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INTRODUCTION

PANELS TECHNOLOGY FACTORY (TECHNOPANEL) is a company that is engaged in the production and manufacture of ACP – Aluminum Composite Panel products or wall claddings. Throughout this type of industry, we are proud to be the first ACP manufacturing company in KSA.

Since the year 2006, we have been establishing the growing market in ACP requirement on modern architecture and design. The aim of our business is to meet the constant demand for ACP products as we expand our sales network from local to the international market.

As leaders in the industry, we strive to achieve a high level of competitiveness by expanding our operations. Our main office is located in the city of Riyadh that covers a land area of 3,800 m². Then, about 60 km south of Riyadh is our operations hub that covers a land area of 8,000 m².

Furthermore, we have increased our production capacity to 5 million m² annually, using the latest advancements in ACP technology. Therefore, we can ensure our clients our full commitment to deliver their needs with remarkable quality.

The quality driven standards of TECHNOPANEL enables us to maintain our stature through acquiring the ISO 9001:2015 Quality Management System (QMS), participated in drafting the Saudi Arabian Standard (SASO) 2752 for ACP, conformance with the American Society for Testing and Materials (ASTM) ISO Standard and specimen samples tested by the SGS International Laboratory

TECHNOPANEL's commitment to innovate and serve customers is to cater the interior and exterior wall claddings, offering a broad selection of colors, textures and elegant finishing. The products we offer also come with various sizes and dimension to accommodate the requirements of our customers. It is our pride to offer our customers a "20 year guarantee of quality coating" on the material surface.

The combination of expertise and aggressiveness of TECHNOPANEL's team can continually exceed our customers' expectation, value for money and on-time delivery.

تكنوبانل تنشئ أول مجمع صناعي لألواح الألمنيوم المعزولة لتكسية الجدران وأعمال الديكور الخارجي والداخلي بمدينة الرياض. ليصبح بذلك المصنع الأول لإنتاج هذه الألواح وذلك لتلبية الطلب المتزايد من قبل المصممين المعماريين ومسؤولي صناعة البناء بالمملكة

ولذلك فإننا سخرنا جهودنا وطاقاتنا لعمل آليات جديدة وتجهيزات إضافية وإستخدام طاقات بشرية على أعلى مستويات المهارة والجودة لإنتاج هذا المنتج واليوم تمتلك تكنوبانل خط الإنتاج الأول لصناعة الألواح الألمنيوم ليتوافق الإنتاج مع المواصفات العالمية الأمريكية والغربية والصينية وتمتلك تكنوبانل أجهزة متطورة ومتميزة لتواكب متطلبات السوق السعودي والعالمي

FACTS AND FIGURE

- Foundation - PANELS TECHNOLOGY FACTORY (TECHNOPANEL) is the first Aluminum Composite Panel (ACP) processing facility in the Kingdom that was established since year 2006.
- Vision - The core of our business is to be the prime contributors of modern architectural design in the building industry by supplying the most innovative types of ACP products.
- Quality Oriented - Our company has been certified with ISO 9001:2015 Quality Management System (QMS).
- Technical Contribution - We are a major participant in drafting the Saudi Arabian Standard (SASO 2752) for ACP – interior and exterior wall claddings.
- Quality Assurance - Conformance with the American Society for Testing and Materials and specimens that are tested by International Laboratories
- Growth - Leader in the local market and expanding our network through product exports to the neighboring countries such as Egypt, Syria, Qatar, Bahrain, Oman, Yemen, Kuwait, Jordan, Lebanon, New Guinea and Congo.
- Durability - We offer "20 Years Guarantee of Quality Coating".
- Capability - Using the latest advancements in ACP technology, we have an annual production capacity of 5 million m^2 .
- Development – The main office and logistics center is situated in the city of Riyadh and established a large scale operations facility 60 km north of Riyadh.



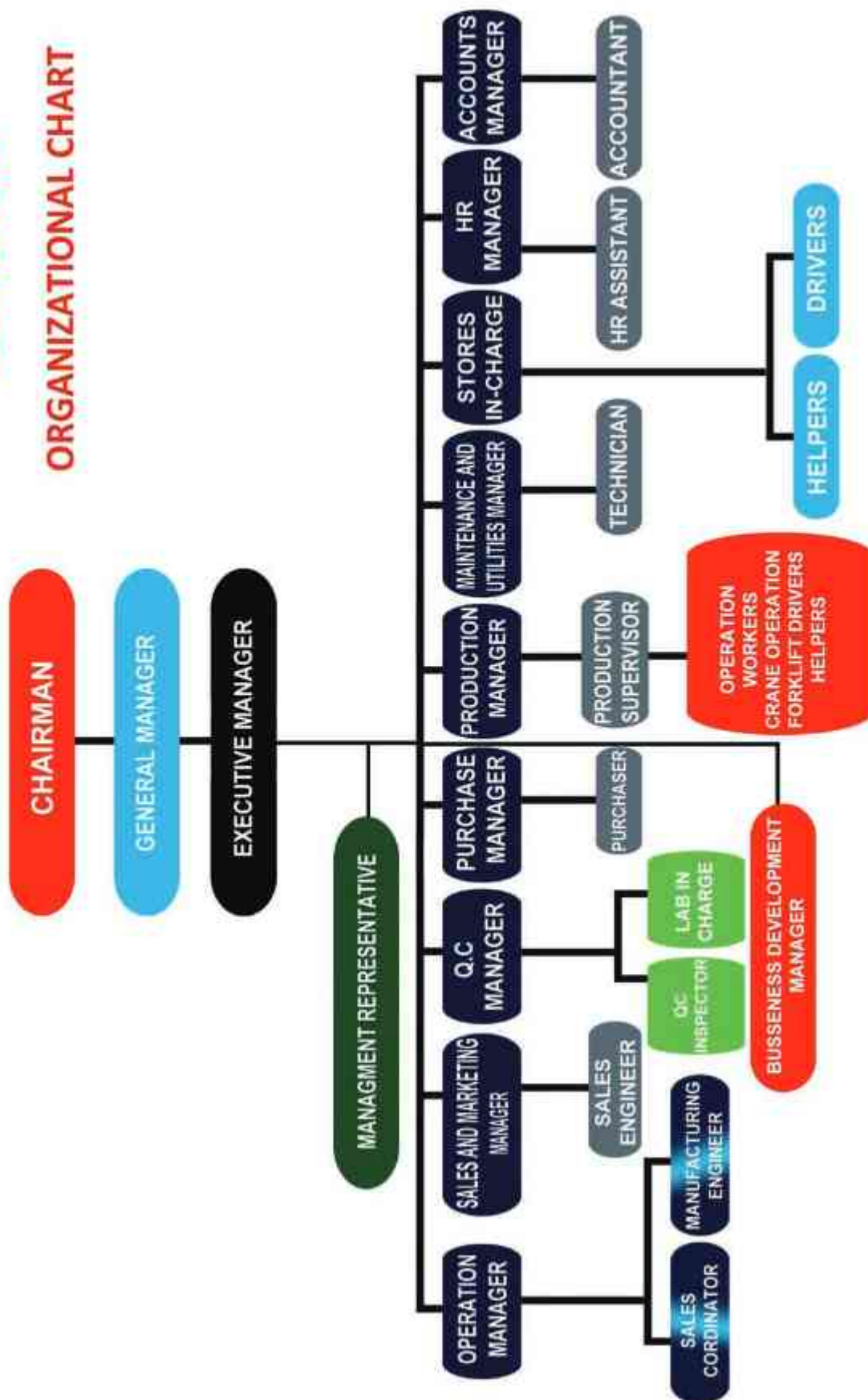
- لقد تم إنشاء مصنع تقنية الألواح (تكنوبانل) في ٢٠٠٥ / ٥ / ٥ م .
- أول مصنع ألواح معزولة يحصل على علامة الجودة السعودية ساسو .
- الإنتاج وفقا للمواصفات القياسية السعودية ساسو ٢٧٥٢ / ٢٠١٦ .
- التصدير للعديد من الدول الصديقة كمصر وسوريا وقطر والكويت واليمن والاردن ولبنان وغينيا والكونغو والسودان .
- المصنع الوحيد في المملكة العربية السعودية والذي يعطي ضمان لمدة ٢٠ عاما ضد تغير الألوان وتفكك الصفائح .
- تم شراء وتركيب خط الإنتاج الثاني وفق أحدث تقنيات صناعة الألواح المعزولة بالعالم . وقد بدأ أول إنتاج له في يناير ٢٠٠٩ و الخط الثالث عام ٢٠١٤ والخط الرابع عام ٢٠١٨ .
- والآن يمتلك تكنوبانل الخط السابع وفق أحدث التقنيات في صناعة ألواح الألمنيوم المعزولة والمقاومة للحريق .
- المصنع الوحيد بالمملكة الذي يوجد لديه مختبر للجودة لتطبيق معايير الجودة والسلامة .
- المصنع الوحيد الذي يقوم باستخدام فيلم الحماية من شركة (بولي فيلم - ألمانيا) بمقاومة الأشعة البنفسجية لمدة ١٢ شهر من تاريخ التركيب .

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ORGANIZATIONAL CHART



PANELS TECHNOLOGY FACTORY (TECHNOPANEL)

INTEGRATED MANAGEMENT SYSTEM POLICY

We are committed to provide excellent products of

ALUMINUM COMPOSITE PANELS

We strive to achieve this by:

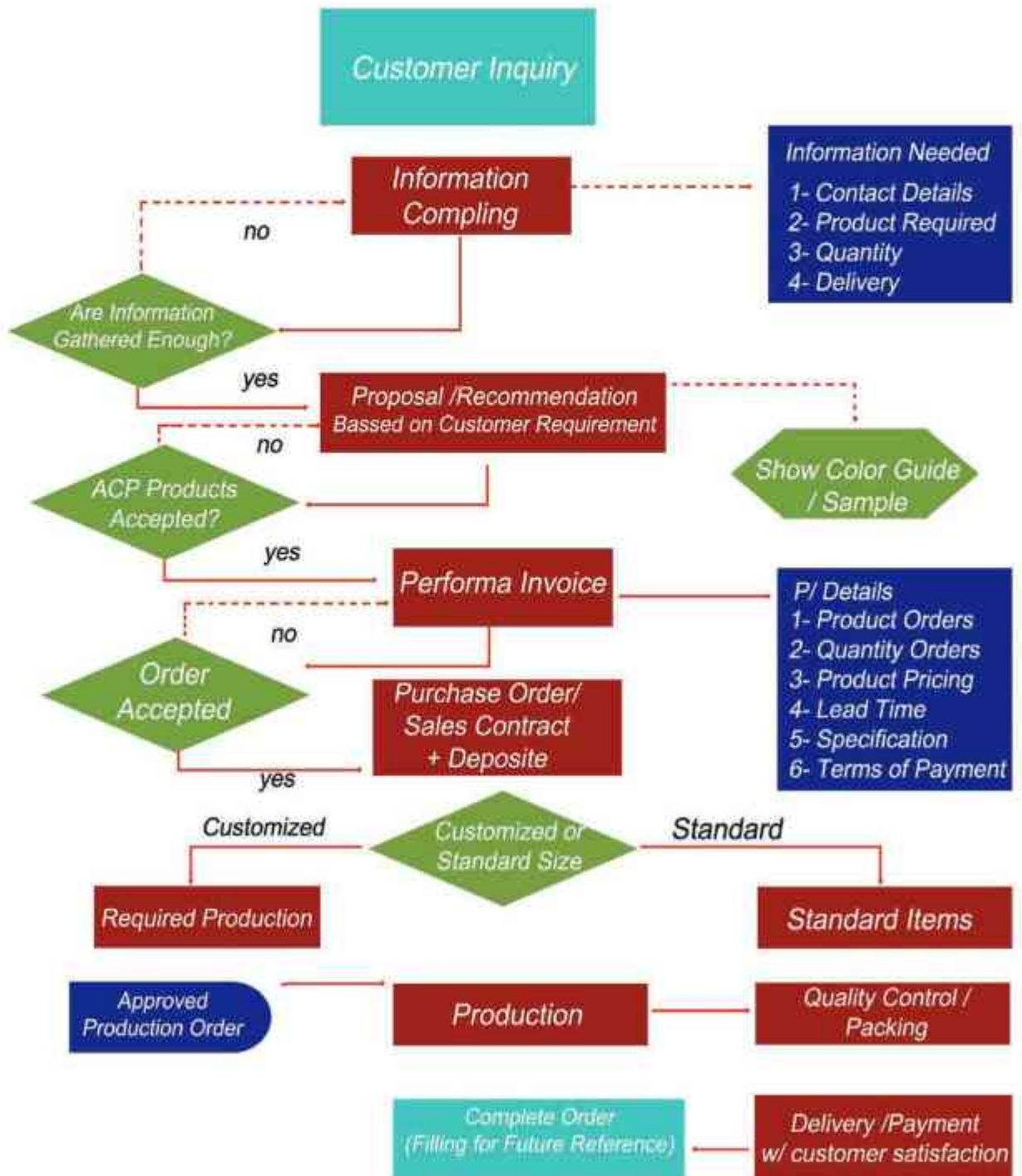
- ❖ Compliance with all applicable legal and other requirements.
- ❖ Continual improvement in quality, environmental, health and safety performance with the ultimate goal of zero complaints, zero injuries and zero emissions of toxic and hazardous materials.
- ❖ Design and operation of our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public.
- ❖ Maintain an Integrated Management System satisfying requirements which include ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 standards.
- ❖ Encouraging opportunities for continual improvement in the effectiveness of Quality, Occupational Health, Safety and Environmental systems in all areas of our business management.
- ❖ Effective communication of this policy to all employees and contractors of the company.
- ❖ Prevention of injury or ill health to people, and pollution to the environment.
- ❖ Conducting an annual management review to monitor the overall effectiveness and suitability of our Integrated Management System, including this policy, establishing and reviewing of objectives, and agreeing appropriate changes with senior management. This policy will be implemented through the systematic application of good engineering practice and quality management to all activities, together with the active involvement and conscious improvement of all staff.

Mr. Abdul Rahman Saad Bin Rasheed

Deputy General Manager

TECHNOPANEL

TECHNOPANEL CUSTOMER SERVICE FLOW CHART



FR A2 PROCESS AND PRODUCTION LINE

The most recent innovations on ACP machine technology with high-speed capacity that can produce from 800 mm to 1600 mm in width and 4 mm to 8 mm in thickness which can guarantee notable quality and high product performance.



- ❶ A2 Core Uncoil Station
- ❷ FR A2 Core Joint Station
- ❸ FR A2 Core Heating & Laminating Oven Station
- ❹ Uncoiling Section
- ❺ Composite Section
- ❻ Cooling Section
- ❼ Protective Film Station
- ❽ Cutting Station
- ❾ Unloading Station

TECHNOPANEL

FR A2 - ACP TECHNICAL DATA SHEET

Product Description

TECHNOPANEL Aluminum Composite Panel (A.C.P) FR A2 is high performance fire retardent , consisting of two sheets of aluminum bonded to each side of a laminating hallogen free compound core material made of $Mg(OH)_2$ and $Al(OH)_3$ which are inorganic compound that have non fire properties , lowest smoke generation.

Product Composition

TECHNOPANEL FRA2 -ACP is basically composed of the following materials:



1. POLYVINYLIDENE DIFLUORIDE (PVDF) COATING – paint for the front aluminum sheet with high non-reactive and pure fluouopolymer coating used in applications requiring the highest purity, strength, resistance to solvents, acids, bases and heat, and low smoke generation during a fire event. PVDF is not susceptible to attack by UV light, so the resin does not break down on exposure to sunlight which gives a very high resistance to fading, chalking and long-term retention of gloss and color. with coating thickness more than (32) micron

2. ALUMINUM SHEETS - two sheets of aluminum that is bonded to each side of a hallogen free fire retardent core. They have excellent tensile strength, yield strength and elongation rate and with high resistance to corrosion. ,and highest fire resistant performance , which can quality NFPA - 285 test

Type of Alloy	3003
Thickness	0.50 mm

3. Hallogen Free Fire retardant core the main core of Technopanel FR A2 - ACP that have highest fire resisting charecterstics. FR A2 ACP only made up of inorganic compound $Mg(OH)_2$ and $Al(OH)_3$ both compounds are non fire and lowest smoke generation.

4. POLYESTER COATING – a fifteen (15) micron polyester-based coating for the back aluminum sheet that serves as an aid in protecting **TECHNOPANEL** ACP from risks of exposure to corrosion on the back surface of the panel after installation.

5. PROTECTIVE FILM - The decorative surface is being covered by an 80 micrometer thick self-adhesive protective film to protect it from scratch and any possible damages during processing, storage and installation. It is composed of two layers, the White surface with **TECHNOPANEL** logo on the outer side to deflect ultraviolet rays and the Black surface from the inner side to prevent ultraviolet rays from penetrating the inner surface.

❑ Product Dimension

1. Thickness : 4 mm to 8.0 mm
2. Width : 800 to 1600 mm
3. Length : 5800 mm

Provision: or under customer's requirement between 2000 to 6000 mm.

Note: Technopanel's standard stock is 5800 x 1240 mm (L x W).

4. Tolerances

Size	Permissible Tolerance
Length ,mm	±3
Width, mm	±2
Thickness, mm	±0.2
Deviation of diagonal, mm	≤5
Out of straight at sides, mm/m	≤5
Warp, mm/m	≤5

❑ Surface Visual Quality

The appearance of decorative surface shall not have any damages, irregularities and abnormalities. It shall be inspected in accordance with the appearance criteria for Aluminum Composite Panel (Outside and Inside Cladding) with maximum allowable blemishes and defects on the criteria. As per SASO ISO 4628- parts: (1 to 5.7.10/2016) part 6/2011 ,part 8/2012 and SASO ASTM

❑ Product Properties

1. Panel Weight Density

ACP Thickness (mm)	Panel Weight (kg/sq.m)
4	9.01± 0.5
5	10.3 ± 0.5
6	11.9± 0.5

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TECHNOPANEL

Coating Performance

Paint/Coating Properties				
Parameters	Test Methods	Unit	Result	Specification Limit: SASO 2752:2019
Coating thickness	SASO ISO 2360:2012	µm	39.8	≥30
Pencil hardness	SASO GSO ISO 15184:2015	-	F-3H	≥HB
Coating Flexibility (T- Bent test)	ISO 17132:2007	-	Pass	≤2 Without any cracks damage on the coating
Adhesion Grade	SASO ISO 2409:2020	Grade	0*1	≤1
Impact resistance(kg.cm)	SASO ISO 6272-2:2014	-	No cracks observed at 50 kg.cm	Shall not be any peel off and cracks
Abrasion resistance	SASO ASTM D 968:2017	Lum	>2	≥2
Stain resistance	SASO ISO 11998:2007	%	2	≤5
Chemical Resistance Properties				
Alkali resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Acid resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Oil resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Solvent resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Hot water resistance*	SASO ISO 2812-2:2014	-	Resistant	Shall be resistant
Weathering /Aging Properties				
Accelerated Weathering at 2000 hours	SASO ISO 16474-2:2015	-	No change observed	Shall have no change
Gloss Deviation*	SASO ISO 2813:2015	-	4	≤10
Salt Fog Resistance at 2000 hours	ISO 11997-1:2017	-	No change observed	Shall have no change

RESEARCH AND PERFORMANCE

PVDF Performance Against Other Coatings

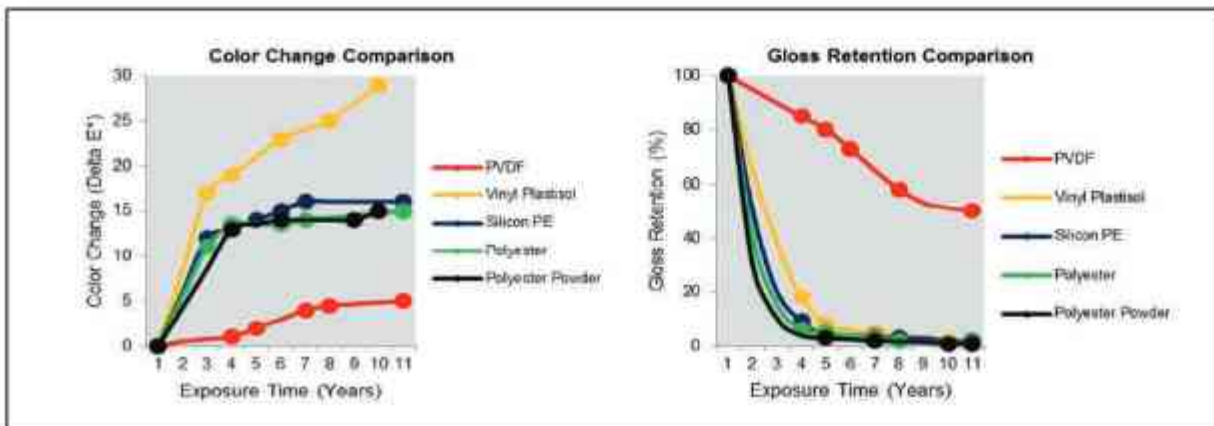
Weathering Properties	PVDF	Acrylic	Silicon Polyester	Polyester	Vinyl Plastisol	Urethane	Anodized
Color Retention	5	3	4	2	2	3	3
Gloss Retention	5	3	4	2	2	3	3
Chalking	5	3	4	2	2	3	3
Humidity Resistance	4	4	4	4	4	4	2

Physical Properties	PVDF	Acrylic	Silicon Polyester	Polyester	Vinyl Plastisol	Urethane	Anodized
Abrasion Resistance	5	3	3	2	3	4	3
Impact Resistance	5	3	3	3	5	3	3
Flexibility	5	2	2	3	5	4	2
Hardness	3	5	4	5	3	4	4

Chemical Resistance	PVDF	Acrylic	Silicon Polyester	Polyester	Vinyl Plastisol	Urethane	Anodized
Acid and Alkali	5	3	3	3	5	3	2
Oil Stain	4	3	4	4	4	3	3
Water	5	3	3	3	4	3	2

Rating Performance : (5) Highest and (1) Lowest

PVDF Exposure Test



TECHNOPANEL

FR-A2-ACP- Fire Performance Properties					
ASTM E84 – 21a: Standard Test Method for Surface Burning Characteristics of Building Materials					
Test Method	Parameter			Results	
				Actual Result	SASO Requirement
ASTM E84 – 21a	FLAME SPREAD INDEX (FSI)			5	FSI: 26 - 50
	SMOKE DEVELOPED INDEX (SDI)			20	SDI ≤ 450
BS EN ISO-1718:2018 Reaction to Fire Tests for Products - Determination of the Gross Heat of Combustion (Calorific Value)					
Test Method	Parameter		No. of tests	Results	
				Continuous parameter- mean (m)	Compliance parameter
BS EN ISO-1718:2018	PCSts ≤ 4.0 MJ/m² (for External Non-Substantial component)	Topcoat + Primer	3	0.7	Compliant
		Back coat	3	0.2	Compliant
	PCSts ≤ 3.0 MJ/kg (for Substantial component)	Aluminium Skin	0	0	Compliant
		A2 Core	3	1.4	Compliant
	PCSts ≤ 4.0 MJ/m² (for Internal Non-Substantial component)	Adhesive	3	3.6	Compliant
	PCSts ≤ 3.0 MJ/kg (For product as a whole)			1.9	Compliant
BS EN 13823:2020 Reaction to Fire Tests for Building Products — Building Products excluding Floorings exposed to the Thermal Attack by a Single Burning Item					
Test Method	Parameter		No. of tests	Results	
				Continuous parameter- mean (m)	Compliance parameter
BS EN 13823:2020	FIGRA0.2MJ ≤ 120 W/s		3	5	Compliant
	THR600s ≤ 7.5 MJ		3	0.8	Compliant
	Lateral Flame Spread < Edge of specimen		3	< Edge of specimen	Compliant
	CRITERIA for subclass "s1"				
	SMOGR, m²/s¹		3	0	Compliant
	TSP600s ≤ 50 m²		3	16	Compliant
	CRITERIA for subclass "d0"				
	Flaming droplets/Particles within 600s		3	Nil	Compliant
CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH BS EN 13501-1:2018					
Fire behavior	Smoke Production			Flaming droplets	
A2	S	t	-	d	0
Reaction to fire classification: A2 – S1, d0					

Core Thermal Properties				
Heat Deflection Temperature	SASO ISO 75-2:2014	°C	89	85 Min
Linear Thermal Expansion Coefficient	ASTM D 696:16	µm/m-°C	151	200 Max
Self-ignition temperature	SASO ASTM D1929:2015	°C	>350	343 Min
Temperature Resistance @ -50 to +80	Visual	-	No defect	-
Thermal conductivity of core, Kc	ASTM C 518-17 / BS EN ISO 6948:2007	W/mk	0.4148	-
Thermal resistance of core, Rc		m2K/W	0.0559	-
Internal surface resistance, RSI			0.13	-
External surface resistance, RSE			0.04	-
Total Thermal resistance, RT			0.2259	≥0.06
Thermal transmittance (U value)	ASTM C 518-17	W/m2 K	4.43	≤4.5
Physical and Mechanical Properties				
Drum peel strength	ASTM D1781-98 (2021)	N.mm/mm	107	≥100
180 degrees Peel Strength	SASO ISO 8510-2:2008	N/mm	9.15	≥9.0
Shear Strength	ASTM C393 / C393 M-16	MPa	23	≥22
Bending Strength	ASTM C393/C 393 M-16	MPa	109	≥100
Bend Elastic Module	ASTM C393/C 393 M-16	MPa	21856	≥20000
Acoustic Properties				
Sound absorption Factor	ISO 354:2003	-	0.042	-
Sound Transmission loss	ISO 717-1:2020	dB	25	-
Loss Factor	EN ISO 6721 Frequency range 100 - 3200 Hz	-	0.0086	-
Bending and Rigidity Properties				
Section Modulus W	DIN 53293-1982	cm3/m	1.77	-
Rigidity – Poisson's ratio	DIN 53293-1982	kNm2/m	0.31	-
Lacquering	FT-IR	-	Polyester	-

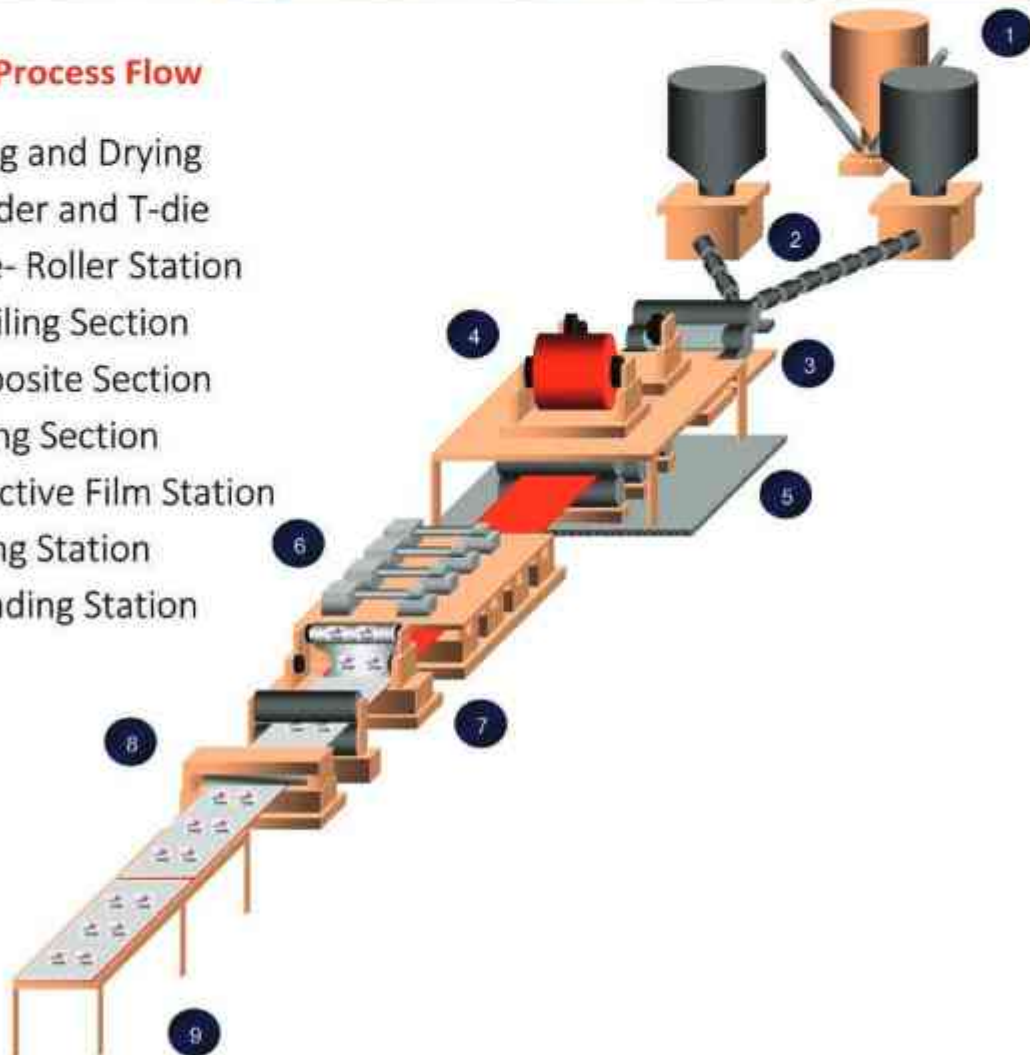
FR B1 PROCESS AND PRODUCTION LINE

The most recent innovations on ACP machine technology with high-speed capacity that can produce from 800 mm to 1600 mm in width and 4 mm to 8 mm in thickness which can guarantee notable quality and high product performance.



ACP Line Process Flow

- ① Mixing and Drying
- ② Extruder and T-die
- ③ Three- Roller Station
- ④ Uncoiling Section
- ⑤ Composite Section
- ⑥ Cooling Section
- ⑦ Protective Film Station
- ⑧ Cutting Station
- ⑨ Unloading Station



TECHNOPANEL

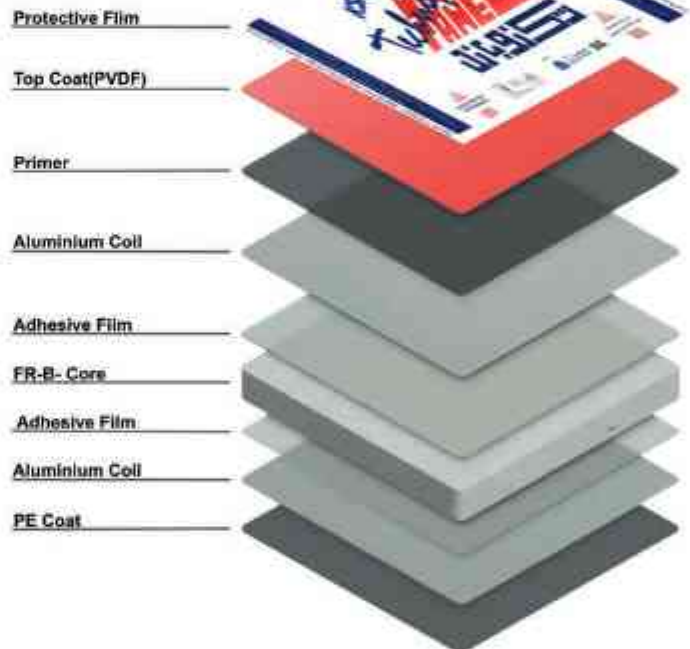
FR - B1 ACP - TECHNICAL DATA SHEET

Product Description

TECHNOPANEL Fire-Retardant Aluminum Composite Panel (FR-ACP) is a high performance product consisting of two sheets of aluminum bonded to each side of a halogen-free fire-retardant PE core. It is suitable to use for exterior and interior wall cladding applications or for buildings under renovation that are designed to reduce the risk of structural fire. It has the capability of reducing flame spread for a specified intensity and/or duration, low smoke and delays heat penetration across on it.

Product Composition

TECHNOPANEL FR-ACP is basically composed of the following materials:



1. POLYVINYLIDENE DIFLUORIDE (PVDF) COATING – paint for the front aluminum sheet with high non-reactive and pure fluoreopolymer coating used in applications requiring the highest purity, strength, resistance to solvents, acids, bases and heat, and low smoke generation during a fire event. PVDF is not susceptible to attack by UV light, so the resin does not break down on exposure to sunlight which gives a very high resistance to fading, chalking and long-term retention of gloss and color. with coating thickness more than (32) micron

2. ALUMINUM SHEETS - two sheets of aluminum that is bonded to each side of a fire retardant polyethylene core. They have excellent tensile strength, yield strength and elongation rate and with high resistance to corrosion.

Type of Alloy	3003
Thickness	0.50 mm

3. HALOGEN-FREE FIRE-RETARDANT CORE – the main core of **TECHNOPANEL** FR-ACP that it has the capability of reducing flame spread for a specified intensity and/or duration, low smoke and delays heat penetration across it. It acts as a thermal insulation barrier where the role is to turn polymer into a char, which separates the flame from the material.

There are two important components that can be used as a fire retardant core for polymer applications. These components decompose at high temperatures absorbing considerable amounts of heat in the process. In addition to behaving as a fire retardant, it is very effective as a smoke suppressant when applied to polymers such as polyethylene.

The two components are:

Mg (OH)₂ Magnesium Hydroxide or AL (OH)₃ Aluminum Hydroxide

In addition to the performance of the FRPE core, it is Halogen-free that limits the use of hazardous substances on the product. The drive for creating these products is associated with the green movement as well as health concerns. When fire breaks out and harmful substances contained in plastics are ignited, toxic fumes are released into the surrounding area. Therefore, compliance with these directives is important in the preservation of life and the environment.

4. POLYESTER COATING – a fifteen (15) micron polyester-based coating for the back aluminum sheet that serves as an aid in protecting **TECHNOPANEL** FR-ACP from risks of exposure to corrosion on the back surface of the panel after installation.

5. PROTECTIVE FILM - The decorative surface is being covered by an 80 micrometer thick self-adhesive protective film to protect it from scratch and any possible damages during processing, storage and installation. It is composed of two layers, the White surface with **TECHNOPANEL** logo on the outer side to deflect ultraviolet rays and the Black surface from the inner side to prevent ultraviolet rays from penetrating the inner surface.

Product Dimension

1. Thickness : 4 mm to 8.0 mm
2. Width : 800 to 1600 mm
3. Length : 5800 mm

Provision: or under customer's requirement between 2000 to 6000 mm.

Note: Technopanel's standard stock is 5800 x 1240 mm (L x W).

4. Tolerances

Size	Permissible Tolerance
Length ,mm	±3
Width, mm	±2
Thickness, mm	±0.2
Deviation of diagonal, mm	≤5
Out of straight at sides, mm/m	≤5
Warp, mm/m	≤5

Surface Visual Quality

The appearance of decorative surface shall not have any damages, irregularities and abnormalities. It shall be inspected in accordance with the appearance criteria for Aluminum Composite Panel (Outside and Inside Cladding) with maximum allowable blemishes and defects on the criteria.

Product Properties

1. Panel Weight Density

ACP Thickness (mm)	Panel Weight (kg/sq.m)
4	6.90 ± 0.5
5	8.30 ± 0.5
6	9.70 ± 0.5

Paint/Coating Properties				
Parameters	Test Method	Unit	Result	Specification Limit: SASO 2752:2019
Coating thickness	SASO ISO 2360:2012	µm	43.1	≥30
Pencil hardness	SASO GSO ISO 15184:2015	-	F-3H	≥HB
Coating Flexibility (T- Bent test)	ISO 17132:2007	-	Pass	≤2 Without any cracks damage on the coating
Adhesion Grade	SASO ISO 2409:2020	Grade	0*1	≤1
Impact resistance(kg.cm)	SASO ISO 6272-2:2014	-	No cracks observed at 50 kg.cm	Shall not be any peel off and cracks
Abrasion resistance	SASO ASTM D 968:2017	Lum	>2	≥2
Stain resistance	SASO ISO 11998:2007	%	2	≤5
Chemical Resistance Properties				
Alkali resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Acid resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Oil resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Solvent resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Hot water resistance*	SASO ISO 2812-2:2014	-	Resistant	Shall be resistant
Weathering /Aging Properties				
Accelerated Weathering at 2000 hours	SASO ISO 16474-2:2015	-	No change observed	Shall have no change
Gloss Deviation*	SASO ISO 2813:2015	-	4	≤10
Salt Fog Resistance at 2000 hours	ISO 11997-1:2017	-	No change observed	Shall have no change

TECHNOPANEL

Core Thermal Properties				
Heat Deflection Temperature	SASO ISO 75-2:2014	°C	91	85 Min
Linear Thermal Expansion Coefficient	ASTM D 696:16	µm/m-°C	148	200 Max
Self-ignition temperature	SASO ASTM D1929:2015	°C	>350	343 Min
Temperature Resistance @ -50 to +80	Visual	-	No defect	-
Thermal conductivity of core, Kc	ASTM C 518-17 / BS EN ISO 6946:2007	W/mk	0.3248	-
Thermal resistance of core, Rc		m2K/W	0.0828	-
Internal surface resistance, RSI			0.13	-
External surface resistance, RSE			0.04	-
Total Thermal resistance, RT			0.2528	≥0.06
Thermal transmittance (U value)	ASTM C 518-17	W/m2.K	3.96	≤4.5
Physical and Mechanical Properties				
Drum peel strength	ASTM D1781-98 (2021)	N.mm/mm	109	≥100
180 degrees Peel Strength	SASO ISO 8510-2:2008	N/mm	9.85	≥9.0
Shear Strength	ASTM C393 / C393 M-16	MPa	25	≥22
Bending Strength	ASTM C393/C 393 M-16	MPa	113	≥100
Bend Elastic Module	ASTM C393/C 393 M-16	MPa	22045	≥20000
Acoustic Properties				
Sound absorption Factor	ISO 354:2003	-	0.046	-
Sound Transmission loss	ISO 717-1:2020	dB	24	-
Loss Factor	EN ISO 6721 Frequency range 100 - 3200 Hz	-	0.0068	-
Bending and Rigidity Properties				
Section Modulus W	DIN 53293-1982	cm3/m	1.82	-
Rigidity – Poisson's ratio	DIN 53293-1982	kNm2/m	0.34	-
Lacquering	FT-IR	-	Polyester	-

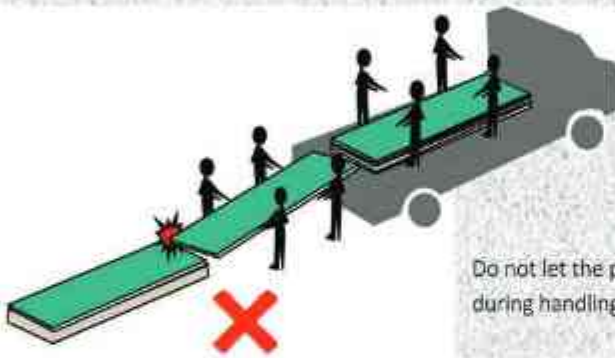
FR-B1-ACP- Fire Performance Properties				
ASTM E84 – 21a: Standard Test Method for Surface Burning Characteristics of Building Materials				
Test Method	Parameter		Results	
			Actual Result	SASO Requirement
ASTM E84 – 21a	FLAME SPREAD INDEX (FSI)		10	FSI ≤ 75
	SMOKE DEVELOPED INDEX (SDI)		30	SDI ≤ 450
BS EN 11925-2: 2020 - Ignitability of products subjected to direct impingement of flame.				
Test Method	Parameter	No. of tests	Results	
			Continuous parameter- mean (m)	Compliance parameter
BS EN 11925-2: 2020	Fs ≤ 150mm within 60 seconds	12	Fs ≤ 150mm	Compliant
	Ignition of filter paper		NI	Compliant
BS EN 13823:2020 Reaction to Fire Tests for Building Products – Building Products excluding Floorings exposed to the Thermal Attack by a Single Burning Item				
Test Method	Parameter	No. of tests	Results	
			Continuous parameter- mean (m)	Compliance parameter
BS EN 13823:2020	FIGRA0.2MJ ≤ 120 W/s	3	15	Compliant
	THR600s ≤ 7.5 MJ	3	1.6	Compliant
	Lateral Flame Spread < Edge of specimen	3	< Edge of specimen	Compliant
	CRITERIA for subclass "s1"			
	SMOGR0.1m³ ≤ 0.1	3	0	Compliant
	TSP600s ≤ 50 m³	3	15	Compliant
	CRITERIA for subclass "d0"			
	Flaming droplets/Particles within 800s	3	NI	Compliant
CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH BS EN 13501-1:2018				
Fire behavior	Smoke Production		Flaming droplets	
B	S	1	d	0
Reaction to fire classification: B – S1, d0				

HANDLING, TRANSPORTATION AND STORAGE

Carefully unload the panels from the delivery truck. If unloading is done manually, lift two (2) sheets of panel in this suggested method where the protective films are both facing each side thereby protecting the inner surface and exposing the back surface of the panel.

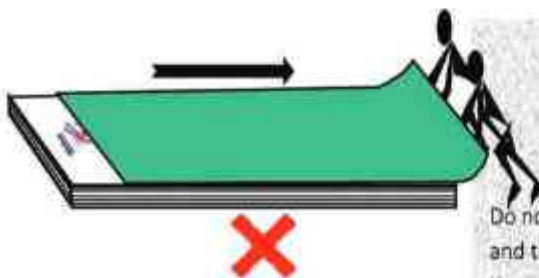
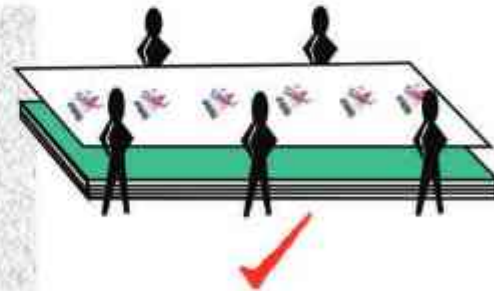
The recommended number of persons lifting the standard length (5.80 m) is at least four (4) persons in the truck and four (4) persons near the truck for transporting the panels.

Whenever a forklift or crate is used for shorter length panels, ensure that it has the capability to carry the panels and pallet safely. The panel weight is about 5.5 kg/m².



Do not let the panels hit hard objects during unloading from the truck or during handling as it may damage the side, surface and corners.

Lift the panel/s during transferring or handling.



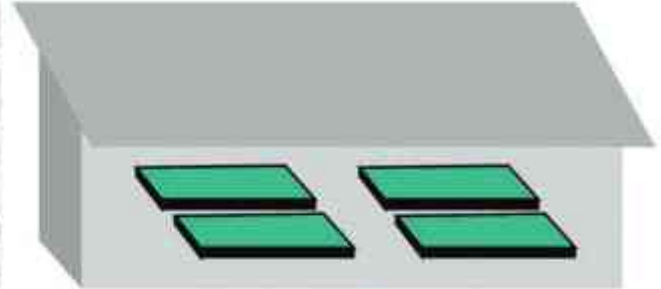
Do not pull the panel/s as it may damage or scratch any part of its surface and the other panel especially if it has any foreign material between them.

TECHNOPANEL

Keep the panels in a clean environment, normal room condition and at a flat horizontal position.

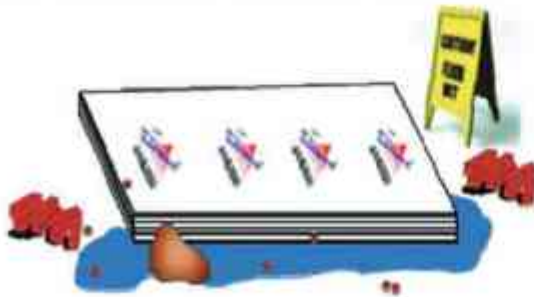
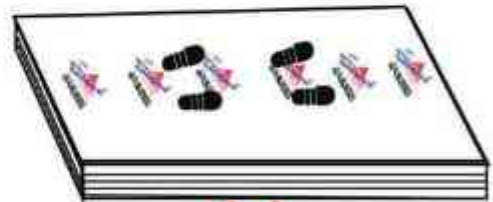
Arrange the topmost panel's backside surface in top position.

Storage should not be in a crowded or with high activity areas and must free from potential collision, sand, stones and materials that may cause damage or scratch.



Do not store the panel in vertical or at an inclined position.

Do not step on the panel. It may cause scratches, deformation or damage on the decorative surface especially if the footwear has sharp objects underneath.



Do not store the panels with oil & dirt, sand or any wet environment. It may cause damage or stain if exposed under these conditions.

ACP FABRICATION TECHNIQUES AND EQUIPMENT

Cutting Method

Though customized sizes can be made according to necessity, it is also common to perform cutting to go well with the needs of the project. Sawing and routing panels are relatively easy processes that can be done with ordinary commercial metal and woodworking equipment.

Typical cutting tools can be used for cutting with hard alloy blades. Saw blades and router bits are available through independent distributors who handle cutting tools. But for best cutting results, it is more suitable to use an automatic cutting machine.

Cutting Machine



CNC Grooving and Cutting Machine

This machine is able to grooving, cutting, perforating and 3D drawing on the ACP sheets.



CNC Grooving and
Cutting Machine



TECHNOPANEL

A grooving machine (specialized or portable) is used to fabricate panels. Choose the available cutters for grooving according to the design requirement that can either be circular/arc, V-shaped or straight groove cutters.

Note: In most applications, angle cutting is done after grooving to trim out the excess portion on the panel.

It is strongly recommended to settle with at least 0.3 mm thickness remaining polyethylene material during grooving.

Note: For FR-ACP, it is recommended at least 0.5 mm thickness of polyethylene.

Types of Grooving / Router Blade:

V-shaped Grove



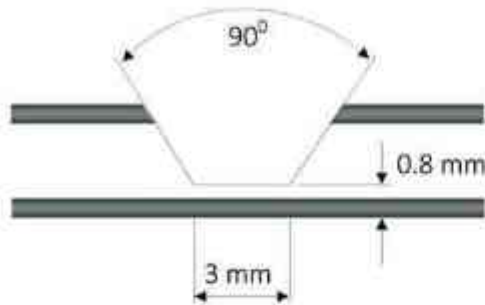
Circular Grove



Straight Grove



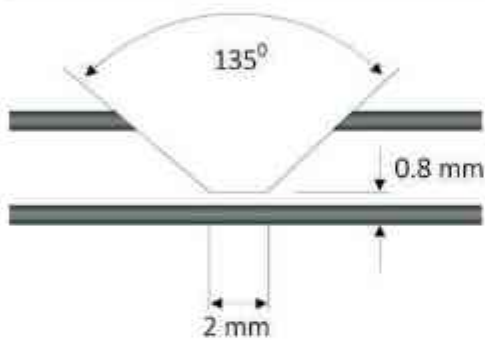
Grooving and Folding Techniques:



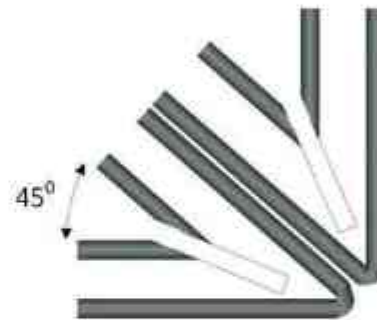
V-shaped 90° Groove



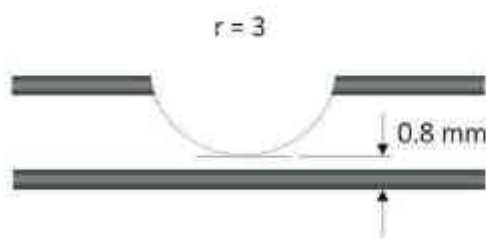
V-shaped 90° Groove if folded up to 90°



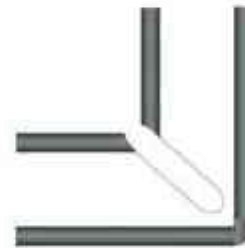
V-shaped 135° Groove



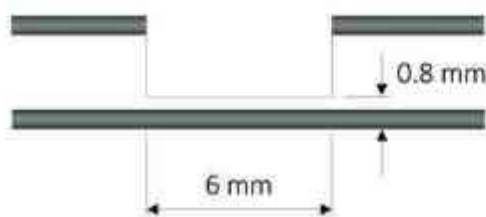
V-shaped 135° Groove if folded up to 45°



Circular Groove



Circular Groove if folded up to 90°



Straight Groove



Straight Groove if folded up to 90°

TECHNOPANEL

Cutting Machine

We understand the importance of customization in meeting the unique needs of our clients. That's why we offer the ability to produce customized sizes as per custom orders, as well as perform cutting to suit the architectural requirements of specific projects. Our cutting machine is designed to cut cladding with precision and accuracy, delivering clean, smooth cuts for a high-quality finish, with Production capacity of 200 m²/hour.

CNC Machine

We are proud to offer a versatile range of services through our CNC machine. This machine is capable of performing cutting, grooving, and designing of cladding with maximum length of 6 meters and a width of 2 meters as per architectural designs, as well as creating intricate and detailed CNC art work. Our technology allows us to create precise cuts and grooves, ensuring a high-quality finish that meets the standards of our clients. With a production capacity of 100 m²/hour, our CNC machine is capable of handling even the most demanding projects with ease. Whether you're looking to create complex designs or simple cuts for projects, and seeking a unique piece of wall art.

ACP-Bending Machine

Technopanel is a leading provider of advanced architectural solutions, equipped with state-of-the-art machinery to meet even the most complex design requirements. Our three roller bending machines are capable of forming and bending ACP into circular shapes with a minimum diameter of 25 cm and above, and a maximum width of 3.2 meters. With a production output of 200 square meters per hour, we can efficiently provide high-quality circular ACP panels to meet the demands of our clients. At Technopanel, we are committed to delivering excellence in every project we undertake.



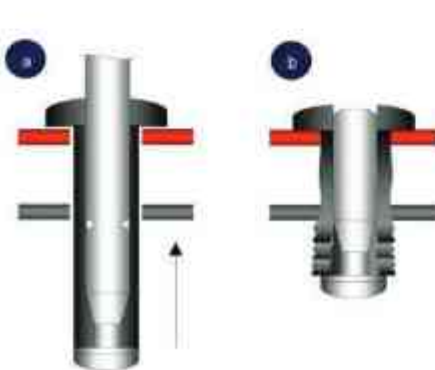
Three- Roller Bending Machine

Fastening

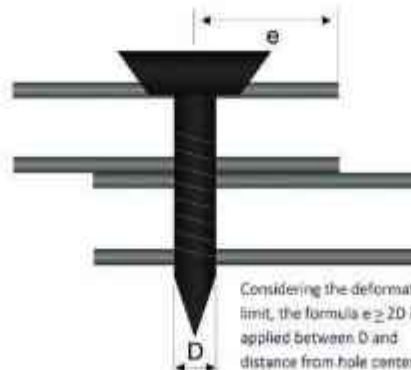
Fastening makes the structure more rigid enabling the edges to be fixed firmly. A variety of different fasteners is used to fabricate and install panels. Structural adequacy and selection of these fasteners is the responsibility of qualified engineers and in most instances where architectural panels are used, certified calculations will be required by the building official.

Rivets are often utilized to attach Aluminum clip angles and other structural or ornamental elements to panels. Please take note that some building code jurisdictions do not endorse the use of pop rivets for structural connections.

Screws are also used to perform many of the same applications as rivets. Stainless steel screws are industry standard and are appropriate to prevent corrosion.



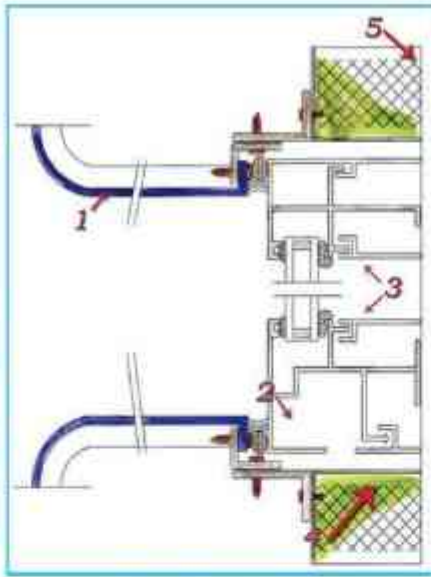
Rivet



Considering the deformation limit, the formula $e \geq 2D$ is best applied between D and distance from hole center to the panel's edge.

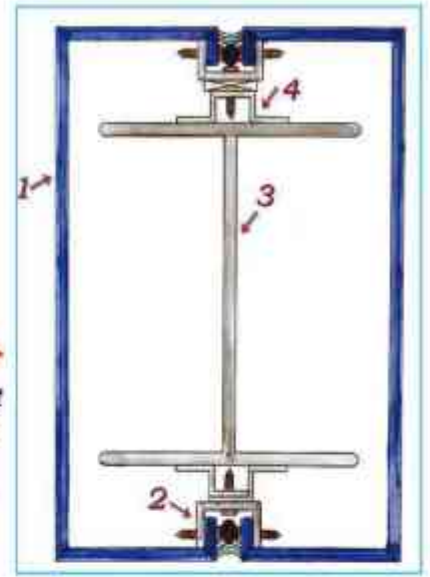
Screw

TECHNOPANEL



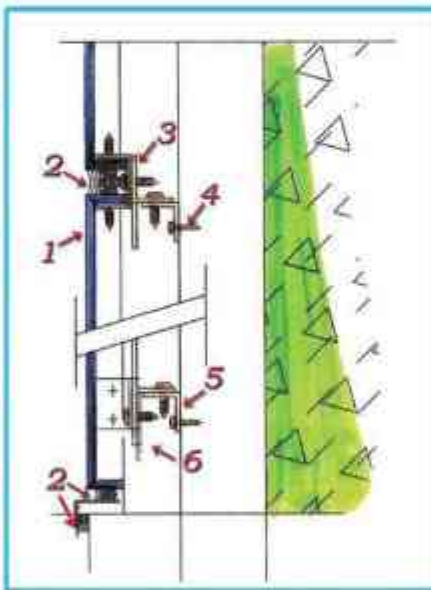
①

- 1- Technopanel Sheet
- 2- Gap Filler (Backing Rod + Silicon)
- 3- Securing Frame For Aluminum Window
- 4- Framework
- 5- Insulating Materials



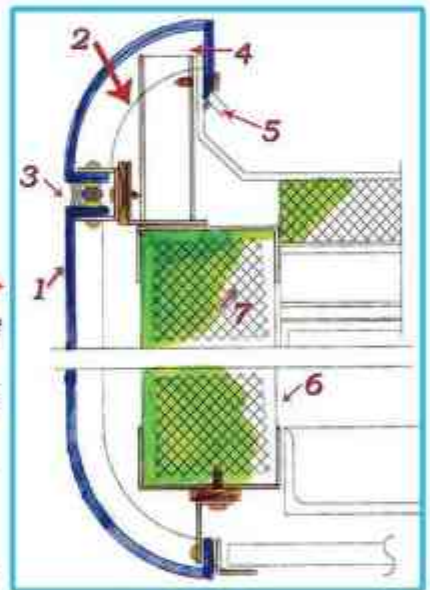
④

- 1- Technopanel Sheet
- 2- Steel Framework
- 3- Aluminum Angle
- 4- Steel Framework



②

- 1- Technopanel Sheet
- 2- Gap Filler (Backing Rod + Silicon)
- 3- T-Shaped Aluminum
- 4- Self Taping Scrw
- 5- Iron Angle
- 6- Aluminum Fitting



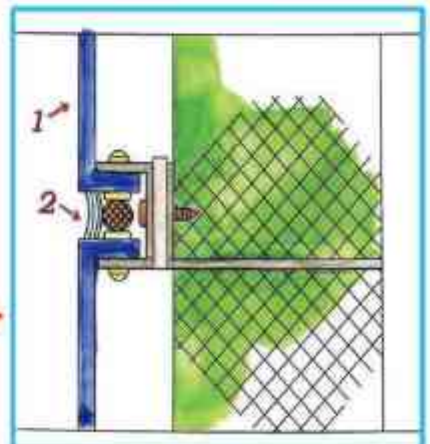
⑤

- 1- Technopanel Sheet
- 2- Camber Line
- 3- Gap Filler (Backing Rod + Silicon).
- 4- Self Taping Screw
- 5- Water Board
- 6- Framework
- 7- Insulating Material



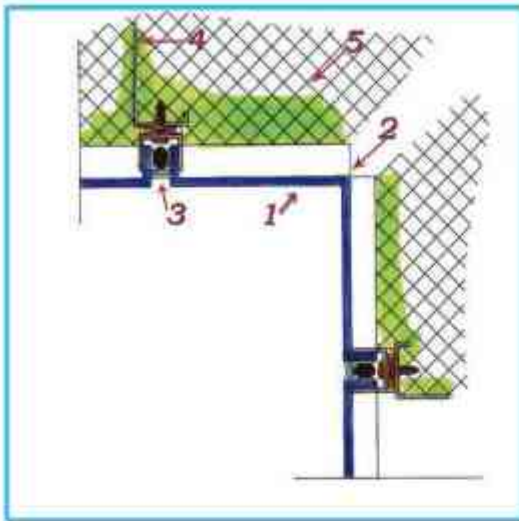
③

- 1- Technopanel Sheet
- 2- Gap Filler (Backing Rod + Silicon).
- 3- Securing Frame For Aluminum Window
- 4- Framework
- 5- Insulating Material



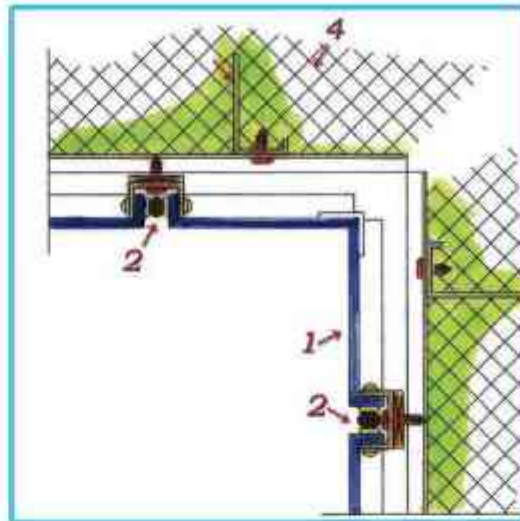
⑥

- 1- Technopanel Sheet
- 2- Gap Filler (Backing Rod + Silicon).



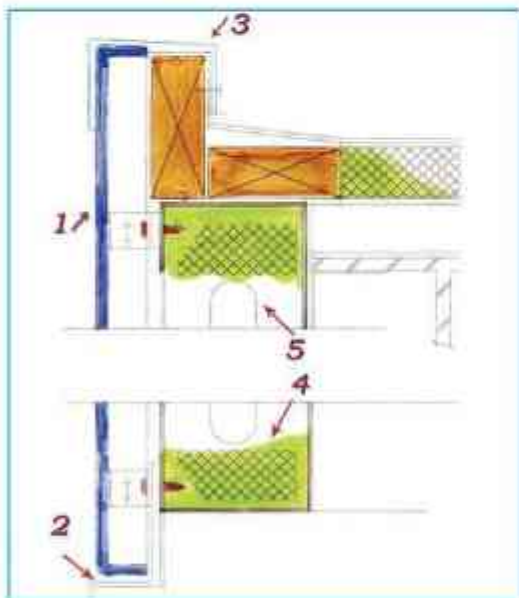
7

- 1- Technopanel Sheet
- 2- Aluminum Fitting
- 3- Gap Filler (Backing Rod + Silicon)
- 4- Framework
- 5- Insulating Materials



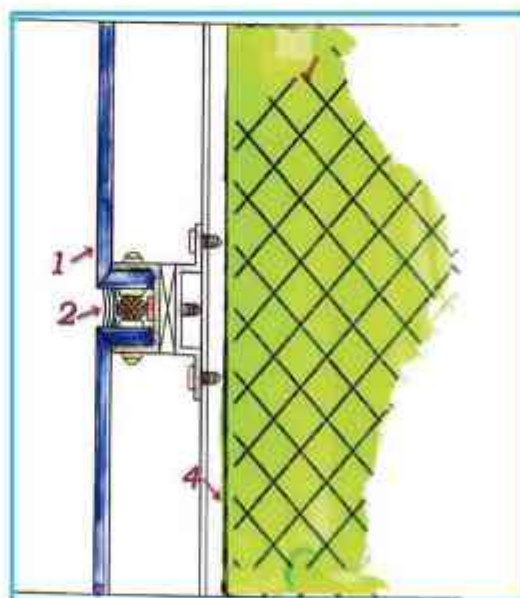
8

- 1- Technopanel Sheet
- 2- Gap Filler (Backing Rod + Silicon)
- 3- Framework
- 4- Insulating Material



9

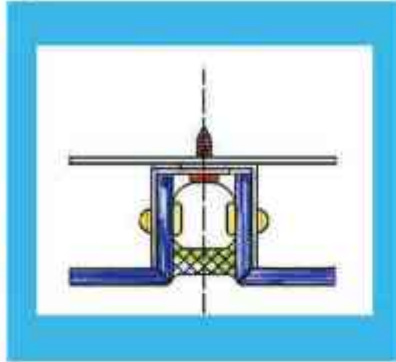
- 1- Technopanel Sheet
- 2- Gap Filler
- 3- Breakwater
- 4- Insulating Materials
- 5- Supporting frame



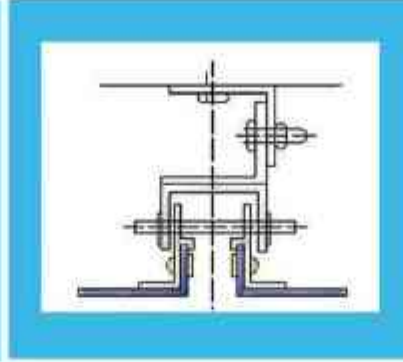
10

- 1- Technopanel Sheet
- 2- Gap Filler (Backing Rod + Silicon)
- 3- Insulating Material
- 4- Framework

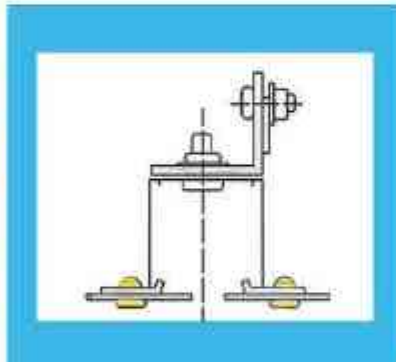
11



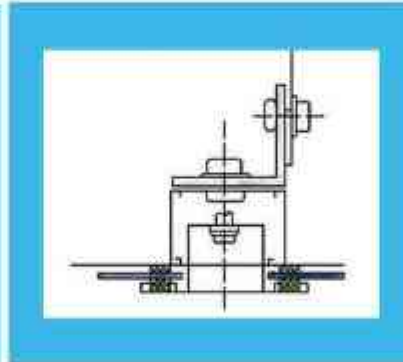
Screw Fastening



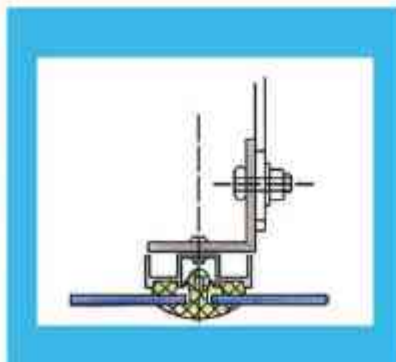
Fitting Part Suspending Fastening



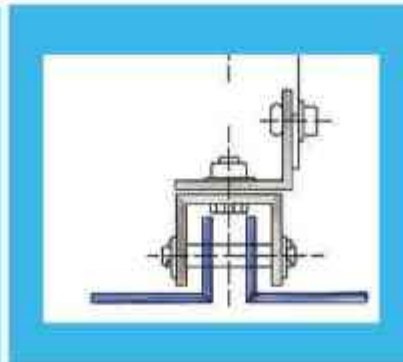
Fastener Fastening



Layerage Scres Fastening

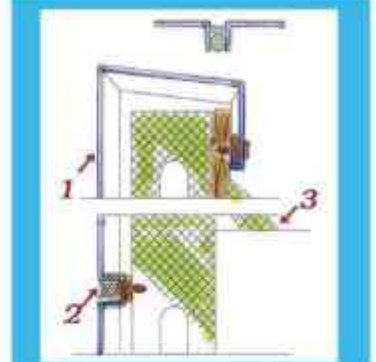


Layerage Fastening



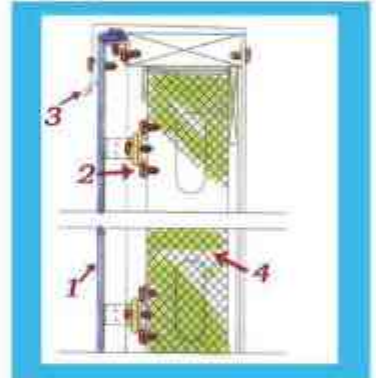
Suspending fastening

12



Cement Post Construction Method

- 1-Technopanel Sheet
- 2-Gap Filler (Backing Rod + Silicon)
- 3-Support



Supporting Frame Constructing Method

- 1-Technopanel Sheet
- 2-Framework
- 3-Breakwater
- 4-Insulating Material



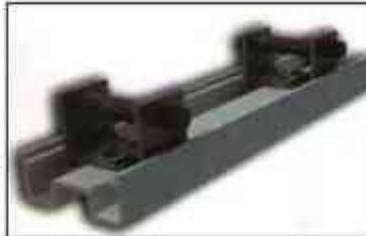
Common Constructing Method

- 1-Technopanel Sheet
- 2-Iron Angle
- 3-Breakwater
- 4-Adjustable Framework

ACCESSORIES FOR INSTALLATION



GI Steel Angle



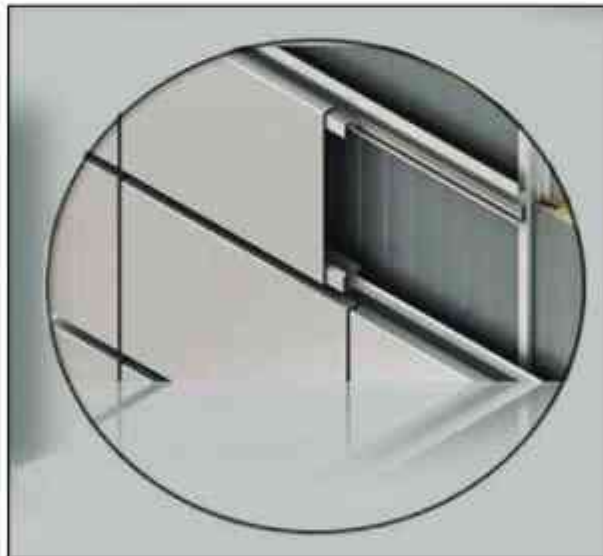
Aluminum Runner



Aluminum / Steel Tubes



Riveter and Rivets



Screw



Screw Driver



Sealant



Hand Drill

TECHNOPANEL

FINISHING AND MAINTENANCE

Protective Film Removal

It is usual to remove the protective film after installation though 12 months warranty is provided as supplemental panel protection since the duration of certain projects may differ from one another.

Peeling-off the protective film is suggested to be done on each corner or substrate of the installed panel for a more convenient removal of the film.

Do not prolong the protective film removal beyond the warranty limit since it may cause adhesive retention and film degradation under varying environmental conditions.

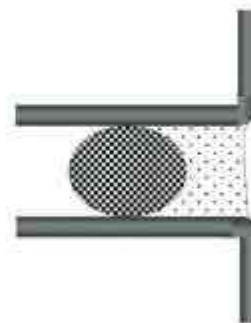
Sealant Finishing

During application of sealants in between panel partitions, it is recommended to follow as illustrated below:



Sealant – Not The Suitable Condition

This condition can cause the dirt to accumulate in between the hollow slots.



Sealant – The Suitable Condition

This condition is ideal to prevent dirt from accumulating in between slots.

Cleaning and maintenance of ACP

It is important to keep the panel in best condition to maintain the color and glossiness throughout its lifespan.

- Plain water is required to clean the surface of the panels.
- Do not use strong agents such as acids, solvents and strong alkali. This can damage the panel surface.
- Use a clean soft cloth for cleaning the surface. Prevent using cloth or material with abrasion that can cause scratches or damage on the coating.



Boulevard - Riyadh



Sabic Project



Empire Cinemas



Empire Cinemas - 2

Othaim Mall - Riyadh



Saudi Red Crescent - Makah



Hadab Hotel Project



ATR Project





Hardees - Jordan



KUDU - Riyadh



Jodia Towers

King Fahd Road - Riyadh





Yamamah Palace Hotel

Al Sarhan Hotel Apartments



Rajhi Bank



Villas - Dammam



Train Project



Riyadh Bank Project



Al Rabeea Towers



Administration Building - Riyadh



Granada Mall Theater
Exit 9 - Riyadh



Children Hospital - Al Taief



Owayed Al Brikan Project - Dhahret Laban





Al-Sadhan Mall - Riyadh



Al Basateen Compound Project



Dawadmy Project



Al Olaya Al Akaria - North Ring Road





Al Amaken Hotel - Riyadh



Al Safinah Restaurant - Alwashm





Extra - Eastern Ring Road - Riyadh



Saudi Wildlife Authority



Raden Center - Olaya Road - Riyadh

STC Project





Waqoodi Station



Tabook- Ramada Hotel



Ajlan & brothers Project







المواصفات السعودية
Saudi Standards



الهيئة السعودية للمواصفات والمقاييس والجودة
Saudi Standards, Metrology and Quality Org.

شهادة ترخيص باستخدام علامة الجودة
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Production Line Location:	KING ABDUL AZIZ ROAD, Malham 10342 KSA 5761	موقع خط الإنتاج:
Normative References:	SASO 2752 : 2019 اللائحة الفنية لمواد البناء - الجزء الثاني	المراجع القياسية:
The Trade Mark:	تكنوپانل	العلامة التجارية:
The Product:	الواح الألومنيوم المركبة للتكسيات الخارجية والتشطيبات الداخلية	المنتج: (مخصص في الترخيص)
Date of Granting:	10/04/2023	تاريخ الممنح:
Date of Renewal:	-	تاريخ التجديد:
Date of Expiry:	10/04/2026	تاريخ الانتهاء:

مدير عام الإدارة العامة لممنح الشهادات
Director General of Certification Department

المهندس / خالد بن محمد النملة
Eng. Khalid M. Alnamlah



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المملكة العربية السعودية
Kingdom of Saudi Arabia

ص.ب 3437 الرياض 11471
P.O.Box 3437 Riyadh 11471

T 920009085
F +966114520086

www.saso.gov.sa
info@saso.gov.sa

1 / 2

CERTIFICATE OF COMPLIANCE

Certificate Number R40168
Report Reference R40168-2020-10-23
Date 2020-November-02

Issued to: TECHNOPANEL
MADAIN INDUSTRIAL 212 TO 217, NEW KHARJ ROAD,
P.O BOX 10342, RIYADH 11433
Riyadh, KSA SA

This is to certify that
representative samples of SHEATHING MATERIALS
"Technopanel – FR A2 Aluminium Composite Panel" 6mm
thick. 6mm thick product to give coverage for 4mm and
5mm thickness.

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL723, Standard for Surface Burning Characteristics for
Building Materials

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up
Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's
Follow-Up Services.

Look for the UL Certification Mark on the product.

B. Mahholz

Bruce Mahholz, Director North American Certification Program

UL LLC

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contact a local UL Customer Service Representative at info.ul@ulprospector.com





شهادة اشتراك
Membership Certificate

ሪፖርት
Riyoch Chamber

Membership No. :	167286	167286	رقم العضوية الموحّد :
Date of Issue:	27/05/2006	2006/05/27	تاريخ الإصدار:
Membership Class :	First	الاولى	درجة العضوية :
Riyadh Chamber Certifies	تشهد الغرفة التجارية الصناعية بالرياض بأن		
.TECHONPANEL FACTORY CO		شركة مصنع تقنية الالواح	
Commercial Registration No.	1010219680	1010219680	مقيدة بالسجل التجاري / الترخيص رقم :
Certificate Expires on	21/10/2025	2025/10/21	ينتهي سريان هذه الشهادة في



- يلزم التحقق من الوثيقة عبر الرابط <https://mybusiness.chamber.sa>، أو تطبيق "سندا للأجهزة المحمولة" أو الرقم المودج جون أدنى مسؤولية على الشركة عن محتوى الوثيقة.
- تعد هذه الورقة من الوثائق الإلكترونية لفئة الرضا، ويمكن تعديلها أول محاولة السبت بها وتصبح لأغية حال محاولة تعديلها وتعرض صاحبها للملاحقة القانونية.



مفتی محمد امجد علی

١٤٤٥/٠٥/١٥
٢٩/١١/٢٠٢٣
٥٩٢-٣١٢٦

رقم السجل التجاري: ١٠٣١٩٦٨٠
رقم الإثبات: ٥٠١٣٥١١٥
محل: ١٠٣٤٢٣ الرياض
اسم المنشأ: شركة مصنع تقنية الافواج

• **•**

عدد المشاركين السعوديين
عدد المشاركين غير السعوديين
المجموع

٤١	واحد و تسعون	مئتي
٦٥	خمسة وستون	مئتي
١٢١	مائة و عشرون	مئتي
١٢٥	مائة و عشرين	مئتي

تلتها المدرسة العامة للتأهيلات الإجتماعية بين العائلات المذكورة أعلاه في أوقات تأخراتها توجد المدرسة وفق البقالت القديمة منها حتى تخرج اصحاب هذه الشهادة ، و التي تم منحها لتلاميذها في جده تظليها ، وهي مدرسة احمد الميمون (9) في طرابلس (البحر المتوسط) في 15/10/1984 (10)

[illegible]

value must now solve

(الشهادة معتدلة من صاحب الصلاحية ولا تحتاج إلى توقيع أو ختم)



تاريخ

[illegible]

شركة العنبر

المملكة العربية السعودية
وزارة التجارة والصناعة

إدارة تشجيع الصناعة

الرقم: ٢٦٠٢٣
التاريخ: ١٤٠٩
المرحلات:

المحترم
سعادة مدير عام إدارة المشاريع
المؤسسة العامة للتقاعد

السلام عليكم ورحمة الله وبركاته
لود الإحاطة أن مصنع تقنية الألواح مرخص له بموجب القرار الوزاري رقم
١٤٢٦/١١/٢٣ وتاريخ ١٤٢٦ هـ.

وتلك لإنتاج ألواح العنبر معزولة ولدية الإعانيات لتأمين احتياجاتكم من إنتاجه.
لذا نأمل الإحاطة لجهة المختصة لديكم بتأمين احتياجاتكم من منتجات الصناعة الوطنية
علا بقرارات مجلس الوزراء المؤرخ بهذا الخصوص.

شكراً ودعمكم وتشجيعكم للصناعة الوطنية.

مع أطيب تحياتي وتقديري

صورة

مدير إدارة تشجيع الصناعة بالتبعية

بسم بن عبد العزيز الهزاعي
١٤٠٩ / ١١ / ١٨

شركة العنبر

المملكة العربية السعودية
وزارة التجارة والصناعة

إدارة تشجيع الصناعة

الرقم: ٢٦٠٢٥
التاريخ: ١٤٠٩
المرحلات:

المحترم
سعادة مدير عام إدارة المشاريع
وزارة التعليم العالي

السلام عليكم ورحمة الله وبركاته
لود الإحاطة أن مصنع تقنية الألواح مرخص له بموجب القرار الوزاري رقم
١٤٢٦/١١/٢٣ وتاريخ ١٤٢٦ هـ.

وتلك لإنتاج ألواح العنبر معزولة ولدية الإعانيات لتأمين احتياجاتكم من إنتاجه.
لذا نأمل الإحاطة لجهة المختصة لديكم بتأمين احتياجاتكم من منتجات الصناعة الوطنية
علا بقرارات مجلس الوزراء المؤرخ بهذا الخصوص.

شكراً ودعمكم وتشجيعكم للصناعة الوطنية.

مع أطيب تحياتي وتقديري

صورة

مدير إدارة تشجيع الصناعة بالتبعية

بسم بن عبد العزيز الهزاعي
١٤٠٩ / ١١ / ١٨

المملكة العربية السعودية
وزارة التجارة والصناعة

مركز تنمية الصناعة

شركة التجارة

الرقم: ٢٦٠٢٤

التاريخ: ١٩ رجب ١٤٤١

الرفقات: ١

سعادة مدير عام إدارة المشاريع

الهيئة العامة للتأمينات الاجتماعية

المحترم

السلام عليكم ورحمة الله وبركاته

أولاً: الإخطار بأن مصنع تقنية الألواح مرخص له بموجب القرار الوزاري رقم (١٤٤٠٦) هـ، وتاريخ ١١/٢٣/١٤٤٠ هـ.

وبذلك يُنتج ألواح المنيوم معزولة ولدية الإمكانات لتأمين احتياجاتكم من إنتاجه.

لذا نأمل الإقبال للجهة المختصة لبيكم بتأمين احتياجاتكم من منتجات الصناعة الوطنية صلاً بقرارات مجلس الوزراء المؤقر بهذا الخصوص.

شكراً ودعم وتشجيعكم للصناعة الوطنية.

مع أطيب تحياتي وتقديري !!!!!

مدير إدارة تشجيع الصناعة بالنيابة

بسم بن عبد العزيز الهزاعي

١٤٤١ / ١٩

المملكة العربية السعودية
وزارة المياه والكهرباء

مركز الوزارة

Kingdom of Saudi Arabia

Ministry of Water & Electricity

Minister's Office

سعادة وكيل الوزارة لشؤون الكهرباء
سعادة وكيل الوزارة لشؤون المياه
سعادة الرئيس التنفيذي لشركة المياه الوطنية
سعادة المدير العام لإدارة الصرف الصحي
سعادة المدير العام للمياه بمنطقة الرياض
سعادة المدير العام للمياه بمنطقة مكة المكرمة
سعادة المدير العام للمياه بمنطقة المدينة المنورة
سعادة المدير العام للمياه بمنطقة القصيم
سعادة المدير العام للمياه بمنطقة الشرقية
سعادة المدير العام للمياه بمنطقة تبوك
سعادة المدير العام للمياه بمنطقة حائل
سعادة المدير العام للمياه بمنطقة الحدود الشمالية
سعادة المدير العام للمياه بمنطقة نجران
سعادة المدير العام للمياه بمنطقة جازان
سعادة المدير العام للمياه بمنطقة الباحة
سعادة المدير العام للمياه بمنطقة الجوف
سعادة المدير العام للمياه بمنطقة الجوف

السلام عليكم ورحمة الله وبركاته.

بهدف نسخة خطاب شركة مصنع تقنية الألواح (تكو بايل) المؤرخ في ١٤٣٣/٢/٦ هـ، المتضمن طلب اعتماد منتجات الشركة من ألواح الألمنيوم المعزولة (Cladding) في مشاريع الوزارة، وبموجب إشارات شركة المياه الوطنية بالخطاب رقم (٢٣/٢٠٥٧٠)، وتاريخ ١٤٣٢/٤/٢٦ هـ، ووكالة الوزارة لشؤون الكهرباء بالخطاب رقم (١/٢٧٧٠) وتاريخ ١٤٣٣/٦/٢٨ هـ، باعتماد منتجات الشركة من ألواح الألمنيوم المعزولة المستخدمة في تغطية واجهات المباني الخارجية والمخفية.

أتم الإطلاع، والتوجيه حيال اعتماد منتجات شركة مصنع تقنية الألواح (تكو بايل)، ضمن الشركات المعتمدة في مشاريع الوزارة، على أن يتم استخدام (Water Proof EPDM Rubber) في القواسم بين الألواح بدلاً من (Backlog rob and Silicon)، مع الأخذ في الاعتبار أن هذه المنتجات تعتبر مكملة للعزل الحراري وليست بديلاً عنه.

مع أطيب تحياتي
مدير إدارة تشجيع الصناعة بالنيابة
بسم بن عبد العزيز الهزاعي

نسخة لشركة مصنع تقنية الألواح
٣١٥٣٨

الرقم: ١٤٤٢
تاريخ: ١٤٤٢
المنشور: ١٤٤٢

طريق الملك عبدالعزيز - الرياض ١١٦٦٢ - صندوق البريد ١١٦٦٢ - فاكس: ٢٠٥٢٧٤٩
Riyadh - King Fahd Road - Riyadh 11233 - Communications Dept. Tel. : 2052748 - Fax : 2052749

Kingdom of Saudi Arabia
Ministry of Health
General Directorate for Project
Supervision & Evaluation Department

المملكة العربية السعودية
وزارة الصحة

تاريخ: ٢٠٢٣/١١/٢٢
رقب: ٢٠٢٣/١١/٢٢
الرجوع: ٢٠٢٣/١١/٢٢

السادة / شركة مصنع تقنية الاطوار ركندولك

ص ب: ١٠٣٤٢ الرياض: ١١٤٣٣ ت: ١١٤٧٥٥٠٠ فاكس: ٠١١/٢٤٤٧٥٥٠

السلام عليكم ورحمة الله وبركاته ... وبعد ..

إشارة إلى خطايكم رقم (١٠١/M.GM/٢٠١٤) وتاريخ ١٠/١٠/١٤٣٥هـ

مخصوص طلبكم الموافقة على اعتماد وتأهيل منتجات مصنعكم من

الأواح الألوومنيوم المعزولة والتي تستخدم في تكسية الواجهات (الكلاذج)

لتكونوا ضمن الموردين في مشاريع الوزارة ،

نفيدكم بأنه بعد أن تمت دراسة الملف الخاص بشركتكم - يمكنكم

تقديم منتجاتكم لمزاولة مشاريع الوزارة حال كانت مطابقة لمواصفات






المشاريع بالوزارة .

مع أطيب تحياتي وتقديري

مدير إدارة الإسراء على التفويض
١٤٣٥/١١/٢٢

الهناص / عبد القوم بن محمد الحسن

Riyadh (0039922) Tel. (0039922) Fax (00407997)
Kiyadi (11176) Tel. (0039922) Fax (00407997)

 <p>DM AL-FAYHA P.O. Box - 48287 Riyadh - 11688</p>	 <p>SITE - 1 SITE - 2</p>	 <p>الهيئة العامة للتخطيط والتطوير الاقتصادي</p>	<p>الموقع والموقع :</p>
 <p>العميل :</p>	<p>DOCUMENT SUBMITTAL</p>	<p>مركز المشاريع والتطوير</p>	<p>مركز المشاريع والتطوير</p>
<p>FROM: HORIZON CONTRACTING P.O. Box - 48287 Riyadh - 11688</p>	<p>TO: Engr. Ibrahim Al Fakhri Ariyath Development Authority P.O. Box : 94001 - Riyadh - 11514</p>	<p>64-Jun-14</p>	<p>64-Jun-14</p>
<p>SUBMITTAL NO. 1</p>	<p>NEW SUBMITTAL <input checked="" type="checkbox"/> RE SUBMITTAL <input type="checkbox"/></p>	<p>CALCULATION <input type="checkbox"/></p>	<p>CALCULATION <input type="checkbox"/></p>
<p>TRANSMITTAL FOR :</p>	<p>METHOD STATEMENT <input type="checkbox"/> WARRANTY CERTIFICATE <input type="checkbox"/></p>	<p>OTHER <input type="checkbox"/></p>	<p>OTHER <input type="checkbox"/></p>
<p>MATERIAL TEST <input type="checkbox"/></p>	<p>INVENTAL DELIVERY <input type="checkbox"/></p>	<p>OTHER <input type="checkbox"/></p>	<p>OTHER <input type="checkbox"/></p>
<p>LOCATION :</p>	<p>ATTACHMENT :</p>	<p>OTHER <input type="checkbox"/></p>	<p>OTHER <input type="checkbox"/></p>
<p>CONTRACTOR'S REMARKS:</p>	<p>DESCRIPTION:</p>	<p>CONTRACT REF:</p>	<p>ACTION CODE:</p>
<p>WE CERTIFY THAT THE ABOVE SUBMITTED ITEMS HAVE BEEN REVIEWED IN DETAIL, AND ARE CORRECT AND IN STRICT CONFORMANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS</p>	<p>STAMP</p> 	<p>SIGNATURE</p> <p>PROJECT MANAGER Engr. MOHAMMAD AL MARIQ</p>	<p>ACTION CODE</p> <p>B</p> <p>C</p>
<p>ENR COMMENTS :</p>	<p>ENR COMMENTS :</p>	<p>SIGNATURE</p> <p>PROJECT MANAGER Engr. MOHAMMAD AL MARIQ</p>	<p>ACTION CODE</p>
<p>A complete sample for mentioned above canopy should be provided before installation in site. Should obey all specifications of project requirements in all details. Should follow approved color for mentioned above item. Use 5mm thick for aluminum composite panel.</p>	<p>ENR COMMENTS :</p>	<p>SIGNATURE</p> <p>PROJECT MANAGER Engr. MOHAMMAD AL MARIQ</p>	<p>ACTION CODE</p>
<p>A - APPROVED B - APPROVED AS NOTED C - APPROVED AS NOTED, REBUILT</p>	<p>ENR COMMENTS :</p>	<p>SIGNATURE</p> <p>PROJECT MANAGER Engr. MOHAMMAD AL MARIQ</p>	<p>ACTION CODE</p>
<p>REF. IN :</p>	<p>REF. OUT</p>	<p>SIGNATURE</p> <p>PROJECT MANAGER Engr. MOHAMMAD AL MARIQ</p>	<p>ACTION CODE</p>



الأمانة العامة للبيوت والضيقة الجوزة
مؤلفات المؤلفات

المكبرم / شركة تقنية الألواح (تكنولوجيا)

مربي الرياض ١٠٣٤٢ - ١١٤٣٣

السلام عليكم ورحمة الله وبركاته

شهادة إلى حجاجكم رقم ٣٤٥٧٧١٣ بتاريخ ١٤٣٤/ ٣ / ٧٧ هـ بخصوص طلب استخدام منتجاتكم في مجال التواحيات (ككلاياج) مشاريع الوزارة .

يتم اعارة لقيم المنتجات بعد عام من تاريخه .

والسلام عليكم ورحمة الله وبركاته

(Handwritten signature)



የቴክኒካል ቢሮዎች ሚኒስቴር
Ministry of Environment, Water & Agriculture
P.O. Box 100, Addis Ababa, Ethiopia. Tel: 011-554-1000, Fax: 011-554-1001

العلماء في جامعة القاهرة
2019

المسألة/ شركة مصنع تقنية الألواح (تكنولوجيا)

المريخ ١٩٤٣

السلام عليكم ورحمة الله وبركاته وبعد ،،،

إشارة لحظكم رقم ١٤٣٨/١٦٠٦٠٨ وتاريخ ١٤٣٨/١٢/٢٢ بخصوص اعلمت منكم
الواجب الأوليتم المزمرة (الكتاب) إلى الزيرة التي تمت لمتكم بمعية الرياض وتلك بتاريخ
١٤٣٩/١٢/٢٠ لاختراع على منتجات المصنع وطرقى صنط الجودة ومواصفات المواد الأولية ومرحل
التصنيع المتطرفة في المنتج النهائي.

تفكيك بنية الأملج من اعتماد منتجكم عن طريق المقاولين المنقذين لشاريع إكوتهم المصنوعين لتقديم المواد للاعتماد وطبقاً للصاوصات الفنية لشاريع الوزارة والصاوصات الفنية السموية مع الإقتصادى بمرافقة وضبط الدولة بمنتجكم.

ولکم اطیب تحیات

م. كنعان بن عيسى الكنعان
20/09/2018
مدير عام الإدارة العامة للشؤون الهندسية

[illegible]

المملكة العربية السعودية
وزارة التجارة والصناعة

دراسة تطبیعیة

المحترم
سعادة مدير عام إدارة المناقصات والمشتريات
وزارة الصحة

السلام عليكم ورحمة الله وبركاته

لقد لاحظت أن مصنع تقنية الملح مخصص له بموجب القرار الوزاري رقم ١٤٢٦/١/١٣ وتاريخ ١٤٢٦ هـ.

وذلك لإنتاج العواصم المعنوية، ولتلبية الإحتياجات لتأمين احتياجاتكم من النتائج.

لذا نأمل الإيعاز السخيصة لبيكم بتأمين احتياجاتكم من منتجات الصناعة الوطنية
مخلصاً بقرارات مجلس الوزراء المؤقت بهذا الخصوص.

شاكراً لكم وتجميعكم للصناعة الوطنية.

مع أطيب تحياتي وتقديري
١٩٩٩

مدير الادارة تشجيع الصناعة بالنيابة

بسمام بن عبد العزيز الهزاعي


 $\sqrt{2} \in A, \sqrt{2} \notin A$ 

Arabic Consulting Engineering Services
 P.O. Box 146
 P.O. Box 146 Riyadh 11161
 T: +966 11 5423538

محمد يوسف نايف
 Mohammed Yousef Naghi Motors Co.


ARFICA A. KREIDIE
 ARCHITECTS & ENGINEERS

Arch. Material Submittal Form

Project Name	IMF Sulay Project	Project No	1688
Contractor	Itafic A Kreidie Engineers & Contractor	Project Location	Sulay Riyadh
Contract No.		Shop Drawing Submitted No.	ASACR025
To The Engineer	ACES	Date	17-10-2019
Shop Drawing No.		Contract Drawing Ref. No.	
Drawing Title	TECHNOPANEL – fire resistant Aluminum composite panel – materials and color – dat sheet and samples provided		
Category	<input checked="" type="checkbox"/> Architectural <input type="checkbox"/> Mechanical <input type="checkbox"/> Structural <input type="checkbox"/> Electrical <input type="checkbox"/> As Built <input type="checkbox"/> Builder's Work <input type="checkbox"/> Other (specify)		
The Contractor certifies that this submittal has been verified and coordinated by all related disciplines and relevant subcontractors			
Eng. Moad Mouta'el	 Signature Date 17-10-2019		
Name			
Contractor's Comments			

ACES Consultant / Engineer comments

– TECHNOPANEL as a supplier for fire resistant aluminum composite panel is approved – must submit mock up

Status Code	<input type="checkbox"/> 1 - Approved <input checked="" type="checkbox"/> 2 - Approved With Comments <input type="checkbox"/> 3 - Not Approved. Review & Re-submit <input type="checkbox"/> 4 - Rejected As Comments
Consultant (NA) Signature	Date 24-10-2019  Eng. Hassan Al Masoud Recorder Signature

A - Working shall only proceed when within limits in (1) or (2)
 B - Action shall (1) shall be Resubmitted
 C - (1) shall (2) shall be Resubmitted
 D - (1) shall (2) shall be Resubmitted

Co: Contractor For Compliance Co: Client For Info Co: ACES For Record


Received By Contractor	Date
Project : IMF & Plant Workshop Sulay - Riyadh For: Mohammed Yousef Naghi Motors Co. Arabic Consulting Engineering Services P.O. Box 146 Riyadh 11161, Tel: 011-5423538	

[illegible]

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[illegible]

40002615

TECHNICAL APPROVAL FORM - RESPONSE Project: Community Support Facilities Project Number: BI 10-77801		Revision: 1 of 1 Submittal Received: August 28, 2019
 Saudi Aramco		007-020-1 Aluminium Cladding For Canopy (Rev.1)
PMT ref No. Contractor:		
SELECT AS APPROPRIATE: <input checked="" type="checkbox"/> Approved with conditions		
SUBMISSION 1: <input checked="" type="checkbox"/> DATE: 5-Sep-19		
THESE DOCUMENTS HAVE BEEN REVIEWED FOR GENERAL CONFORMANCE WITH THE CONTRACT. SUCH REVIEW DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES UNDER THE TERMS OF THE CONTRACT NOR AUTHORIZE ADDITIONAL COMPENSATION.		
Department/Reviewer: CSFO		
Comments are as follows: 1. Material identification should be stencilled on the back of the panel, not a sticky label. 2. All the IBC Code Issues (2009 IBC, SECTION 1401, GENERAL) raised by UPD (David Leifer) in his e mail dated July 7th must be clearly addressed. 3. Additional Fire Test Certificates in the process of being procured by Technopanel at the moment should be forwarded to CSFO when available. 4. Written commitment from Technopanel & Contractor that Technopanel will assign trained staff to monitor the fabricators factory and site installation procedures. 5. Provide copy of manufacturers recommended fixing details. 6. Sample mock-up canopy complete with folds and fixation details (similar to what was provided by Al Khumaili for the Package 7 canopy) will also need to be provided. ***Nothing follows***		
Signed: Oliver Quinn		Date: Thursday, September 05, 2019
Distribution:		Lead Engineer: Oliver Quinn

 A.S. ALSAYEGH & PARTNERS CONTRACTING CO. LTD.		REQUEST FOR TECHNICAL APPROVAL		153-2155
TO: Name: Mr. Yusef A. Al Position: Project Manager Department: Community Project Dept. Location: Al-Madina, KSA		Project Title: COMMUNITY SUPPORT FACILITIES PHG 3 Location: DHAHMAN, KSA Contract No: 660019701 10-77801-0001		SA ENGINEERING STANDARDS NA SA ENGINEERING PROCEDURES NA SPECIFICATION SA-P10007
ATTN: Name: Mr. Walid Safadi Position: Sr. Project Engineer		MATERIAL DESCRIPTION RTA FOR: ALUMINIUM CLADDING FOR CANOPY ALS-RTA-007-020 REV 01		SUBMITTAL CODE A V ARCHITECTURAL C CIVIL S STRUCTURAL M MECHANICAL E ELECTRICAL I INSTRUMENTATION O OTHER
FROM: Company: A.S. ALSAYEGH & PARTNERS CONTRACTING CO. LTD. Address: Tel/Fax No: E-mail:		SA DUMMY P.O. NO.: NA		FORM SA-175 NA
NEW SUBMITTAL NA	RESUBMITTAL NA	REF. SUBMITTAL NO. AL-RTA-01720	Rev. No. 1	INSPECTION LEVEL NA "NON INSPECTABLE"
Material Description ALUMINIUM CLADDING FOR CANOPY Technopanel PE 84 TO BE USED FOR COMMUNITY & RECREATION BUILDING CANOPY SAMPLE AT PROJECT SHOWROOM	BOM CCC 600000406	MANUFACTURER NAME Manufacturers PRISMA METAL INDUSTRY LIMITED LIABILITY COMPANY ID# 1046796	VENDOR NAME Saudi Aramco Vendor ID: PRISMA METAL INDUSTRY LIMITED LIABILITY COMPANY ID# 1046796	(FOR SAUDI ARAMCO USE ONLY) REVIEW / COMMENT / APPROVAL / ACTION See attached response from proponent. <input type="checkbox"/> NO OBJECTION <input checked="" type="checkbox"/> NO OBJECTION AS NOTED <input type="checkbox"/> CORRECT & RESUBMIT <input type="checkbox"/> REJECTED Approval is only for general performance with the contract documents. Such review does not relieve the CONTRACTOR of its responsibility under the terms of the CONTRACT nor authorize additional compensation.
Reviewed by:  Architect Engineer	Reviewed by:  Procurement Manager	Approved by:  Project Manager	Approved by:  Sr. Project Engineer	Approved by: (SAFMT) 
Name: Walid Safadi Date: 28/08/2019	Name: Walid Safadi Date: 28/08/2019	Name: Jassim Alsharrah Date: 28/08/2019	Name: Sarah Elsayegh Date: 28/08/2019	Name: Walid Safadi Date: 28/08/2019

Document History

Revision	Details	Description of changes	Purpose of issue	Date
01		First issue	For Approval	22-06-2022

Document Approval

Name	Job Title	Prepared by	Reviewed by	Approved by
Abdul Qadir	QC Manager	Abdelaziz Abdellatif	Tech Manager	Ahmed Adil

14-662000-4800000322-HOB-ARC-MAT-000012_01

AECOM

Material Submittal Form
(Complete All Fields)

Contractor	MORCO Civil Construction	Material Submittal No.	14-662000-4800000322-HOB-ARC-MAT-000012
NEOM Contract No.	4800000322/000	Date	22-06-2022
Material Description (One item system per form)	Metal Composite Material Wall Panels - Cube Metal Industries	Area of Application (Mark on Drawings)	CAR MAINTENANCE, CAR WASHING, TRUCK MAINTENANCE, TRUCK WASHING.
ACOMEX Reference of Drawing with Revision		Applicable Code / Standard	
Specification Reference	SECTION 074213.23 METAL COMPOSITE MATERIAL WALL PANELS	Locally Manufactured (Identify Country of Origin if imported, with justification)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Listed in NEOM Mandatory List	<input type="checkbox"/> Yes <input type="checkbox"/> No	Signature	
Contractor's Representative	MORCO Civil Construction		

Discipline:

<input checked="" type="checkbox"/> Architectural	<input type="checkbox"/> Civil / Structure	<input type="checkbox"/> Interior Design	<input type="checkbox"/> Landscape	<input type="checkbox"/> MEP/HVAC
<input type="checkbox"/> Wall Services	<input type="checkbox"/> Transportation	<input type="checkbox"/> Sustainability	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical
<input type="checkbox"/> Geotechnical	<input type="checkbox"/> Traffic	<input type="checkbox"/> Fire Protection	<input type="checkbox"/> Telecom, ICT & EIM	<input type="checkbox"/> Others

Manufacturer/Supplier

Company Name	TECHNOPANEL / CUBE METAL INDUSTRIES		
Address	P.O. Box 17851 Jeddah 21484, Saudi Arabia		
Local agent	P.O. Box 10342 Riyadh 11433, Saudi Arabia		
Schedule Date of Delivery on Site	As agreed	Delivery Duration (Long Lead Start / End)	Long Lead

Checklist for Attachments (as applicable):

<input type="checkbox"/> Index & Separator Files	<input type="checkbox"/> Drawings / Specification	<input type="checkbox"/> Specification Compliance Sheet
<input checked="" type="checkbox"/> Product Data	<input type="checkbox"/> Design Mixes (Concrete / Asphalt / JMF)	<input type="checkbox"/> NRI Certificate
<input checked="" type="checkbox"/> Test Reports	<input type="checkbox"/> Compliance Certificates	<input type="checkbox"/> Warranties
<input checked="" type="checkbox"/> Finalization Approval reference	<input type="checkbox"/> Source Quality Control Reports	<input type="checkbox"/> Certificates & Accreditations
<input type="checkbox"/> LEED Submittals	<input type="checkbox"/> Welding Certificates	<input checked="" type="checkbox"/> Safety Data Sheet
<input checked="" type="checkbox"/> Previous Client Approvals	<input checked="" type="checkbox"/> Completed Projects (Similar in Nature)	<input type="checkbox"/> Delegated Design Submittals
<input type="checkbox"/> Samples	<input type="checkbox"/> Mockup Records/ Data	<input type="checkbox"/> Maintenance Data

01-710000-100115-ACM-CM64PM-000022 - Rev 003
September 2021

14-662000-4800000322-HOB-ARC-MAT-000012_01

Page 1 of 4



شركة مصنع تقنية الألواح
Panels Technology Factory Co.



شهادة ضمان منتج مقاوم للحريق فئة B1

اسم المركب و مستلم المواد:
اسم المشتري:
مالك المشتري:
التوقيع:
الموقع:

تشهد إدارة شركة مصنع تقنية الألواح (تكنوپانل) بأننا نضمن المواد المصنعة بمصنعنا طبقاً للمواصفات القياسية السعودية رقم 2752/2008 من حيث تركيبته الكيميائية والفيزيائية وضد تغيير الألوان وضد تفكك الصفائح وغيوب الصناعة لمدة عشرين عاماً من تاريخ الإنتاج ما لم يتعرض إلى استخدام أدوات و/ أو مواد تنظيف غير آمنة وغير مناسبة، وما لم يتعرض ميكانيكية تركيب و/ أو ثني غير سليم ومخالف للأنابيب والأساليب المتعارف عليها فنياً والمنصوص عليها في آلية إرشادات التنظيف، وما لم يتعرض إلى تأثير الكوارث الطبيعية التي لا يمكن أن تخلف مؤثرات خارجة عن الأجواء المعتادة في بلد الاستلام



- تكون مسؤولية المنتج بارية فقط على لتلبية المتابعة في الطوارئ.
- يلات الأستر ومواقع العمل على مسؤولية المرافق.

الشركة المساهمة للتسويق المحدودة

شركة ذات مسؤولية محدودة
الرقم التجارية 1010101010

رأس المال 500,000 ريال



TASHELAT MARKETING CO. LTD.

A Limited Liability Company
Head Office

Capital: 500,000 S.A.R.

رقم الخطاب:	ENG/07/2016
التاريخ الجاري:	1438/03/23 هـ
التاريخ الميلادي:	2016/12/22 م

السادة:	شركة مصنع تقنية الألواح (تكنوپانل)
المكرم:	مدير الشركة
الموضوع:	اعتماد منتج مصنع تقنية الألواح (تكنوپانل) لدى شركة الشبهلات للتسويق.

السلام عليكم ورحمة الله وبركاته ،

إشارة إلى طلب سيادتكم لإعتماد منتجكم الذي محطات سهل (شركة الشبهلات للتسويق) (الألواح كلابيلع مقاوم للحريق سمك اللوح 4 مم للونين 102 و 403 طبقاً لمصطلح الألواح الخاص بشركة مصنع تقنية الألواح (تكنوپانل))،

تقديمكم بأنه يمكنكم تقديم عيناتكم لمشاريع التطوير بمحطات سهل (شركة الشبهلات للتسويق) وذلك إشتراطات البنية والبناء المعني ، على أن تتقدم شركة مصنع تقنية الألواح بشهادة ضمان على شكل مشروع يتم إقراره من تاريخه .

ولسيادتكم جزيل الشكر



م. محمد فاروق ايوب
رئيس مجلس إدارته



شركة مساهمة عامة
Sahel
Head Office: P.O. Box 42119, Riyadh 11517, K.S.A. Tel: 011 4601000, Fax: 011 4601001, E.M. 1910101010, C.O. 101010
Branch: P.O. Box 42119, Riyadh 11517, K.S.A. Tel: 011 4601000, Fax: 011 4601001, E.M. 1910101010, C.O. 101010
Branch: P.O. Box 42119, Riyadh 11517, K.S.A. Tel: 011 4601000, Fax: 011 4601001, E.M. 1910101010, C.O. 101010



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Intertek ETL US Mark for Building Panels, Building Materials With Surface Burning Characteristics

Standards: ASTM E84 (2016)

Certificate number: WHI17-30486701

Organization: Tqneyat Al Alwah (Panels Technology Factory) - Technopanel
P.O. Box 10342, Bldg 214 - 217
Al Madaen Industrial Zone, New Kharj Road
Riyadh 11433
Kingdom of Saudi Arabia

Product: Tqneyat Al Alwah (Panels Technology Factory) - Technopanel - FR B1 Aluminum Composite Panel
Spec ID: 41787
Listing Information: See following page(s)

Certification body: Intertek Testing Services NA, Inc.
Initial registration: July 04, 2017
Date of expiry: December 31, 2021
Issue status: 9

Authorized By:
Jean-Philippe Kayl, Director of Certification

Intertek Testing Services NA, Inc.
545 E. Algonquin Road, Ste H., Arlington Heights, IL 60005 USA
Phone: 847-439-5667 Fax: 847-439-7320

LISTING INFORMATION

Technopanel Fire-Retardant B1 Aluminum composite panel (FR-ACP) is a product consisting of two sheets of aluminum bonded to each side of a halogen-free fire-retardant polyethylene core. Panels are available in 4mm, 5mm, or 6mm thickness.

FLAME SPREAD RATINGS

Panel tested*

Test Standard	Flame Spread Index	Smoke Development Index
ASTM E84	5	20

Core tested**

Test Standard	Flame Spread Index	Smoke Development Index
ASTM E84	30	145

*Results based on 6.0mm thick panel. Flame spread rating only valid with exterior skin facing towards the flame.

**Results based on testing with one side of aluminum skin removed and core material facing towards the flame.

الشركة السعودية للتقنيات الخاصة
Saudi Specialized Laboratories Co.



TEST REPORT

PHYSICAL PROPERTIES OF ALUMINIUM COMPOSITE PANEL FOR EXTERNAL GLASSING AND INTERNAL FINISH

SAASO 2783-2014

SPECIFIC PROPERTIES (SAASO ISO 2012)

Property	Value	Unit	Remarks
2.1.1	94.7	%	Reference
2.1.2	94.7	%	Reference

PEEL HARDNESS BY PENCIL TEST (SAASO ISO 18184)

Scale of Pencil	Value	Unit	Remarks
2.1.1	9	F-2H	Pass

1-18184 TEST OF PAINT (SAASO ISO 11131)

Property	Value	Unit	Remarks
2.1.4	35	mm	Observation on Paint

COLOUR TEST OF PAINT (SAASO ISO 2889)

Property	Value	Unit	Remarks
2.1.5	1	2	Pass

RESISTANCE TO LIQUID WATER IMMERSION METHOD (SAASO ISO 2812)

Property	Value	Unit	Remarks
2.1.6	100	%	Pass

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TESTED AT: 25°C

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TESTED AT: 25°C

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TESTED AT: 25°C

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TESTED AT: 25°C

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

الشركة السعودية للتقنيات الخاصة
Saudi Specialized Laboratories Co.



TEST REPORT

PHYSICAL PROPERTIES OF ALUMINIUM COMPOSITE PANEL FOR EXTERNAL GLASSING AND INTERNAL FINISH

SAASO 2783-2014

SPECIFIC PROPERTIES (SAASO ISO 2012)

Property	Value	Unit	Remarks
2.1.1	94.7	%	Reference
2.1.2	94.7	%	Reference

PEEL HARDNESS BY PENCIL TEST (SAASO ISO 18184)

Scale of Pencil	Value	Unit	Remarks
2.1.1	9	F-2H	Pass

1-18184 TEST OF PAINT (SAASO ISO 11131)

Property	Value	Unit	Remarks
2.1.4	35	mm	Observation on Paint

COLOUR TEST OF PAINT (SAASO ISO 2889)

Property	Value	Unit	Remarks
2.1.5	1	2	Pass

RESISTANCE TO LIQUID WATER IMMERSION METHOD (SAASO ISO 2812)

Property	Value	Unit	Remarks
2.1.6	100	%	Pass

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TESTED AT: 25°C

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TESTED AT: 25°C

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TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TESTED AT: 25°C

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TESTED AT: 25°C

TESTED BY: MOTABAQAHA

TESTED ON: 14/04/2014

TEST REPORT

Report No.: METS-R 3322-02/2022

Client / Establishment: Mts. Alay Technology Factory Company
Kingdom of Saudi Arabia

Sample ID: METS-S22-3322-02
Sample Receiving Date: 08/04/2022
Reporting Date: 03/07/2022
Date of Analysis: 09/04/2022-03/07/2022
Tested by: JMSC
Issue No: 01 (Re-Issue Date: NA)

Sample Information:



Sample Description: Aluminium Composite Panel- A2 FR - ACP A2 FR & A2 FR Core

Brief Evaluation of the Results

Test	Result
METS-S22-3322-02	Physico-Chemical Analysis
	Compliance Pass

*The tested parameter comply with SASO 2752:2019 specification limit

The corresponding test results are furnished in following page

Prepared by: 
Verified by: 
Team Head
Material Science Division (MSD)
Employee Code: METS-AJ-EC-136

Chemical
Material Science Division (MSD)
Employee Code: METS-AJ-EC-132

Report No.: METS-R 3322-02/2022

Date of analysis: 08/04/2022-03/07/2022

Parameter	Test Method	Unit	Result	Specification Limit SASO 2752:2019
Material				
Length	SASO 2752:2019 Cl. 10.3.1	mm	300.00	±3
Width	SASO 2752:2019 Cl. 10.3.1	mm	301.31	±2
Thickness	SASO 2752:2019 Cl. 10.3.2	mm	4.112	±0.2
Deviation of diagonal	SASO 2752:2019 Cl. 10.3.3	mm	1.06	≤5
Straightness at edges	SASO 2752:2019 Cl. 10.3.4	mm/m	0.31	≤1
Warpage	SASO 2752:2019 Cl. 10.3.5	mm/m	2.01	≤5
Appearance of the panel				
Wave	-	-	Absent	Not allowed
Bubble	-	-	Absent	Not allowed
Spot-Size	SASO ISO 4629 Parts (1 to 5.7.10 / 2016)	mm	Not observed	≤3
Spot-Number	-	-	Not observed	≤3/m²
Cut	-	-	Absent	Not allowed
Concave/Convex	-	-	Absent	Not allowed
Scratch	-	-	Absent	Not allowed
Blow	-	-	Absent	Not allowed
Color Deviation	SASO ASTM D 2944-2014	-	Pass	Non-obvious in visual observation, ΔE≤2
Panel mechanical properties requirements				
Coating thickness	SASO ISO 2300:2012	µm	35.6	≥30
Pencil hardness	SASO ISO 15184:2015	-	F-2H	≥H
Coating Flexibility (T-Best test)	ISO 17132:2007	-	Pass	≤2 Without any cracks damage on the coating
Adhesion Grade	SASO ISO 2409:2020	Grade	0*	≤1
Impact resistance (cm)	SASO ISO 6272-2:2014	-	No cracks observed at 50 kg.cm	Shall not be any peel off and cracks
Abrasion resistance	SASO ASTM D 968:2017	Lum	≥2	≥2
Stain resistance	SASO ISO 11596:2007	%	2	≤5
Chemical resistance				
Alkal resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Acid resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Oil resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Solvent resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Hot water resistance*	SASO ISO 2812-2:2014	-	Resistant	Shall be resistant

Report No.: METS-R-3323-02/2022
Date of analysis: 08/04/2022-03/07/2022

Parameter	Test Method	Unit	Result	Specification Limit: SASO 2752:2019
Thermal properties (core thermal properties)				
Heat Deflection Temperature	SASO ISO 75-2:2014	°C	89	85 Min
Linear Thermal Expansion Coefficient	ASTM D 695-16	µm/m-°C	151	200 Max
Surface Ignition Temperature @ -50 to 100	SASO ASTM D1959-2015	°C	>350	343 Min
Thermal conductivity of core, K_c	Virtual	W/mK	No defect	-
Thermal resistance of core, R_c	ASTM C 515-17 / BS EN ISO 6946:2007	m²K/W	0.4148	-
Internal surface resistance, R_{si}			0.13	-
External surface resistance, R_{se}			0.04	-
Total Thermal resistance, R_t			0.2259	≥0.06
Thermal transmittance (U value)	ASTM C 515-17	W/m² K	4.43	≤4.5
Drum peel strength	ASTM D1781-98 (2021)	N/mm	107	≥100
Accelerated Weathering at 2000 hours	SASO ISO 16474-2:2015	-	No change observed	Shall have no change
Gloss Retention*	SASO ISO 2813:2015	-	4	≤10
Salt Fog Resistance at 2000 hours	ISO 11967-1:2017	-	No change observed	Shall have no change
180 degrees Peel Strength	SASO ISO 8630-2:2008	N/mm	8.15	≥6.0
Shear Strength	ASTM C883 / C883 M-16	MPa	23	≥22
Bending Strength	ASTM C883C-2003 M-16	MPa	108	≥100
Bend Elastic Module	ASTM C883C-2003 M-16	MPa	21856	≥20000
Thickness of aluminum layer	ASTM A 370-04	mm	0.55	-
Mass per unit area	ASTM B 767-02	kg/m²	8.46	-
Gloss initial value at 20°	SASO ISO 2813:2015	-	56.9	-
Gloss initial value at 60°	SASO ISO 2813:2015	-	39.9	-
Gloss initial value at 85°	SASO ISO 2813:2015	-	93.4	-

Test Results:

Form METS 27 Issue No. 2



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Web: www.metslab.com

P.O. Box: 31442, Ajman - UAE | Tel: +971 67 445538 | E-mail: info@metslab.com

Report No.: METS-R-3323-02/2022
Date of analysis: 08/04/2022-03/07/2022

Parameter	Test Method	Unit	Result	Specification Limit: SASO 2752:2019
Acoustic Properties				
Sound absorption Factor	ISO 354:2003	-	0.042	-
Sound Transmission loss	ISO 717-1:2020	dB	25	-
Loss Factor	EN ISO 9721 Frequency range 100 - 3200 Hz	-	0.0106	-
Technical Properties				
Bonding Modulus W	DIN 5263-1:2002	cm/m	1.77	-
Rigidity - Poisson's ratio	DIN 5263-1:2002	Min/mm	0.31	-
Lacquering*	ET-AR / METS-IP-100	-	Polyester	-

Note 1: Separate core samples were submitted by the client for thermal resistance and transmittance study

* Parameter accredited by IAS in accordance with ISO/IEC 17025:2017

* The edges of the cuts are completely smooth, none of the squares of the lattice is obtained.

The above test results are only applicable to the sample (s) referred above. This report shall not be reproduced except in full without the written approval of METS laboratory.

For further clarification of reports, please contact info@metslab.com

-End of Report-



Page 4 of 4

Web: www.metslab.com

P.O. Box: 31442, Ajman - UAE | Tel: +971 67 445538 | E-mail: info@metslab.com

TEST REPORT

Report No.: METS-R-3322-01/2022

Client / Establishment : Mr. Alsay Technology Factory Company
Kingdom of Saudi Arabia

Sample ID : METS-522-3322-01
Sample Receiving Date : 08/04/2022
Reporting Date : 03/07/2022
Date of Analysis : 08/04/2022-03/07/2022
Tested by : JAFSC
Issue No : 01 (Re-Issue Date: N/A)

Sample Information:

Sample Description : Aluminium Composite Panel-374 FR-B1-ACP "30 x 30" & FR Core B1

Brief Evaluation of the Results

Test	Result
METS-522-3322-01	Physico-Chemical Analysis
	Compliance Pass

*The tested parameter comply with SASO 2752:2019 specification limit

The corresponding test results are furnished in following page

Prepared by

Verified by

Chayal
Material Science Division (MSD)
Employee Code: METS-AJ-EC-153

Team Head
Material Science Division (MSD)
Employee Code: METS-AJ-EC-136

Page 1 of 4

Report No.: METS-R-3322-01/2022
Date of analysis: 08/04/2022-03/07/2022

Test Results:

Parameter	Test Method	Unit	Result	Specification Limit
Material				SASO 2752:2019
Length	SASO 2752:2019 Cl. 10.3.1	mm	307.82	±3
Width	SASO 2752:2019 Cl. 10.3.1	mm	307.05	±2
Thickness	SASO 2752:2019 Cl. 10.3.2	mm	4.179	40.2
Deviation of Diagonal	SASO 2752:2019 Cl. 10.3.3	mm	1.14	±5
Straightness at sides	SASO 2752:2019 Cl. 10.3.4	mm/m	0.33	±1
Warpage	SASO 2752:2019 Cl. 10.3.5	mm/m	2.05	±5
Appearance of the panel				
Wave		-	Absent	Not allowed
Bubble		-	Absent	Not allowed
Spot-Size	SASO ISO 4626 Part 1	mm	Not observed	≤3
Spot Number	(1 to 5.7.10 / 2019)	-	Not observed	≤3mm
Oil	part 6 / 2011 & part 8 / 2012	-	Absent	Not allowed
Concave-Convex		-	Absent	Not allowed
Scratch		-	Absent	Not allowed
Stain		-	Absent	Not allowed
Color Deviation	SASO ASTM D 2244-2014	-	Pass	Non-observable in visual observation, ΔE ≤2
Panel mechanical properties requirements				
Coating thickness	SASO ISO 2060:2012	µm	43.1	≥20
Pencil hardness	SASO GSD ISO 15184:2015	-	F-3H	≥4H
Coating Flexibility (T - Birt test)	ISO 17132:2007	-	Pass	≤2 Without any cracks damage on the coating
Adhesion Grade	SASO ISO 2409:2020	Grade	0*	≤1
Impact resistance(kg.cm)	SASO ISO 6272-2:2014	-	No cracks observed at 50 kg.cm	Shall not be any peel off and cracks
Abrasion resistance	SASO ASTM D 668-2017	Lum	≥2	≥ 2
Scum resistance	SASO ISO 11095:2007	%	2	≤5
Chemical resistance				
Alkal resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Acid resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Oil resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Solvent resistance	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Hot water resistance*	SASO ISO 2812-1:2014	-	Resistant	Shall be resistant

Page 2 of 4

Report No.: METS-R 3322-01/2022
Date of analysis: 09/04/2022-03/07/2022

Parameter	Test Method	Unit	Result	Specification Limit: SASO 2752:2019
Thermal properties (core thermal properties)				
Heat Deflection Temperature	SASO ISO 75-2:2014	°C	91	85 Min
Linear Thermal Expansion Coefficient	ASTM D 695-16	µm/m.°C	149	300 Max
Self-ignition temperature	SASO ASTM D 1929-2016	°C	>350	343 Min
Temperature Resistance 48-50 to +80	Visual	-	No defect	-
Thermal conductivity of core, Kc		W/mK	0.3248	-
Thermal resistance of core, Rc			0.0828	-
Internal surface resistance, Ri	ASTM C 518-17 / BS EN ISO 9946:2007	m²KW	0.13	-
External surface resistance, Re			0.04	-
Total Thermal resistance, Rt			0.2528	≥0.06
Thermal transmittance (U value)	ASTM C 518-17	W/m².K	3.95	≤4.5
Drum peel strength	ASTM D 780-80 (2021)	N/mm	108	≥100
Accelerated Weathering at 2000 hours	SASO ISO 16474-2:2015	-	No change observed	Shall have no change
Gross Deviation*	SASO ISO 2813:2015	-	4	≤10
Salt Fog Resistance at 2000 hours	ISO 11997-1:2017	-	No change observed	Shall have no change
100 Degrees Peel Strength	SASO ISO 8510-2:2006	N/mm	9.85	≥0.0
Shear Strength	ASTM D308 / C300 M-16	MPa	25	≥22
Bending Strength	ASTM C300/C 303 M-16	MPa	113	≥100
Bond Elastic Module	ASTM C300/C 303 M-16	MPa	22045	≥20000
Thickness of aluminium layer	ASTM A 370-04	mm	0.53	-
Mass per unit area	ASTM B 767-02	kg/m²	7.18	-
Gloss Initial Value at 20°	SASO ISO 2813:2015	-	1.4	-
Gloss Initial Value at 60°	SASO ISO 2813:2015	-	12.5	-
Gloss Initial Value at 85°	SASO ISO 2813:2015	-	40.7	-



Report No.: METS-R 3322-01/2022
Date of analysis: 09/04/2022-03/07/2022

Parameter	Test Method	Unit	Result	Specification Limit: SASO 2752:2019
Acoustic Properties				
Sound absorption Factor	ISO 354:2003	-	0.045	-
Sound Transmission loss	ISO 117-1:2020	dB	24	-
Loss Factor	EN ISO 6721 Frequency range 100 - 3200 Hz	-	0.0068	-
Technical Properties				
Section Modulus W	DIN 53293-1982	cm³/m	1.82	-
Rigidity - Poisson's ratio	DIN 53553-1982	mm/mm	0.34	-
Lacquering*	FT-IR / METS-IP 160	-	Polyester	-

Note 1: Separate core samples were submitted by the client for thermal resistance and transmittance study

* Parameter accredited by IAS in accordance with ISO/IEC 17025:2017

* The edges of the cube are completely smooth, none of the squares of the lattice is detached.

The above test results are only applicable to the sample (s) referred above. This report shall not be reproduced except in full, without the written approval of METS laboratory.

For further clarification of reports, please contact info@metstesting.com

-End of Report-



TEST REPORT REACTION TO FIRE TEST

Test Sponsor:

Panel Technology Factory (Technopanel)
Al Mashael Riyadh, Saudi Arabia
T: +966 920 006 292
Website: www.technopanel.com.sa

Test Material / Assembly:

4mm thick Aluminium Composite Panel-FR A2

Test Standard

BS EN ISO-1716:2018 Reaction to Fire Tests for Products - Determination of the Gross Heat of Combustion (Calorific Value)

TEST REPORT REACTION TO FIRE TEST

Test Sponsor:

Panel Technology Factory (Technopanel)
Al Mashael
Riyadh, Saudi Arabia
T: +966 920006292
Website: www.technopanel.com.sa

Test Material / Assembly:

4mm Thick Aluminium Composite Panel- FR A2

Test Standard:

ASTM E84 – 21a: Standard Test Method for Surface Burning Characteristics of Building Materials



THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS

PO BOX 26385, DUBAI UAE T +971 (0) 4 821 5777 fire@bell-wright.com www.bell-wright.com

DUBAI DOHA RIYADH

Test Date: 02-Dec-22
Issue Date: 04-Jan-23
Test Reference No: WC029-7

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INTERNATIONAL CONSULTANTS

PO BOX 26385, DUBAI UAE T +971 (0) 4 821 5777 fire@bell-wright.com www.bell-wright.com

DUBAI DOHA RIYADH

Test Date: 2-Aug-22
Issue Date: 08-Feb-23
Test Reference No: WC029-5 (Rev 01)

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CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH BS EN 13501-1:2018

Test Sponsor:

Panel Technology Factory (Technopanel)
Al Mashael Riyadh, Saudi Arabia
T: +966 920 006 292
Website: www.technopanel.com.sa

Test Material / Assembly:

4mm thick Aluminium Composite Panel-FR A2

TEST REPORT REACTION TO FIRE TEST

Test Sponsor:

Panel Technology Factory (Technopanel)
Al Mashael Riyadh, Saudi Arabia
T: +966 920 006 292
Website: www.technopanel.com.sa

Test Assembly:

4mm thick Aluminium Composite Panel-FR A2

Test Standard

BS EN 13823:2020 Reaction to Fire Tests for Building Products — Building Products excluding Floorings exposed to the Thermal Attack by a Single Burning Item



THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS

PO BOX 26385, DUBAI UAE T: +971 (0)4 821 5777 fire@bell-wright.com www.bell-wright.com

DUBAI

DOHA

RIYADH

Test Date: 13-May-22
Issue Date: 04-Jan-23
Test Reference No: WC029-6



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PO BOX 26385, DUBAI UAE T: +971 (0)4 821 5777 fire@bell-wright.com www.bell-wright.com

DUBAI

DOHA

RIYADH

Issue Date: 04-Jan-23
Classification Report Reference No: WC029-8

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TEST REPORT REACTION TO FIRE TEST

Test Sponsor:

Panel Technology Factory (Technopanel)
Al-Masha'el
Riyadh, Saudi Arabia
T: +966 92 000 6292
Website: www.technopanel.com.sa

Test Assembly:

4mm thick Aluminium Composite Panel-FRB1

Test Standard

BS EN 13623:2020 Reaction to Fire Tests for Building Products — Building Products excluding Floorings exposed to the Thermal Attack by a Single Burning Item



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INTERNATIONAL CONSULTANTS

PO BOX 26385, DUBAI UAE T: +971 (0)4 821 5777 Fire@bell-wright.com www.bell-wright.com

DUBAI DOHA RIYADH

Test Date: 27-Jan-23
Issue Date: 13-Feb-23
Test Reference No: XA017-1

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CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH BS EN 13501-1:2018

Test Sponsor:

Panel Technology Factory (Technopanel)
Al-Masha'el
Riyadh, Saudi Arabia
T: +966 92 000 6292
Website: www.technopanel.com.sa

Test Material / Assembly:

4mm thick Aluminium Composite Panel-FRB1



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INTERNATIONAL CONSULTANTS

PO BOX 26385, DUBAI UAE T: +971 (0)4 821 5777 Fire@bell-wright.com www.bell-wright.com

DUBAI DOHA RIYADH

Issue Date: 13-Feb-23
Classification Report Reference No: WC029-4

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TEST REPORT REACTION TO FIRE TEST

Test Sponsor:

Panel Technology Factory (Technopanel)

Al-Mashaef

Riyadh, Saudi Arabia

T: +966 92 000 6292

Website: www.technopanel.com.sa

Test Material / Assembly:

4mm thick Aluminium Composite Panel-FR81

Test Standard

BS EN 11925-2: 2020 - Ignitability of products subjected to direct impingement of flame (Part2: Single-flame source test)

TEST REPORT REACTION TO FIRE TEST

Test Sponsor:

Panel Technology Factory (Technopanel)

Al-Mashaef

Riyadh, Saudi Arabia

T: +966 920006292

Website: www.technopanel.com.sa

Test Material / Assembly:

4mm Thick Aluminium Composite Panel – FR 81

Test Standard:

ASTM E84 – 21a: Standard Test Method for Surface Burning Characteristics of Building Materials



THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS

PO BOX 26385, DUBAI UAE T: +971 (0)4 821 5777 fire@bell-wright.com www.bell-wright.com

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DOHA

RIYADH

Test Date: 08-Jun-22
Issue Date: 13-Feb-23
Test Reference No: WCO29-2

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RIYADH

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