1,73	1,48	1,30	1,15	1,02	0,92	0,83	0,76	0,69	0,64

Steel sheet | Thicknesses 0,5/0,4

Simple support conditions

Thickness mm	Load	Uniformly distributed loads [kN/m²] Span L [m]														
		1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50	4,75	5,00
30	▲	3,06	2,40	1,95	1,62	1,36	1,17	1,01	0,82	0,67	0,56	0,47	0,40	0,35	0,30	
	▼	2,60	2,02	1,61	1,31	1,09	0,89	0,62	0,42							
40	▲	3,60	2,88	2,37	2,00	1,70	1,47	1,28	1,12	0,92	0,77	0,65	0,55	0,48	0,42	0,37
	▼	3,06	2,43	1,97	1,63	1,37	1,16	0,91	0,66	0,47	0,32					
50	▲	4,17	3,40	2,84	2,41	2,07	1,80	1,58	1,40	1,22	1,02	0,87	0,74	0,64	0,56	0,49
	▼	3,55	2,86	2,36	1,98	1,68	1,44	1,24	0,95	0,71	0,52	0,37				
60	▲	4,77	3,94	3,32	2,85	2,47	2,15	1,90	1,66	1,42	1,24	1,09	0,96	0,83	0,72	0,63
	▼	4,05	3,32	2,77	2,34	2,00	1,73	1,50	1,28	0,98	0,75	0,56	0,42			
80	▲	6,00	5,06	4,34	3,77	3,30	2,82	2,36	2,00	1,72	1,50	1,32	1,17	1,05	0,94	0,86
	▼	5,10	4,26	3,62	3,11	2,70	2,35	2,06	1,82	1,61	1,30	1,04	0,82	0,64	0,49	0,38
100	▲	6,47	5,53	4,83	4,28	3,84	3,32	2,78	2,36	2,03	1,77	1,56	1,38	1,24	1,12	1,01
	▼	6,17	5,24	4,51	3,91	3,42	3,00	2,65	2,35	2,10	1,88	1,60	1,31	1,07	0,86	0,70

▲ Ascending load ▼ Descending load

Multiple support conditions

Thickness mm	Load	Uniformly distributed loads [kN/m²] Span L [m]														
		1,50	1,75	2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25	4,50	4,75	5,00
30	▲	3,06	2,40	1,91	1,54	1,27	1,08	0,93	0,81	0,72	0,64	0,58	0,52	0,48	0,44	0,41
	▼	2,60	2,02	1,61	1,31	1,09	0,91	0,77	0,66	0,57	0,49	0,43	0,38	0,33		
40	▲	3,60	2,71	2,13	1,72	1,43	1,22	1,05	0,92	0,82	0,74	0,67	0,61	0,56	0,51	0,48
	▼	3,06	2,43	1,97	1,63	1,37	1,16	0,99	0,86	0,75	0,65	0,57	0,51	0,45	0,40	0,36
50	▲	3,97	3,00	2,36	1,92	1,61	1,37	1,19	1,05	0,93	0,84	0,76	0,70	0,64	0,60	0,55
	▼	3,55	2,86	2,36	1,98	1,68	1,44	1,24	1,08	0,94	0,83	0,73	0,65	0,58	0,52	0,47
60	▲	4,16	3,18	2,51	2,05	1,71	1,46	1,27	1,12	1,00	0,90	0,81	0,75	0,69	0,64	0,59
	▼	4,05	3,32	2,77	2,34	1,99	1,68	1,43	1,24	1,08	0,95	0,84	0,75	0,68	0,61	0,56
80	▲	4,99	3,71	2,90	2,37	2,00	1,72	1,51	1,35	1,22	1,12	1,03	0,95	0,89	0,84	0,79
	▼	5,10	4,26	3,51	2,82	2,32	1,98	1,71	1,50	1,33	1,19	1,07	0,97	0,89	0,81	0,75
100	▲	5,23	3,95	3,10	2,53	2,12	1,82	1,60	1,42	1,28	1,17	1,08	1,00	0,93	0,88	0,83
	▼	6,17	4,74	3,68	2,94	2,43	2,05	1,75	1,53	1,36	1,21	1,09	0,99	0,90	0,83	0,76

Seashore Panel Factory's PIR Sandwich Panels feature a rigid polyisocyanurate (PIR) foam core, known for its exceptional thermal insulation and energy efficiency. Sandwiched between durable steel or aluminum sheets, these panels provide excellent performance in roofing, wall cladding, and cold storage applications.

3 CONCEALED SANDWICH PANELS

Seashore Concealed Sandwich Panels feature either PIR or PUR foam cores, offering exceptional thermal insulation and durability. Designed with a hidden fixing system, these panels provide a sleek, uninterrupted surface ideal for both exterior and interior applications. The PIR core enhances water tightness and air infiltration resistance, while the PUR core delivers high energy efficiency.

APPLICATIONS

Seashore sandwich panels are both a cladding and thermal insulation product for industrial buildings. The sandwich panels can be used to build perimeter and partition walls, or as a light-weight façade cladding. The sandwich panels are a good solution for constructing and finishing a variety of projects:

- INDUSTRIAL
- COMMERCIAL
- OFFICE AND ADMINISTRATION
- SPORTS AND ATHLETICS

SINGLE SPAN CONDITION – UNFACTORED LOAD / SPAN TABLE

Outer sheet: 0.50mm pre-painted GI, Inner sheet: 0.40mm pre-painted GI

Panel Thick (T) (mm)	Load Type	Uniformly distributed loads KN/m2							
		Span in L in meters (m)							
		1.50	2.00	2.20	2.40	2.60	2.80	3.00	3.20
50	Pressure	5.54	4.05	3.35	2.89	2.42	2.11	1.79	1.57
50	Suction	4.96	3.63	2.95	2.52	2.08	1.79	1.49	1.29
100	Pressure	7.37	5.39	4.85	4.44	4.10	3.81	3.56	3.33
100	Suction	7.33	5.36	4.78	4.01	3.42	2.95	2.57	2.26

DOUBLE SPAN CONDITION – UNFACTORED LOAD / SPAN TABLE

Outer sheet: 0.50mm pre-painted GI, Inner sheet: 0.40mm pre-painted GI

Panel Thick (T) (mm)	Load Type	Uniformly distributed loads KN/m2							
		Span in L in meters (m)							
		1.50	2.00	2.20	2.40	2.60	2.80	3.00	3.20
50	Pressure	6.41	4.69	4.11	3.67	3.22	2.83	2.29	1.98
50	Suction	5.37	3.93	3.15	2.71	2.26	1.98	1.69	1.51
100	Pressure	7.37	5.39	4.85	4.44	4.10	3.81	3.56	3.23
100	Suction	7.33	5.36	4.78	4.01	3.42	2.95	2.57	2.26

Notes:

- *The Panel can be installed both vertically and horizontally.*
- *Deflection limits L /100 for wind pressure and suction loads.*
- *The actual wind suction load resisted by the panels will depend on the number of fasteners and the materials of the supporting rails / purlins.*
- *The supporting rails/ purlins: minimum thickness 1.50mm, and mini mum bearing distance 60mm.*
- *Standard sheet thickness: 0.50mm pre-painted GI for outer sheet and 0.40mm for inner sheet.*
- *The insulation is considered as rigid, non-compressible PU or PIR.*
- *For the panels with higher facing sheet thickness may refer to the same loading table for conservative consideration.*
- *For sheet thickness over 0.50mm, and insulation over 100mm, to follow the table for 100mm as a conservative approach.*

SINGLE SPAN CONDITION – UNFACTORED LOAD / SPAN TABLE

Outer sheet: 0.70mm Aluminum, Inner sheet: 0.50mm Aluminum

Panel Thick (T) (mm)	Load Type	Uniformly distributed loads KN/m2							
		Span in L in meters (m)							
		1.50	2.00	2.20	2.40	2.60	2.80	3.00	3.20
50	Pressure	3.88	2.84	2.35	2.02	1.69	1.48	1.25	1.10
50	Suction	3.47	2.54	2.07	1.76	1.46	1.25	1.04	0.90
100	Pressure	5.16	3.77	3.40	3.11	2.87	2.67	2.49	2.33
100	Suction	5.13	3.75	3.35	2.81	2.39	2.07	1.80	1.58

DOUBLE SPAN CONDITION – UNFACTORED LOAD / SPAN TABLE

Outer sheet: 0.70mm Aluminum, Inner sheet: 0.50mm Aluminum

Panel Thick (T) (mm)	Load Type	Uniformly distributed loads KN/m2							
		Span in L in meters (m)							
		1.50	2.00	2.20	2.40	2.60	2.80	3.00	3.20
50	Pressure	4.49	3.28	2.88	2.57	2.25	1.98	1.60	1.39
50	Suction	3.76	2.75	2.21	1.90	1.58	1.39	1.18	1.06
100	Pressure	5.16	3.77	3.40	3.11	2.87	2.67	2.49	2.26
100	Suction	5.13	3.75	3.35	2.81	2.39	2.07	1.80	1.58

Notes:

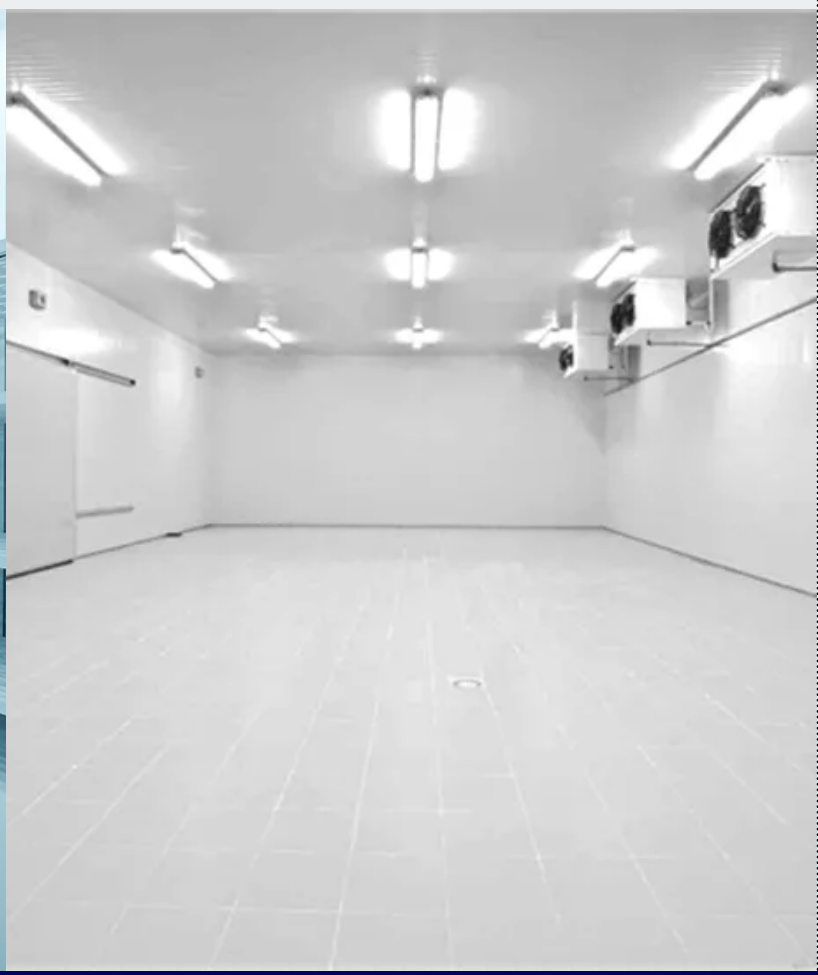
- *The Panel can be installed both vertically and horizontally.*
- *Deflection limits L /100 for wind pressure and suction loads.*
- *The actual wind suction load resisted by the panels will depend on the number of fasteners and the materials of the supporting rails / purlins.*
- *The supporting rails/ purlins: minimum thickness 1.50mm, and mini mum bearing distance 60mm.*
- *Standard sheet thickness: 0.50mm pre-painted GI for outer sheet and 0.40mm for inner sheet.*
- *The insulation is considered as rigid, non-compressible PU or PIR.*
- *For the panels with higher facing sheet thickness may refer to the same loading table for conservative consideration.*
- *For sheet thickness over 0.50mm, and insulation over 100mm, to follow the table for 100mm as a conservative approach.*

Seashore Panel Factory manufactures and supplies a wide range of insulated wall panels with a concealed joining system of micro-ribbed or shallow-ribbed surface offering a modern look to the building envelope. The sandwich wall panels provide superior thermal high insulation and fire resistance.

Seashore Panels SP-Concealed panel is available in different facings, is applicable in its usage for Wall & Ceiling applications. The concealed mean just that t the joints between the panels are hidden from sight as fasteners are not visible to exterior, which improves the aesthetic value of the result.

4 COLD ROOM PANELS

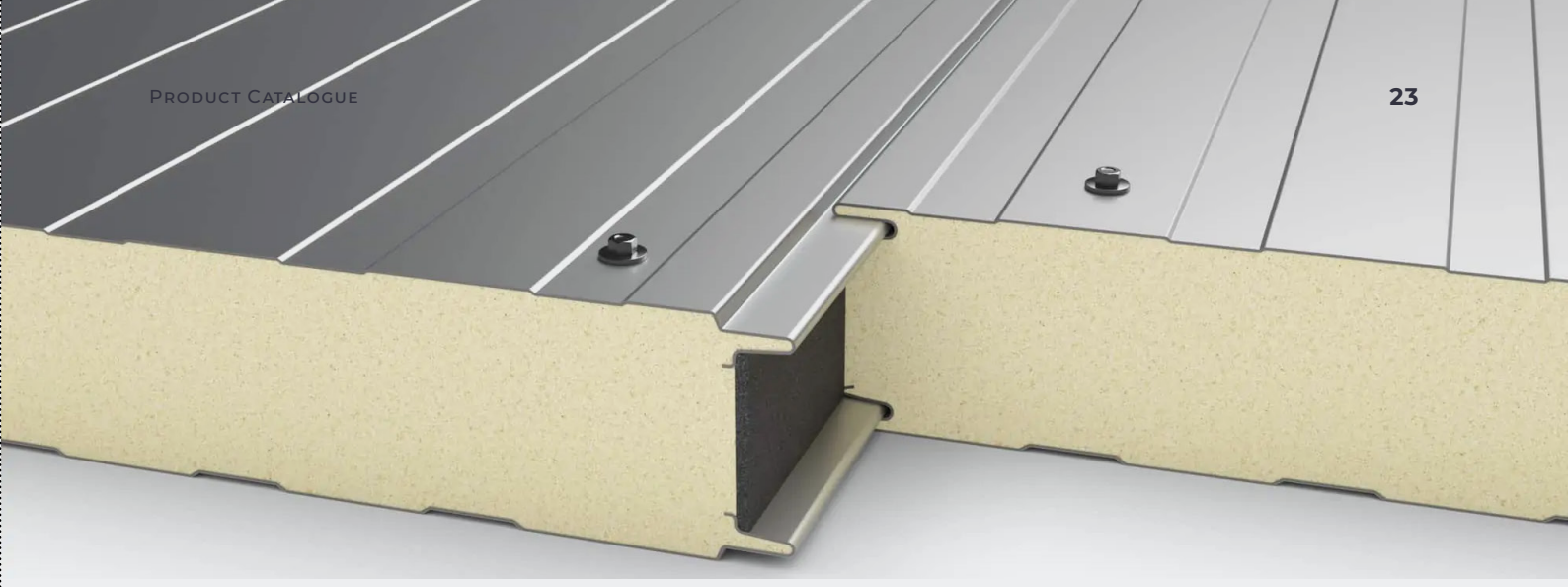
Seashore Cold Room Panels are engineered for optimal performance in temperature-controlled environments. With a high-performance foam core, these panels provide excellent insulation, reducing thermal transfer and maintaining consistent temperatures. Thickness - 30-50-75-100-150 mm. Length 2-16 metres. Width 1Metre. Painting Coating : Polyster paint 25 µm. Density : 38 - 44 kg/m3. Food Safe coating and anit bacterial coating can be provided upon request.



APPLICATIONS

Seashore sandwich panels are both a cladding and thermal insulation product for industrial buildings. The sandwich panels can be used to build perimeter and partition walls, or as a light-weight façade cladding. The sandwich panels are a good solution for constructing and finishing a variety of projects:

-INDUSTRIAL
•COMMERCIAL
•AGRICULTURAL
•OFFICE AND ADMINISTRATION
•SPORTS AND ATHLETICS
•COLD ROOM



ADVANTAGES :

- **Superior Insulation:** Minimizes energy consumption and maintains stable temperatures in cold storage.
- **Durable Construction:** Resists moisture and condensation, ensuring longevity and easy maintenance.
- **Energy Efficiency:** Reduces heating and cooling costs through effective thermal management.
- **Hygienic Design:** Easy-to-clean surfaces help maintain a sanitary environment.
- **Versatile Applications:** Ideal for cold rooms, freezers, and refrigerated warehouses, offering reliable performance for various storage needs.

Outer sheet: 0.40mm pre-painted GI/AL-ZN, Inner sheet: 0.40mm pre-painted GI/AL-ZN

Panel Thickness (T) (mm)	U-Value W / m2K	Weight Kg / m2	Ceiling element span, cantilever as single - span girder	Outside walls bolt distances, single - span system Wall Height
		0.4+0.4	~ m	~ m
100	0.23	12.1	7.00	5.00
150	0.15	14.3	9.00	6.00

Notes:

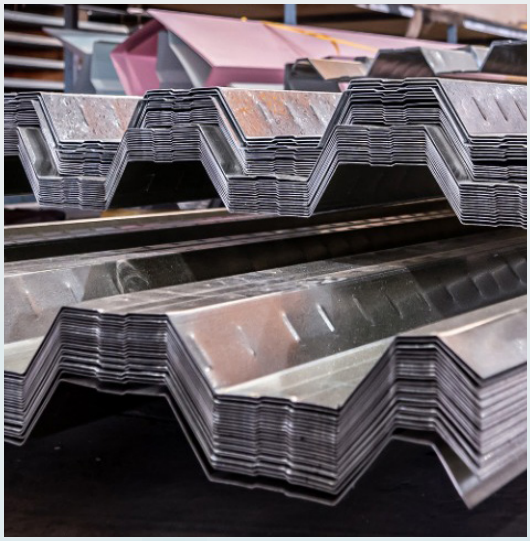
- *The Panel can be installed both vertically and horizontally.*
- *Standard sheet thickness: 0.40mm pre-painted GI/AL-ZN for outer sheet and 0.40mm for inner sheet.*
- *The insulation is considered as rigid, non-compressible PU or PIR.*
- *For the panels with higher facing sheet thickness may refer to the same loading table for conservative consideration.*

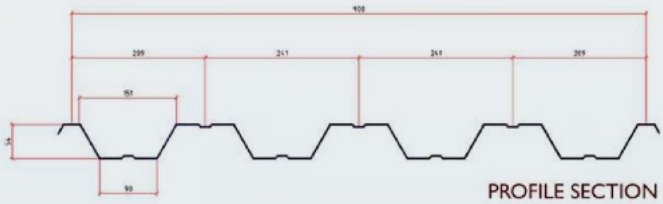
Product features

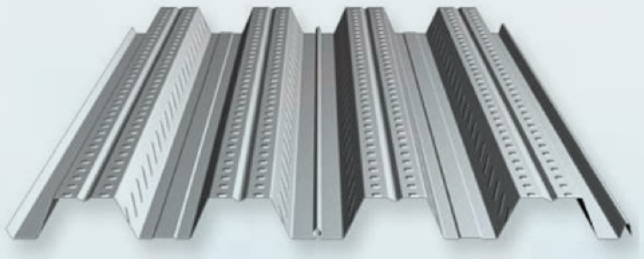
- **CFC / HCFC free**
- **High load bearing capacity**
- **Excellent and durable thermal insulation**
- **Absolute water and vapor barrier**
- **Excellent air tightness**
- **Easy installation**
- **Low maintenance cost**
- **Good sound insulation**
- **Fire resistance**
- **Re-locatable**
- **Energy saving.**

5 SP 54/241 METAL DECKING SHEET

Seashore SP 54/241 Metal Decking Sheet is a robust and versatile solution for structural support in roofing and flooring applications. With a profile depth of 54mm and an effective width of 241mm, these sheets provide excellent load-bearing capacity and rigidity, making them ideal for both commercial and industrial buildings.
Technical Data :. Sheet Width : 900mm, Thickness : GI 0.5 - 1.2mm, Coating : G90 (275g/ m2) Zinc coating, Finish : MIll Finish.







ADVANTAGES :

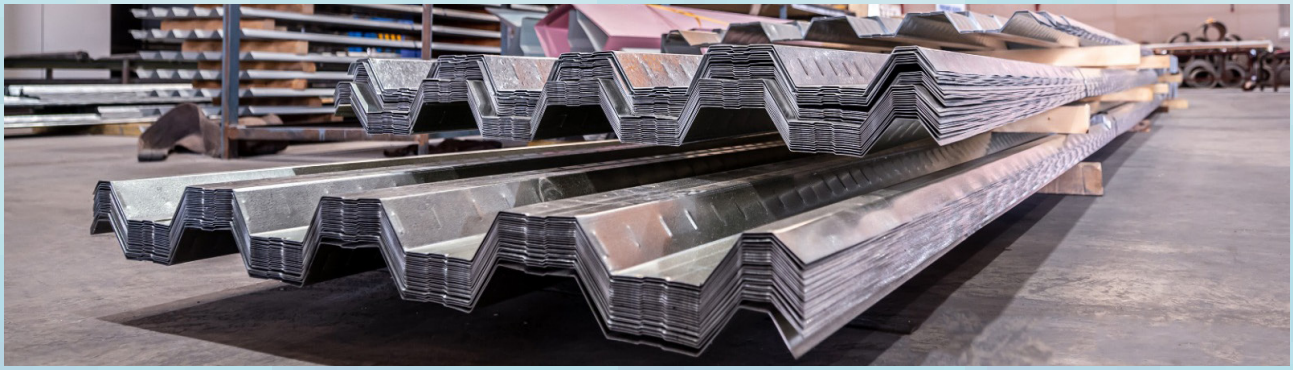
-High Strength: Offers superior load-bearing capacity and structural support.

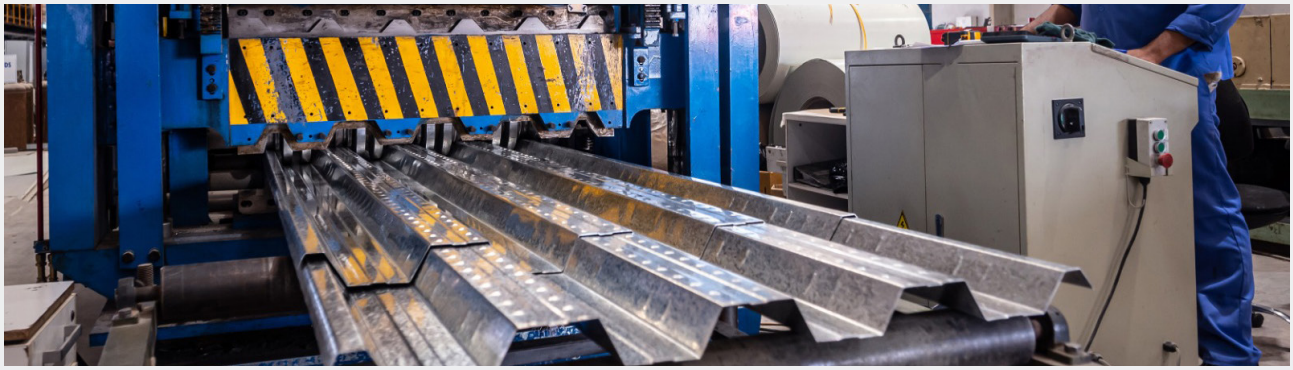
- Durability: Made from high-quality steel, ensuring resistance to corrosion and harsh weather conditions.

- Easy Installation: Lightweight and easy to handle, which speeds up construction and reduces labor costs.

- Versatile Applications: Suitable for a variety of roofing and flooring applications, providing flexibility in design.

- Cost-Effective: Provides a reliable and economical solution for structural support.





SECTION PROPERTIES (PER M WIDTH) BASE METAL : STEEL

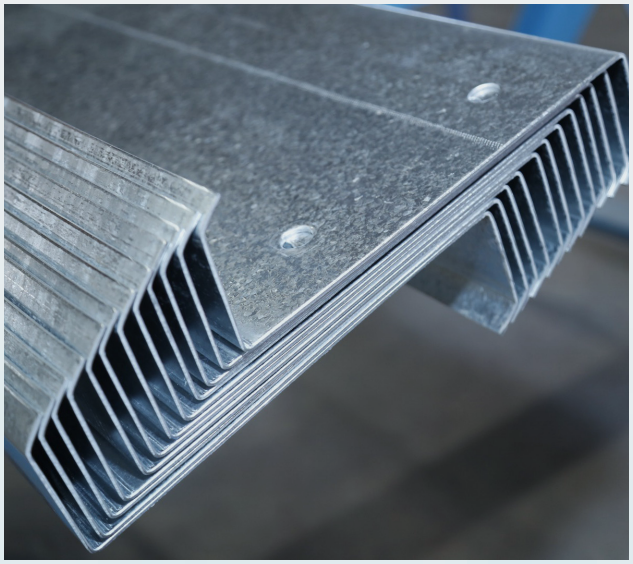
Thickness (mm)	Cover width (mm)	Nominal Weight (kg/ m^2)	Area (cm^2)	Full Sect Ix (cm^4)	Elastic Modulus (KN/c m^2)	Top in Compression				Bottom in Compression			
						Ixeb (cm^4)	Sx-Top (cm^3)	Sx-Bot (cm^3)	Ma_{gx} (KNm)	Ixeb (cm^4)	Sx-Top (cm^3)	Sx-Bot (cm^3)	Ma_{gx} (KNm)
0.50	900	5.32	6.94	37.34	20300	28.64	7.33	13.45	1.51	26.21	9.50	8.00	1.65
0.60	900	6.38	8.33	44.76	20300	37.00	9.74	16.46	2.01	33.90	11.63	10.82	2.23
0.70	900	7.45	9.72	52.17	20300	45.77	12.35	19.49	2.55	41.40	13.79	13.56	2.80
0.80	900	8.51	11.10	59.56	20300	54.87	15.12	22.52	3.12	49.52	16.00	16.68	3.30
0.90	900	9.58	12.49	67.15	20300	64.39	18.03	25.59	3.72	58.20	18.23	20.08	3.76
1.00	900	10.64	13.87	74.81	20300	74.06	20.99	28.66	4.33	67.17	20.49	23.70	4.23
1.20	900	12.77	16.64	90.22	20300	90.22	25.46	34.45	5.25	85.79	25.00	31.43	5.16

UNIFORM ALLOWABLE LOAD (KN/m^2) BASE METAL : STEEL

Nominal Thickness	No. of spans	Load case	Span											
			1.0	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5	3.75
0.5	1	BENDING	12.08	7.73	5.37	3.94	3.02	2.39	1.93	1.6	1.34	1.14	0.99	0.86
		DEFLECT	29.11	14.9	8.63	5.43	3.64	2.55	1.86	1.4	1.08	0.85	0.68	0.55
	2	BENDING	13.2	8.45	5.87	4.31	3.3	2.61	2.11	1.75	1.47	1.25	1.08	0.94
		DEFLECT	70.18	35.93	20.79	13.09	8.77	6.15	4.49	3.37	2.6	2.04	1.63	1.32
	3	BENDING	14.1	9.03	6.27	4.6	3.53	2.79	2.26	1.86	1.57	1.34	1.15	1
		DEFLECT	54.93	28.12	16.27	10.24	6.86	4.82	3.51	2.64	2.03	1.6	1.28	1.04
0.6	1	BENDING	16.08	10.29	7.15	5.25	4.02	3.18	2.57	2.13	1.79	1.52	1.31	1.14
		DEFLECT	34.89	17.87	10.34	6.51	4.36	3.06	2.23	1.68	1.29	1.02	0.81	0.66
	2	BENDING	17.84	11.42	7.93	5.83	4.46	3.52	2.85	2.36	1.98	1.69	1.46	1.27
		DEFLECT	84.12	43.07	24.93	15.69	10.51	7.38	5.38	4.04	3.11	2.45	1.96	1.59
	3	BENDING	19.06	12.2	8.47	6.22	4.76	3.76	3.05	2.52	2.12	1.8	1.56	1.36
		DEFLECT	65.84	33.71	19.51	12.28	8.23	5.77	4.21	3.17	2.43	1.92	1.54	1.25
0.7	1	BENDING	20.4	13.06	9.07	6.66	5.1	4.03	3.26	2.7	2.27	1.93	1.67	1.45
		DEFLECT	40.67	20.82	12.05	7.59	5.08	3.57	2.6	1.95	1.5	1.19	0.95	0.77
	2	BENDING	22.4	14.34	9.96	7.31	5.6	4.42	3.58	2.96	2.49	2.12	1.83	1.59
		DEFLECT	98.05	50.2	29.05	18.29	12.25	8.6	6.27	4.71	3.63	2.86	2.28	1.85
	3	BENDING	23.93	15.32	10.64	7.81	5.98	4.73	3.83	3.16	2.66	2.27	1.95	1.7
		DEFLECT	76.74	39.29	22.74	14.31	9.59	6.73	4.91	3.69	2.83	2.24	1.79	1.45
	1	BENDING	24.96	15.97	11.09	8.15	6.24	4.93	3.99	3.3	2.77	2.36	2.04	1.77
		DEFLECT	46.43	23.77	13.76	8.66	5.8	4.07	2.97	2.23	1.72	1.35	1.08	0.88

6 SEASHORE Z&C PURLINS

Seashore Z&C Purlins are essential structural components used in building frameworks to support roofing and cladding systems. Available in both Z and C shapes, these purlins offer versatile solutions for various construction needs. They are manufactured from high-strength steel, ensuring durability and stability in both commercial and industrial applications.

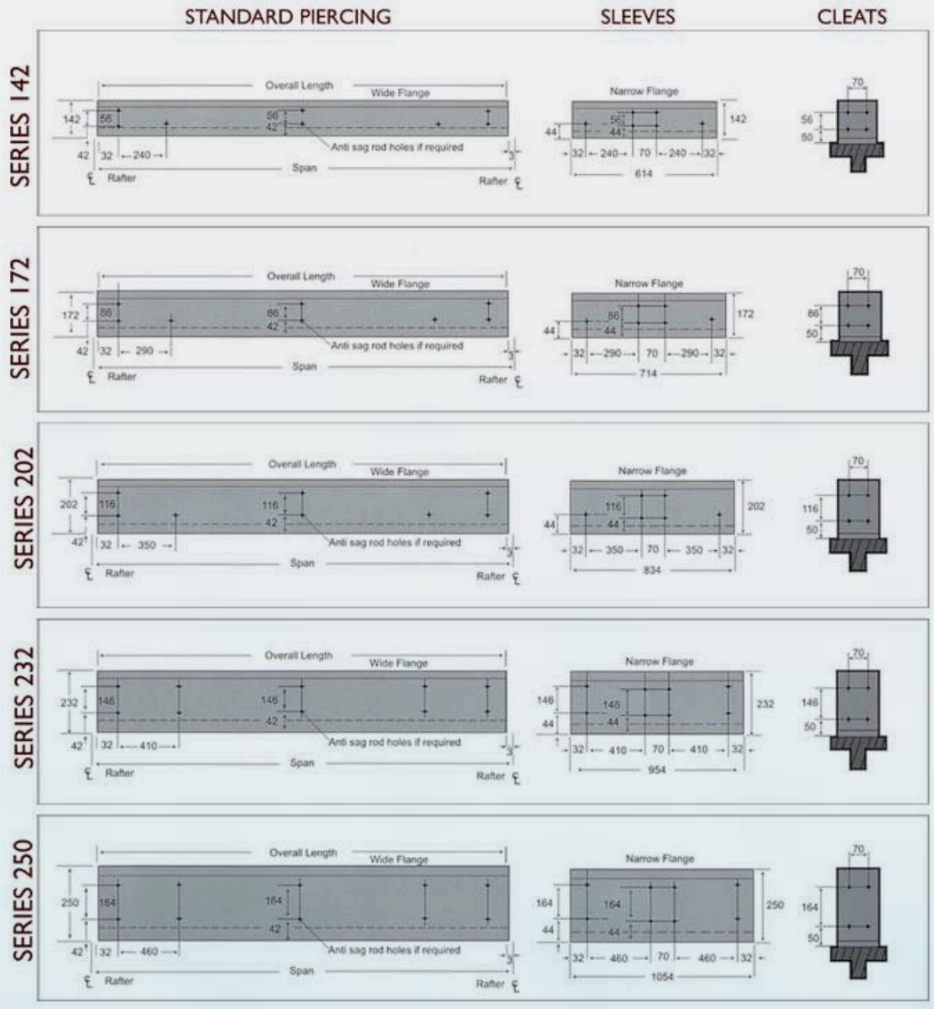


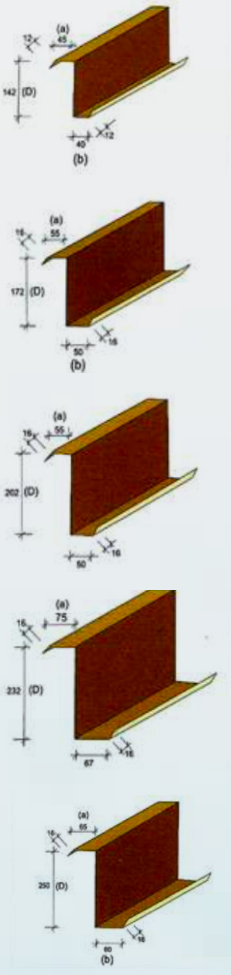
ADVANTAGES :

- **Versatile Design:** Available in Z and C profiles, allowing for flexible design and application in different structural configurations.
- **High Strength-to-Weight Ratio:** Provides excellent load-bearing capacity while being lightweight, which reduces structural load and simplifies handling.
- **Durability:** Made from high-quality steel with protective coatings, ensuring long-term resistance to corrosion and weathering.
- **Easy Installation:** Designed for quick and efficient installation, which helps reduce construction time and costs.
- **Cost-Effective:** Offers a reliable and economical solution for supporting roofing and cladding systems.
- **Fire Resistance:** Meets stringent fire safety standards for added protection.

COLD FORMED Z PURLINS

Details and Dimensions





All dimensions in mm

SECTION		14220	17220	20220	23220	25020
Depth	D mm	142	172	202	232	250
Thickness	t mm	2.0	2.0	2.0	2.0	2.0
Top Flange	a mm	45	55	55	75	65
Bottom Flange	b mm	40	50	50	67	60
Weight	Kg/m	3.93	4.85	5.24	6.37	6.37
Area	mm^2	471	571	631	765	767
Ixx	cm^4	133	241	355	595	659
Zxx (Top)	cm^3	19.1	28.5	35.7	52.3	53.4
Iyy (Top)	cm^4	8.7	15.3	15.4	35.4	24.4
ryy	mm	18.47	22.3	21.22	29.1	24.4

SECTION		14215	17215	20215	23215	25015
Depth	D mm	142	172	202	232	250
Thickness	t mm	1.5	1.5	1.5	1.5	1.5
Top Flange	a mm	45	55	55	75	65
Bottom Flange	b mm	40	50	50	67	60
Weight	Kg/m	2.95	3.63	3.93	4.78	4.78
Area	mm^2	357	432	477	578	579
Ixx	cm^4	102	184	271	452	501
Zxx (Top)	cm^3	14.0	21.3	27.2	39.8	40.6
Iyy (Top)	cm^4	6.9	11.87	11.9	27.4	18.9
ryy	mm	18.8	22.65	21.55	29.5	24.74

PURLIN SIZE FOR UPLIFT PRESSURE

WIND UPLIFT PRESSURE	75 KG/m²							
Purlin Spacing / Span M / Lap	1.25 m		1.5 m		1.75 m		2.0 m	
	End	Int.	End	Int.	End	Int.	End	Int.
4.0	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215
Lap (mm)	367	367	367	367	367	367	367	367
4.5	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215
Lap (mm)	367	367	367	367	367	367	367	367
5.0	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215
Lap (mm)	367	367	367	367	367	367	367	367
5.5	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14220	Z - 14215
Lap (mm)	367	367	367	367	367	367	367	367
6.0	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14220	Z - 14215	Z - 14220	Z - 14215
Lap (mm)	367	367	367	367	367	367	667	367
6.5	Z - 14215	Z - 14215	Z - 14220	Z - 14215	Z - 14225	Z - 14215	Z - 14225	Z - 14215
Lap (mm)	367	367	367	367	667	367	967	667
7.0	Z - 14220	Z - 14215	Z - 14225	Z - 14215	Z - 14225	Z - 14215	Z - 17220	Z - 17215
Lap (mm)	367	367	667	367	967	667	667	367
7.5	Z - 14220	Z - 14215	Z - 14225	Z - 14215	Z - 17220	Z - 17215	Z - 20220	Z - 20215
Lap (mm)	967	367	967	667	667	367	667	367
8.0	Z - 17220	Z - 17215	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 20220	Z - 20215
Lap (mm)	367	367	667	367	667	367	967	667
8.5	Z - 20215	Z - 20215	Z - 20220	Z - 20215	Z - 20220	Z - 20215	Z - 25020	Z - 25015
Lap (mm)	367	367	667	367	967	667	967	667
9.0	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 25020	Z - 25015	Z - 25020	Z - 25015
Lap (mm)	967	667	967	667	967	367	967	667

WIND UPLIFT PRESSURE	100 KG/m²							
Purlin Spacing / Span M / Lap	1.25 m		1.5 m		1.75 m		2.0 m	
	End	Int.	End	Int.	End	Int.	End	Int.
4.0	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215
Lap (mm)	367	367	367	367	367	367	367	367
4.5	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215
Lap (mm)	367	367	367	367	367	367	667	367
5.0	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14220	Z - 14215	Z - 14220	Z - 14215
Lap (mm)	367	367	367	367	367	367	667	367
5.5	Z - 14215	Z - 14215	Z - 14220	Z - 14215	Z - 14225	Z - 14215	Z - 14225	Z - 14215
Lap (mm)	367	367	367	367	667	367	667	667
6.0	Z - 14220	Z - 14215	Z - 14225	Z - 14215	Z - 17220	Z - 17215	Z - 17220	Z - 17215
Lap (mm)	367	367	667	367	367	367	667	367
6.5	Z - 14225	Z - 14215	Z - 17220	Z - 17215	Z - 17220	Z - 17215	Z - 20220	Z - 20215
Lap (mm)	667	367	367	367	667	367	667	367
7.0	Z - 17220	Z - 17215	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 25020	Z - 25015
Lap (mm)	367	367	667	367	667	367	667	367
7.5	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 25020	Z - 20215	Z - 25020	Z - 25015
Lap (mm)	667	367	667	367	667	367	967	667
8.0	Z - 20220	Z - 20215	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 25020	Z - 25015
Lap (mm)	667	367	667	367	967	667	967	967
8.5	Z - 20220	Z - 20215	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 25025	Z - 25015
Lap (mm)	967	667	967	667	967	967	967	967
9.0	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 25025	Z - 25015	Z - 25025	Z - 25020
Lap (mm)	967	367	967	667	967	967	667	667

Note :Limiting deflection - L/180

PURLIN SIZE FOR GRAVITY LOAD

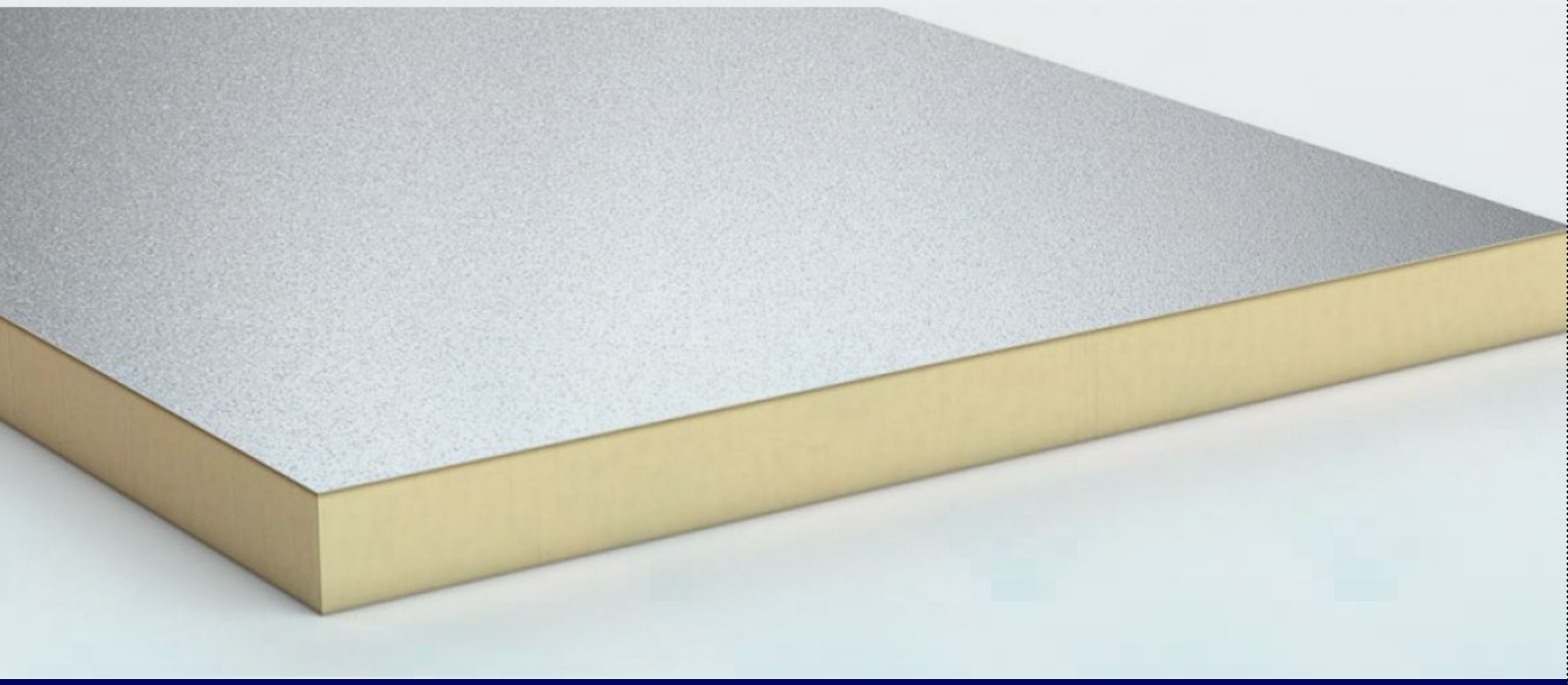
GRAVITY LOADS	75 KG/m²							
Purlin Spacing / Span M / Lap	1.25 m		1.5 m		1.75 m		2.0 m	
	End	Int.	End	Int.	End	Int.	End	Int.
4.0	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215
Lap (mm)	367	367	367	367	367	367	367	367
4.5	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14220	Z - 14215
Lap (mm)	367	367	367	367	667	367	367	367
5.0	Z - 14215	Z - 14215	Z - 14220	Z - 14215	Z - 14220	Z - 14215	Z - 17215	Z - 17215
Lap (mm)	367	367	367	367	667	367	967	367
5.5	Z - 14220	Z - 14215	Z - 17215	Z - 17215	Z - 17220	Z - 17215	Z - 17220	Z - 17215
Lap (mm)	367	367	367	367	367	367	667	367
6.0	Z - 17215	Z - 17215	Z - 20215	Z - 20215	Z - 17220	Z - 17215	Z - 20220	Z - 20215
Lap (mm)	367	367	367	367	667	367	667	367
6.5	Z - 17220	Z - 17215	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 25020	Z - 25015
Lap (mm)	367	367	967	667	667	367	667	667
7.0	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 25020	Z - 25015	Z - 25020	Z - 25015
Lap (mm)	667	367	667	367	967	667	967	667
7.5	Z - 20220	Z - 20215	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 25020	Z - 25015
Lap (mm)	667	367	667	667	667	667	967	967
8.0	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 30020	Z - 30020
Lap (mm)	667	367	967	667	967	967	667	667
8.5	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 30020	Z - 30020	Z - 30025	Z - 30020
Lap (mm)	967	667	967	967	667	667	667	667
9.0	Z - 25020	Z - 25015	Z - 30020	Z - 30015	Z - 30025	Z - 30020	Z - 30025	Z - 30020
Lap (mm)	967	967	967	967	667	667	967	667

GRAVITY LOADS	100 KG/m²							
Purlin Spacing / Span M / Lap	1.25 m		1.5 m		1.75 m		2.0 m	
	End	Int.	End	Int.	End	Int.	End	Int.
4.0	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215
Lap (mm)	367	367	367	367	367	367	367	367
4.5	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14215	Z - 14220	Z - 14215
Lap (mm)	367	367	367	367	667	367	367	367
5.0	Z - 14215	Z - 14215	Z - 14220	Z - 14215	Z - 14220	Z - 14215	Z - 17215	Z - 17215
Lap (mm)	367	367	367	367	667	367	967	367
5.5	Z - 14220	Z - 14215	Z - 17215	Z - 17215	Z - 20215	Z - 20215	Z - 17220	Z - 17215
Lap (mm)	367	367	367	367	367	367	667	367
6.0	Z - 17215	Z - 17215	Z - 20215	Z - 20215	Z - 17220	Z - 17215	Z - 20220	Z - 20215
Lap (mm)	367	367	367	367	667	667	667	667
6.5	Z - 20215	Z - 20215	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 25020	Z - 25015
Lap (mm)	367	367	967	667	667	667	967	667
7.0	Z - 17220	Z - 17215	Z - 20220	Z - 20215	Z - 25020	Z - 25015	Z - 25020	Z - 25020
Lap (mm)	967	667	967	667	967	667	967	667
7.5	Z - 20220	Z - 20215	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 25020	Z - 25015
Lap (mm)	667	367	967	667	967	967	967	967
8.0	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 25020	Z - 25015	Z - 30020	Z - 30020
Lap (mm)	667	667	967	667	967	967	667	667
8.5	Z - 25220	Z - 25015	Z - 25020	Z - 25015	Z - 30020	Z - 30020	Z - 30025	Z - 30020
Lap (mm)	967	667	967	967	667	667	667	667
9.0	Z - 25020	Z - 25015	Z - 30020	Z - 30020	Z - 30025	Z - 30020	Z - 30025	Z - 30020
Lap (mm)	967	967	967	967	667	667	967	667

Note :Limiting deflection - L/180

7 SEASHORE PIR BOARDS

Seashore PIR Boards are high-performance insulation materials featuring a polyisocyanurate (PIR) foam core. Designed for superior thermal efficiency, these boards are ideal for use in walls, roofs, and floors, providing effective insulation in both residential and commercial buildings. Technical Data : Material : Top & Bottom Facings with Aluminum, Foil-Scrim-Kraft Facing with 2-way, scrim and 80gsm Kraft paper with, Silver Color on Outer Facings. Thickness : 25-150mm, Density : 38-49 kg/m3.



APPLICATIONS

PIR (Polyisocyanurate) thermal boards are valued for their insulation properties in building walls, roofs, and floors, enhancing energy efficiency. They are used in flat roof systems, cold storage, and industrial applications to maintain temperature, as well as for insulating HVAC ductwork. Effective for retrofitting and popular in prefabricated construction, PIR boards improve energy efficiency and reduce costs.

-INDUSTRIAL
•COMMERCIAL
•OFFICE AND ADMINISTRATION

GREEN BUILDING WITH SP THERMOBOARD

Polyisocyanurate (PIR) materials are proven to have the best thermal performance per given thickness of insulation among standard commercial products.
They also have a very low weight and resultant loading on the structure in comparison with other insulation materials to provide equivalent insulation properties.
Thermal insulation is one of the key design and construction requirements to create comfortable environments inside of buildings, which is achieved by providing protection from the heat and/or cold environment outside.

ADVANTAGES :

- **Exceptional Thermal Insulation:** High thermal resistance reduces energy consumption and improves climate control.
- **Lightweight:** Easy to handle and install, which speeds up construction.
- **Durability:** Resistant to moisture, mold, and decay, ensuring long-lasting performance.
- **Fire Resistance:** Complies with fire safety standards, offering enhanced protection.
- **Versatility:** Suitable for a variety of applications, including wall, roof, and floor insulation.

Property	Result	Unit	Test method
Foam core apparent density	≥40	kg/m3	ASTM D 1622
Laminate squareness	≤6	mm/m	ASTM C 550
Laminate flatness	≤10	mm	ASTM C 550
Foam compressive strength(all directions at 10% compression)	≥100	kPa	
Foam closed cell content	>90	%	
Foam dimensional stability	≤3 (70C/95% RH, 20hrs) ≤1 (-10C, 20hrs)	%	
Water absorption	< 0.1	%	
Thermal Conductivity	≤0.022	W/mK	ASTM C 518

8 SEASHORE AC DUCTS

Seashore AC Ducts are designed for efficient air distribution in heating, ventilation, and air conditioning (HVAC) systems. Constructed from high-quality materials with excellent insulation properties, these ducts ensure effective temperature control and energy efficiency in commercial and residential buildings.

ADVANTAGES :

- **Efficient Air Distribution:** Ensures optimal airflow and temperature control throughout the building.
- **Thermal Insulation:** Reduces heat loss and gain, improving HVAC system efficiency.
- **Durability:** Made from robust materials that resist wear and tear, extending the lifespan of the ducts.
- **Noise Reduction:** Insulated construction helps minimize operational noise from the HVAC system.
- **Easy Installation:** Designed for straightforward installation and maintenance, reducing labor and time costs.

Foam Thickness	Density	Thermal Conductivity	Dimension
20.5mm (+/- 0.5mm)	45Kg/m³ (+/- 3Kg/m³)	0.021 W/m°K	4000mm X 1200mm
30mm (+/- 0.5mm)	48Kg/m³ (+/- 3Kg/m³)	0.021 W/m°K	4000mm X 1200mm

Properties	Standard
Water Absorption	ASTM C 209:1998
Thermal Conductivity	ASTM C518:2010
Water Vapor Transmission	ASTM E96-00
Compressive Strength	BS EN 826:1996
Fluxural Strength	ASTM C203
Fire Classification	BS EN 13501-1:2007
Fire Propogation Index	BS 476 PART 6
Surface Spread Of Flame	BS 476 PART 7
Toxicity Index	DEFENCE STANDARD 02-713
Smoke Generation & Toxic Potency	IMO MSC 61(67) PART 2
Resistance To Fungi	ASTM G21-15

Certificates

وزارة الداخلية
الإدارة العامة للدفاع المدني
إدارة الوقاية

Ministry of Interior

شـــــهـــادة عدم ممانعة

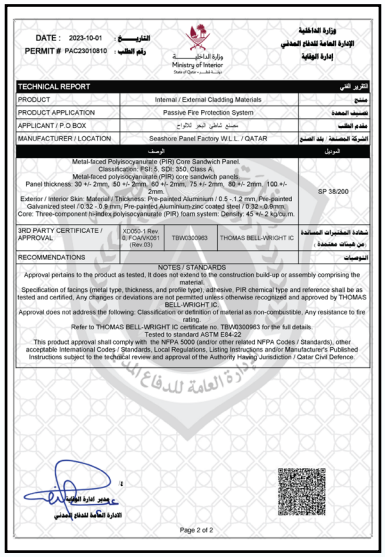
تاريخ الطباعة : 2023-10-01
وقت الطباعة : AM 8:11
رقم الطلب : PAC23010810

نوع الشهادة : اعتماد منتج
بيانات المنشأة
الإسم التجاري : مصنع شاطئ البحر للألواح
رقم السجل التجاري : 47153
رقم قيد المنشأة : 15-6619-00
رقم الرخصة التجارية : 175786
رقم الهاتف :
البريد الإلكتروني :
التصنيف : Passive Fire Protection System
إسم المنتج : Internal / External Cladding Materials
تفاصيل المنتجات
تم مراجعة الطلب المقدم وتأكد بأنه لا مانع من اعتماد المنتج المنتجات الموضحة في التقرير الفني المرفق بناءً على اعتماده من قبل الجهة المختصة الموضحة في التقرير الفني المرفق
ملاحظات
1 يجب على الشركة الالتزام والعمل بما جاء في الاشتراطات فصل أنظمة الحماية التي تم الاطلاع والموافقة عليها في خلال المنهاج
2 يجب أن يقوم بتركيب هذا المنتج من قبل مقاولين ومنفذين معتمدين من الإدارة العامة للدفاع المدني
3 يجب أن يعامل المنتج المعاد التجارية للشهادة المذكورة المعتمدة والموضحة في التقرير الفني المرفق

تاريخ الاعتماد : 2023-09-28
تاريخ الانتهاء : 2025-09-27

ع. مدير إدارة الوقاية
الإدارة التحكم للدفاع المدني

Page 1 of 2



وزارة الداخلية
الإدارة العامة للدفاع المدني
إدارة الوقاية

Ministry of Interior

DATE : 2023-10-01
PERMIT # PAC23010810

التقرير : تاريخ الطباعة
رقم الطلب :

TECHNICAL REPORT		التقرير الفني
PRODUCT	Internal / External Cladding Materials	منتج
PRODUCT APPLICATION	Passive Fire Protection System	تصنيف المنتج
APPLICANT / P.O.BOX	مصنع شاطئ البحر للألواح	مقدم الطلب
MANUFACTURER / LOCATION	Seashore Panel Factory W.L.L. / QATAR	الشركة المصنعة / بلد الصنع
الوصف		المواصفة
Metal-faced Polyisocyanurate (PIR) Core Sandwich Panel Classification: FSI: 5, SDI: 350, Class A Metal-faced polyisocyanurate (PIR) core sandwich panels Panel thickness: 30 +/- 2mm, 50 +/- 2mm, 60 +/- 2mm, 75 +/- 2mm, 80 +/- 2mm, 100 +/- 2mm Exterior / Interior Skin: Material / Thickness: Pre-painted Aluminium / 0.5 - 1.2 mm, Pre-painted Galvanized steel / 0.32 - 0.8 mm, Pre-painted Aluminium-zinc coated steel / 0.32 - 0.8 mm; Core: Three-component hi-index polyisocyanurate (PIR) foam system. Density: 45 +/- 2 kg/cu.m.		SP 38/200
3RD PARTY CERTIFICATE / APPROVAL	XD050-1 Rev. 0 / F-QA/W/081 (Rev. 03) TBW0300963 THOMAS BELL-WRIGHT IC	شهادة المختبرات المعتمدة من الجهات المختصة :
RECOMMENDATIONS	NOTES / STANDARDS	التوصيات

Approval pertains to the product as tested. It does not extend to the construction build-up or assembly comprising the material.

Specification of facings (metal type, thickness, and profile type), adhesive, PIR chemical type and reference shall be as tested and certified. Any changes or deviations are not permitted unless otherwise recognized and approved by THOMAS BELL-WRIGHT IC.

Approval does not address the following: Classification or definition of material as non-combustible. Any resistance to fire rating.

Refer to THOMAS BELL-WRIGHT IC certificate no. TBW0300963 for the full details
Tested to standard ASTM E84-22

This product approval shall comply with the NFPA 5000 (and/or other related NFPA Codes / Standards), other acceptable International Codes / Standards, Local Regulations, Listing Instructions and/or Manufacturer's Published Instructions subject to the technical review and approval of the Authority Having Jurisdiction / Qatar Civil Defence.

ع. مدير إدارة الوقاية
الإدارة التحكم للدفاع المدني

Page 2 of 2

وزارة الداخلية
الإدارة العامة للدفاع المدني
إدارة الوقاية

Ministry of Interior

شـــــهـــادة عدم ممانعة

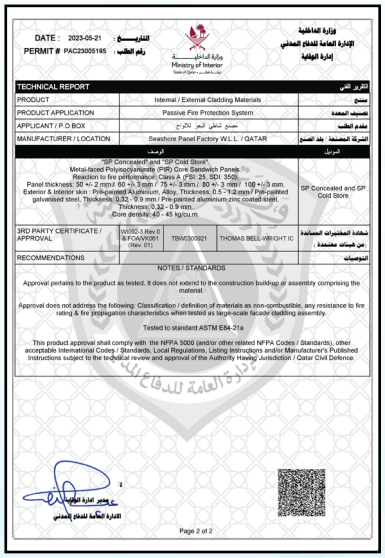
تاريخ الطباعة : 2023-05-21
وقت الطباعة : PM 12:22
رقم الطلب : PAC23005195

نوع الشهادة : اعتماد منتج
بيانات المنشأة
الإسم التجاري : مصنع شاطئ البحر للألواح
رقم السجل التجاري : 47153
رقم قيد المنشأة : 15-6619-00
رقم الرخصة التجارية : 175786
رقم الهاتف :
البريد الإلكتروني :
التصنيف : Passive Fire Protection System
إسم المنتج : Internal / External Cladding Materials
تفاصيل المنتجات
تم مراجعة الطلب المقدم وتأكد بأنه لا مانع من اعتماد المنتج المنتجات الموضحة في التقرير الفني المرفق بناءً على اعتماده من قبل الجهة المختصة الموضحة في التقرير الفني المرفق
ملاحظات
1 يجب على الشركة الالتزام والعمل بما جاء في الاشتراطات فصل أنظمة الحماية التي تم الاطلاع والموافقة عليها في خلال المنهاج
2 يجب أن يقوم بتركيب هذا المنتج من قبل مقاولين ومنفذين معتمدين من الإدارة العامة للدفاع المدني
3 يجب أن يعامل المنتج المعاد التجارية للشهادة المذكورة المعتمدة والموضحة في التقرير الفني المرفق

تاريخ الاعتماد : 2023-05-21
تاريخ الانتهاء : 2025-05-20

ع. مدير إدارة الوقاية
الإدارة التحكم للدفاع المدني

Page 1 of 2



وزارة الداخلية
الإدارة العامة للدفاع المدني
إدارة الوقاية

Ministry of Interior

DATE : 2023-05-21
PERMIT # PAC23005195

التقرير : تاريخ الطباعة
رقم الطلب :

TECHNICAL REPORT		التقرير الفني
PRODUCT	Internal / External Cladding Materials	منتج
PRODUCT APPLICATION	Passive Fire Protection System	تصنيف المنتج
APPLICANT / P.O.BOX	مصنع شاطئ البحر للألواح	مقدم الطلب
MANUFACTURER / LOCATION	Seashore Panel Factory W.L.L. / QATAR	الشركة المصنعة / بلد الصنع
الوصف		المواصفة
"SP Concealed" and "SP Cold Store" Metal-faced Polyisocyanurate (PIR) Core Sandwich Panels Reaction to fire performance: Class A (FSI: 25, SDI: 350) Panel thickness: 50 +/- 2 mm/ 60 +/- 3 mm / 75 +/- 3 mm / 80 +/- 3 mm/ 100 +/- 3 mm. Exterior & Interior skin: Pre-painted Aluminium, Alloy, Thickness: 0.5 - 1.2 mm / Pre-painted galvanized steel, Thickness: 0.32 - 0.9 mm / Pre-painted aluminium-zinc coated steel, Thickness: 0.32 - 0.9 mm Core density: 40 - 45 kg/cu.m.		SP Concealed and SP Cold Store
3RD PARTY CERTIFICATE / APPROVAL	W302-3 Rev.0 & F-QA/W/081 (Rev. 01) TBW0300921 THOMAS BELL-WRIGHT IC	شهادة المختبرات المعتمدة من الجهات المختصة :
RECOMMENDATIONS	NOTES / STANDARDS	التوصيات

Approval pertains to the product as tested. It does not extend to the construction build-up or assembly comprising the material.

Approval does not address the following: Classification / definition of materials as non-combustible, any resistance to fire rating & fire propagation characteristics when tested as large-scale facade cladding assembly.

Tested to standard ASTM E84-21a

This product approval shall comply with the NFPA 5000 (and/or other related NFPA Codes / Standards), other acceptable International Codes / Standards, Local Regulations, Listing Instructions and/or Manufacturer's Published Instructions subject to the technical review and approval of the Authority Having Jurisdiction / Qatar Civil Defence.

ع. مدير إدارة الوقاية
الإدارة التحكم للدفاع المدني

Page 2 of 2

●CERTIFICADO ●СЕРТИФИКАТ ●CERTIFICAT ●شهادة ●CERTIFICATE ●SERTİFİKA

DENEY SERTİFİKASI
TEST CERTIFICATE

TSE
TÜRK STANDARDLARI ENSTİTÜSÜ
TURKISH STANDARDS INSTITUTION

Firma Unvanı / Company Name : SEASHORE PANEL FACTORY
Firma Adresi / Company Address : GATE: 295 STREET 11 ZONE 81 NEW INDUSTRIAL AREA PO BOX 41100 DOHA / QATAR -/Ar Rayyan
Numunenin Tanımı / Sample Description : SP PIR Panel (Tested Vertically)
Ticari Marka/Model / Commercial Brand/ Model : - / -
Deneylerin Yapıldığı Tarih Aralığı / Date interval of Tests : 3.10.2022 - 11.11.2022
Uygulanan Standart(lar) / Metot (lar) ve/veya Teklif/Yönetmelik / Applied Standard/Method and/or Notification / Regulations : 01/01/2014 - BS 476-22
Deney Raporları / Related Test Reports : TSE / 11/11/2022 - 359780
Özet Açıklama / Summary Explanation : Firma tarafından gönderilen numune(ler) yukarıda atıf yapılan raporun(ların) verildiği laboratuvar(lar)da test edilmiş ve yukarıda atıf yapılan deney raporunda(larında) uygulanan ilgili standart(lar) / metot(lar) / teklif(ler) / yönetmelik(ler) maddesine(lerine) göre uygunluk bulunmuştur. *The sample(s) submitted by the company has been tested in laboratory(ies) where the above mentioned report(s) are given and found to comply with the relevant clause(s) of the applied standard (s) / method (s) / communique (s) / regulation (s) in test report(s) above mentioned*

Sonuç / Result

Yangına Dayanım Sınıfı: INTEGRITY 50 minutes

Fire Resistance Class: INTEGRITY 50 minutes

** JOINT STABILITY 30 minutes*

e-imzasıla-signed

SENCER GÜVEN
YAPI MALZEMELERİ YANGIN VE AKUSTİK LABORATUVARI MÜDÜRLÜĞÜ
DIRECTORATE OF CONSTRUCTION MATERIALS FIRE AND ACOUSTICS LABORATORY

Sertifika No. / Certificate No : LAB17-05/355
Veriliş Tarihi / Date of Issue : 05.03.2024
Son Geçerlilik Tarihi / Date of Expiry : 05.03.2025

Bu sertifika kimlik üzerine yukarıda atıf yapılan raporda/da bilinenler dâhilinde(ki) olup sadece deneyi yapılan numune için geçerlidir. Bu sertifika herhangi bir "Ürün Belgesi" veya "Yapısılık Belgesi" niteliğinde değildir. Bu sertifika TSE marka kullanım hakkı vermez, aynısı yerine tamamı alınmaz. This certificate was prepared upon request according to the mentioned test report(s) above and represents only tested sample(s). This certificate does not represent any "Product Certificate" or "Certificate of Conformity". This certificate does not give permission to use the brand of TSE, also does not represent the batch.

https://belgedenet.tse.org.tr/belgeDogrulama.aspx?q=ZGVtbnQ4 adresinden belgenin doğruluğunu sorgulayabilirsiniz.
Please, confirm the authenticity and validity of the certificate from the given link https://belgedenet.tse.org.tr/belgeDogrulama.aspx?q=ZGVtbnQ4

ISO/IEC 17065 CE CENELEC SI.&S egolf SAMIC eptis IEC

Efectis

EFECTIS ERA AVRASYA TEST ve BELGELENDİRME AŞ
Dilovası OSB Mahallesi Fırat Caddesi No: 18
Dilovası, Kocaeli / TÜRKİYE
www.efectis.com

DECLARATION OF TEST RESULTS
No: EEA – 2200 – 0047

The fire resistance tests were carried out for the product as described below at Efectis Era Avrasya Test Laboratory on 26.09.2022 in accordance with the test standard:

EN 1365-2:2014

"SP PIR ROOF PANEL – FR"
LOADBEARING SANDWICH PANEL ROOF/FLOOR SYSTEM

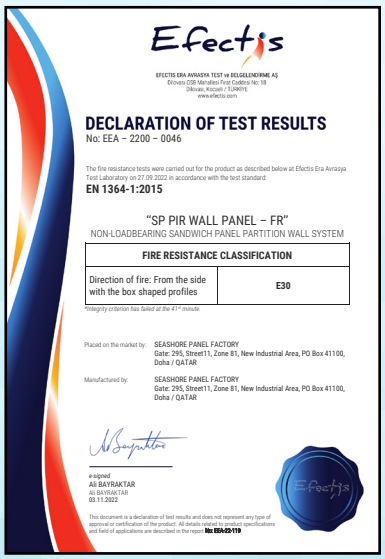
FIRE RESISTANCE CLASSIFICATION	
Direction of fire: From the side with the box shaped profiles	RE30

Placed on the market by: SEASHORE PANEL FACTORY
Gate: 295, Street11, Zone 81, New Industrial Area, PO Box 41100, Doha / QATAR

Manufactured by: SEASHORE PANEL FACTORY
Gate: 295, Street11, Zone 81, New Industrial Area, PO Box 41100, Doha / QATAR

e-signed
Ali BAYRAKTAR
Laboratory Manager
04.11.2022

This document is a declaration of test results and does not represent any type of approval or certification of the product. All details related to product specifications and field of applications are described in the report **No: EEA-22-120**



Efectis

EFECTIS ERA AVRASYA TEST ve BELGELENDİRME AŞ
Dilovası OSB Mahallesi Fırat Caddesi No: 18
Dilovası, Kocaeli / TÜRKİYE
www.efectis.com

DECLARATION OF TEST RESULTS
No: EEA – 2200 – 0046

The fire resistance tests were carried out for the product as described below at Efectis Era Avrasya Test Laboratory on 27.09.2022 in accordance with the test standard:

EN 1364-1:2015

"SP PIR WALL PANEL – FR"
NON-LOADBEARING SANDWICH PANEL PARTITION WALL SYSTEM

FIRE RESISTANCE CLASSIFICATION	
Direction of fire: From the side with the box shaped profiles	E30

**Integrity criterion has failed at the 41st minute.*

Placed on the market by: SEASHORE PANEL FACTORY
Gate: 295, Street11, Zone 81, New Industrial Area, PO Box 41100, Doha / QATAR

Manufactured by: SEASHORE PANEL FACTORY
Gate: 295, Street11, Zone 81, New Industrial Area, PO Box 41100, Doha / QATAR

e-signed
Ali BAYRAKTAR
03.11.2022

This document is a declaration of test results and does not represent any type of approval or certification of the product. All details related to product specifications and field of applications are described in the report **No: EEA-22-119**

Alcumus
ISOQAR

Certificate of Registration

This is to certify that the Management System of:

Seashore Panel Factory

Gate 295, Street 11, Zone 81, P.O. Box 41100, New Industrial Area, Doha, Qatar

has been approved by Alcumus ISOQAR and is compliant with the requirements of:

ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

Certificate Number:	18225-Q1S-001
Certificate Number:	18225-E1S-001
Certificate Number:	18225-OHS-001
Initial Registration Date:	23 September 2019
Previous Expiry Date:	23 September 2022
Recertification Date:	13 – 16 July 2022
Re-issue Date:	29 September 2022
Current Expiry Date:	23 September 2025

Scope of Registration:

Manufacturing of Roof & Wall Insulated Panels & Claddings

Signed:
Alyn Franklin, Chief Executive Officer
(on behalf of Alcumus ISOQAR)

This certificate will remain current subject to the company maintaining its system to the required standard. This will be monitored regularly by Alcumus ISOQAR. Further clarification regarding the scope of this certificate and the applicability of the relevant standards' requirement may be obtained by consulting Alcumus ISOQAR.

QS22-962

IAF

Alcumus ISOQAR Limited, Alcumus Certification, Cobra Court, 1 Blackmoor Road, Stretford, Manchester M32 0QY.
T: 0161 865 3699 F: 0161 865 3685 E: isoqarenquiries@alcumusgroup.com W: www.alcumusgroup.com/isoqar
This certificate is the property of Alcumus ISOQAR and must be returned on request.

THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS

In accordance with UKAS accreditation to ISO/IEC 17065
Certification is Hereby Granted

to

Seashore Panel Factory W.L.L.
Gate 295, Street 11, Zone 81, New Industrial Area,
P.O. Box 41100, Doha, Qatar

for

"SP 38/200"
Metal-faced Polyisocyanurate (PIR)
Core Sandwich Panel
(Test Method: ASTM E84-22)

which, subject to limitations described on the following pages and continued listing on www.tbwcert.com, complies with Product Certification Scheme
SD03 Exterior Wall Assemblies, Curtain Walls, Building Materials, Products & Assemblies

In witness whereof, this Certificate is issued this 18th day of September 2023

Sandy Dweik
Chief Executive Officer

Nicholas Purcell
Director of Certification

Certificate Number: TBW0300963
Initial registration: September 18, 2023 Issued: September 18, 2023 Expiration: September 17, 2026
File Name: VR060_CRT_SD03RX_SP38-200_Issue1_(f) Issue 1

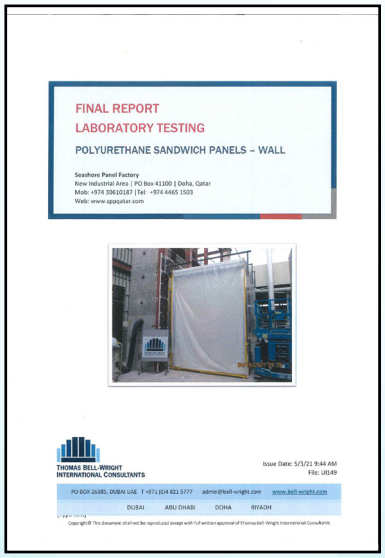
This certificate and schedules are held in force by regular Factory Inspection by Thomas Bell-Wright International Consultants (TBWIC). Refer to www.tbwcert.com or contact TBWIC Certification Division to validate the current status of Certification. This certificate remains the property of Thomas Bell-Wright International Consultants, PO Box 241001, Dubai, UAE. Tel: +971 4 8070777, Email: certificates@bell-wright.com
Web: www.bell-wright.com
This document must not be reproduced, except in its entirety and with the express permission of Thomas Bell-Wright International Consultants
F 19 Scheme Certificate Issue 7 Issued Feb 2020

Certificates

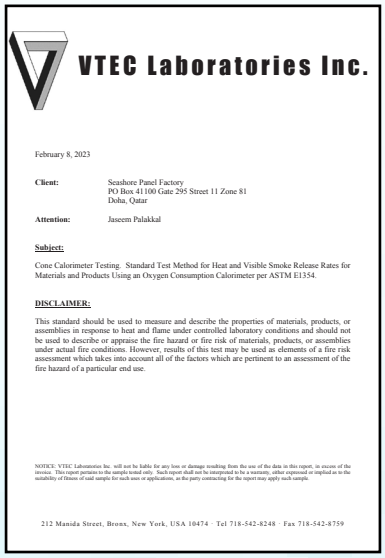
THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS
In accordance with UKAS accreditation to ISO/IEC 17065
Certification is Hereby Granted
to
Seashore Panel Factory W.L.L.
Gate 295, Street 11, Zone 81, New Industrial Area,
P.O. Box 41100, Doha, Qatar
for
"SP Concealed" and "SP Cold Store"
Metal-faced Polyisocyanurate (PIR) Core
Sandwich Panels
(Test Method: ASTM E84-21a)
which, subject to limitations described on the following pages and continued listing on www.tbwcert.com, complies with Product Certification Scheme
SD03 Exterior Wall Assemblies, Curtain Walls, Building Materials, Products & Assemblies
In witness whereof, this Certificate is issued this 28th day of April 2023
Sandy Dwelk
Chief Executive Officer
Nicholas Purcell
Director of Certification
Certificate Number: TBW0300921
Initial registration: April 28, 2023 Issued: April 28, 2023 Expiration: April 27, 2026
File Name: VX060_CRT_SD03RX_SPCP_Issue1_(f) Issue 1

THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS
In accordance with UKAS accreditation to ISO 17065
Certification is Hereby Granted
to
Seashore Panel Factory W.L.L.
Gate 295, Street 11, Zone 81, New Industrial Area,
P.O. Box 41100, Doha, Qatar
for
"SP Concealed Panel"
100 mm thick Polyisocyanurate (PIR)
Sandwich Panel
(Test Method: ASTM E84-19a)
which, subject to limitations described on the following pages and continued listing on www.tbwcert.com, complies with Product Certification Scheme
SD03 Exterior Wall Assemblies, Curtain Walls, Building Materials, Products & Assemblies
In witness whereof, this Certificate is issued this 23rd day of February 2023
Sandy Dwelk
Chief Executive Officer
Nicholas Purcell
Director of Certification
Certificate Number: TBW0300572
Initial registration: February 23, 2023 Issued: February 23, 2023 Expiration: February 22, 2026
File Name: XA051_CRT_SD03RX_100mm_Issue2_572_(f) Issue 2

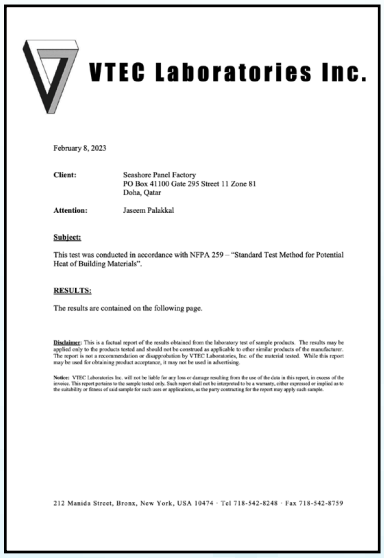
THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS
In accordance with UKAS accreditation to ISO 17065
Certification is Hereby Granted
to
Seashore Panel Factory W.L.L.
Gate 295, Street 11, Zone 81, New Industrial Area,
P.O. Box 41100, Doha, Qatar
for
"SP- 38/200"
50 mm thick Polyisocyanurate (PIR)
sandwich panel
(Test Method: ASTM E84-19a)
which, subject to limitations described on the following pages and continued listing on www.tbwcert.com, complies with Product Certification Scheme
SD03 Exterior Wall Assemblies, Curtain Walls, Building Materials, Products & Assemblies
In witness whereof, this Certificate is issued this 23rd day of February 2023
Sandy Dwelk
Chief Executive Officer
Nicholas Purcell
Director of Certification
Certificate Number: TBW0300571
Initial registration: February 23, 2023 Issued: February 23, 2023 Expiration: February 22, 2026
File Name: XA051_CRT_SD03RX_50mm_Issue2_571_(f) Issue 2



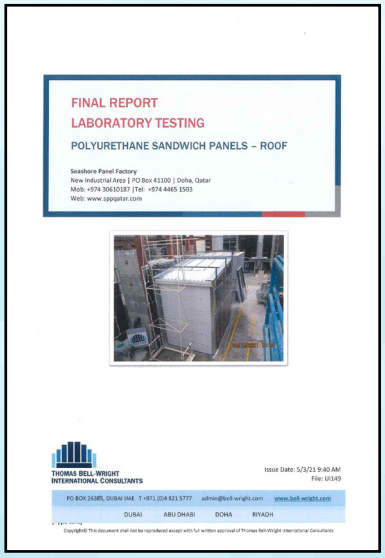
FINAL REPORT
LABORATORY TESTING
POLYURETHANE SANDWICH PANELS – WALL
Seashore Panel Factory
New Industrial Area | PO Box 41100 | Doha, Qatar
Mob: +974 30610187 | Tel: +974 4465 1503
Web: www.sppqatar.com
THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS
Issue Date: 5/3/21 9:44 AM
File: UI149
PO BOX 26385, DUBAI UAE T +971 (0)4 821 5777 admin@bell-wright.com www.bell-wright.com
DUBAI ABU DHABI DOHA RIYADH



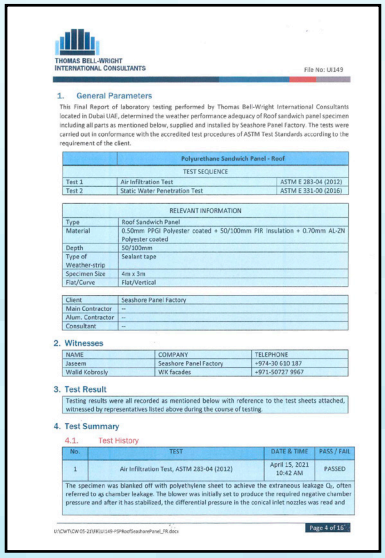
VTEC Laboratories Inc.
February 8, 2023
Client: Seashore Panel Factory
PO Box 41100 Gate 295 Street 11 Zone 81
Doha, Qatar
Attention: Jaseem Palakkal
Subject:
Cone Calorimeter Testing. Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter per ASTM E1354.
DISCLAIMER:
This standard should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.
NOTICE: VTEC Laboratories Inc. will not be liable for any loss or damage resulting from the use of the data in this report, in excess of the invoice. This report pertains to the sample tested only. Such report shall not be interpreted to be a warranty, either expressed or implied as to the suitability or fitness of said sample for such uses or applications, as the party contracting for the report may apply such sample.
212 Manida Street, Bronx, New York, USA 10474 · Tel 718-542-8248 · Fax 718-542-8759



VTEC Laboratories Inc.
February 8, 2023
Client: Seashore Panel Factory
PO Box 41100 Gate 295 Street 11 Zone 81
Doha, Qatar
Attention: Jaseem Palakkal
Subject:
This test was conducted in accordance with NFPA 259 – "Standard Test Method for Potential Heat of Building Materials".
RESULTS:
The results are contained on the following page.
Disclaimer: This is a factual report of the results obtained from the laboratory test of sample products. The results may be applied only to the products tested and should not be construed as applicable to other similar products of the manufacturer. The report is not a recommendation or disapprobation by VTEC Laboratories, Inc. of the material tested. While this report may be used for obtaining product acceptance, it may not be used in advertising.
Notice: VTEC Laboratories Inc. will not be liable for any loss or damage resulting from the use of the data in this report, in excess of the invoice. This report pertains to the sample tested only. Such report shall not be interpreted to be a warranty, either expressed or implied as to the suitability or fitness of said sample for such uses or applications, as the party contracting for the report may apply such sample.
212 Manida Street, Bronx, New York, USA 10474 · Tel 718-542-8248 · Fax 718-542-8759



FINAL REPORT
LABORATORY TESTING
POLYURETHANE SANDWICH PANELS – ROOF
Seashore Panel Factory
New Industrial Area | PO Box 41100 | Doha, Qatar
Mob: +974 30610187 | Tel: +974 4465 1503
Web: www.sppqatar.com
THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS
Issue Date: 5/3/21 9:40 AM
File: UI149
PO BOX 26385, DUBAI UAE T +971 (0)4 821 5777 admin@bell-wright.com www.bell-wright.com
DUBAI ABU DHABI DOHA RIYADH



THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS
File No: UI149
1. General Parameters
This Final Report of laboratory testing performed by Thomas Bell-Wright International Consultants located in Dubai UAE, determined the weather performance adequacy of Roof sandwich panel specimen including all parts as mentioned below, supplied and installed by Seashore Panel Factory. The tests were carried out in conformance with the accredited test procedures of ASTM Test Standards according to the requirement of the client.

Polyurethane Sandwich Panel - Roof		
TEST SEQUENCE		
Test 1	Air Infiltration Test	ASTM E 283-04 (2012)
Test 2	Static Water Penetration Test	ASTM E 331-00 (2016)

RELEVANT INFORMATION	
Type	Roof Sandwich Panel
Material	0.50mm PPGI Polyester coated + 50/100mm PIR insulation + 0.70mm AL-ZN Polyester coated
Depth	50/100mm
Type of Weather-strip	Sealant tape
Specimen Size	4m x 3m
Flat/Curve	Flat/Vertical

Client	Seashore Panel Factory
Main Contractor	--
Alum. Contractor	--
Consultant	--

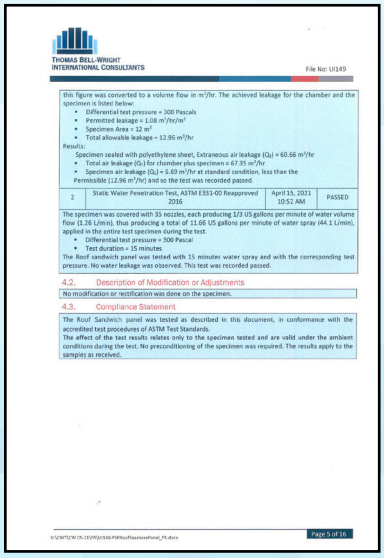
2. Witnesses

NAME	COMPANY	TELEPHONE
Jaseem	Seashore Panel Factory	+974-30 610 187
Walid Kebrosly	WK facades	+971-50727 3967

3. Test Result
Testing results were all recorded as mentioned below with reference to the test sheets attached, witnessed by representatives listed above during the course of testing.
4. Test Summary
4.1. Test History

No.	TEST	DATE & TIME	PASS / FAIL
1	Air Infiltration Test, ASTM 283-04 (2012)	April 15, 2021 10:42 AM	PASSED

The specimen was blanked off with polyethylene sheet to achieve the extraneous leakage Q_e, often referred to as chamber leakage. The blower was initially set to produce the required negative chamber pressure and after it has stabilized, the differential pressure in the conical inlet nozzles was read and
Page 4 of 16



THOMAS BELL-WRIGHT INTERNATIONAL CONSULTANTS
File No: UI149
this figure was converted to a volume flow in m^3/hr. The achieved leakage for the chamber and the specimen is listed below:
- Differential test pressure = 300 Pascals
- Permitted leakage = 1.08 $m^3/hr/m^2$
- Specimen Area = 12 m^2
- Total allowable leakage = 12.96 m^3/hr

Results:
Specimen sealed with polyethylene sheet, Extraneous air leakage (Q_E) = 60.66 m^3/hr
- Total air leakage (Q_T) for chamber plus specimen = 67.35 m^3/hr
- Specimen air leakage (Q_S) = 6.69 m^3/hr at standard condition, less than the Permissible (12.96 m^3/hr) and so the test was recorded passed.

2	Static Water Penetration Test, ASTM E331-00 Reapproved 2016	April 15, 2021 10:52 AM	PASSED

The specimen was covered with 35 nozzles, each producing 1/3 US gallons per minute of water volume flow (1.26 L/min), thus producing a total of 11.66 US gallons per minute of water spray (44.1 L/min), applied in the entire test specimen during the test.
- Differential test pressure = 300 Pascal
- Test duration = 15 minutes

The Roof sandwich panel was tested with 15 minutes water spray and with the corresponding test pressure. No water leakage was observed. This test was recorded passed.
4.2. Description of Modification or Adjustments
No modification or rectification was done on the specimen.
4.3. Compliance Statement
The Roof Sandwich panel was tested as described in this document, in conformance with the accredited test procedures of ASTM Test Standards.
The affect of the test results relates only to the specimen tested and are valid under the ambient conditions during the test. No preconditioning of the specimen was required. The results apply to the samples as received.
Page 5 of 16

Seashore Panel Factory
Qatar

Gate: 295, Street 11, Zone 81,
New Industrial Area, Doha

www.sppqatar.com