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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 m^2 . Then, about 60 km south of Riyadh is our operations hub that covers a land area of 8,000 m^2 .

Furthermore, we have increased our production capacity to 5 million m^2 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 ألواح 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 ومسئولي صناعة البناء بالمملكة

ولذلك فإننا سخرنا جهودنا وطاقاتنا لعمل آليات جديدة وتجهيزات إضافية وإستقدام طاقات بشرية على أعلى مستويات المهارة والجودة لإنتاج هذا المنتج واليوم تمتلك تكنوبانل خط الانتاج 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 الألواح 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 .

TECHNOPANEL

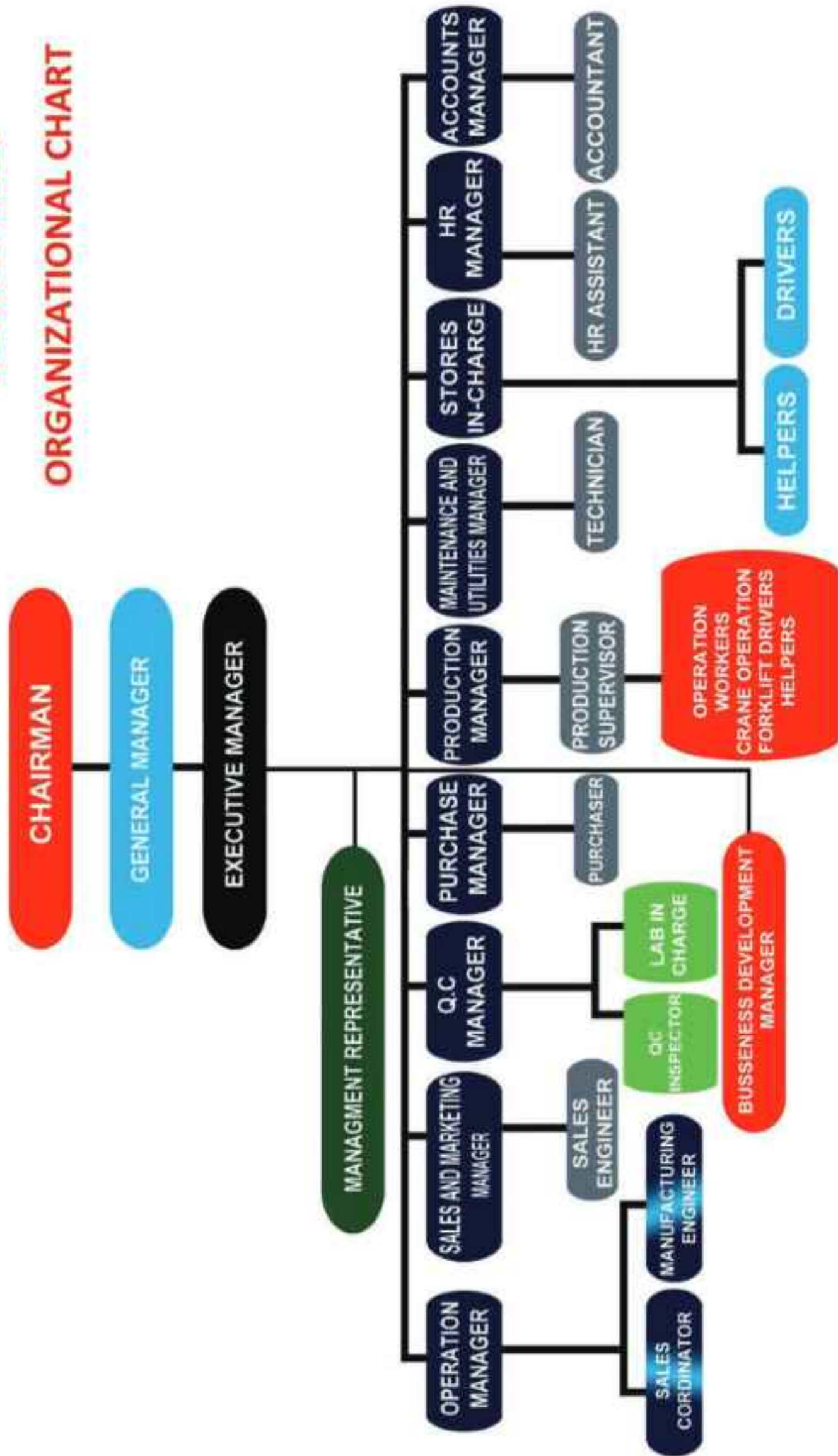


TECHNOPANEL

ALUMINIUM COMPOSITE PANEL

TECHNOPANEL

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:

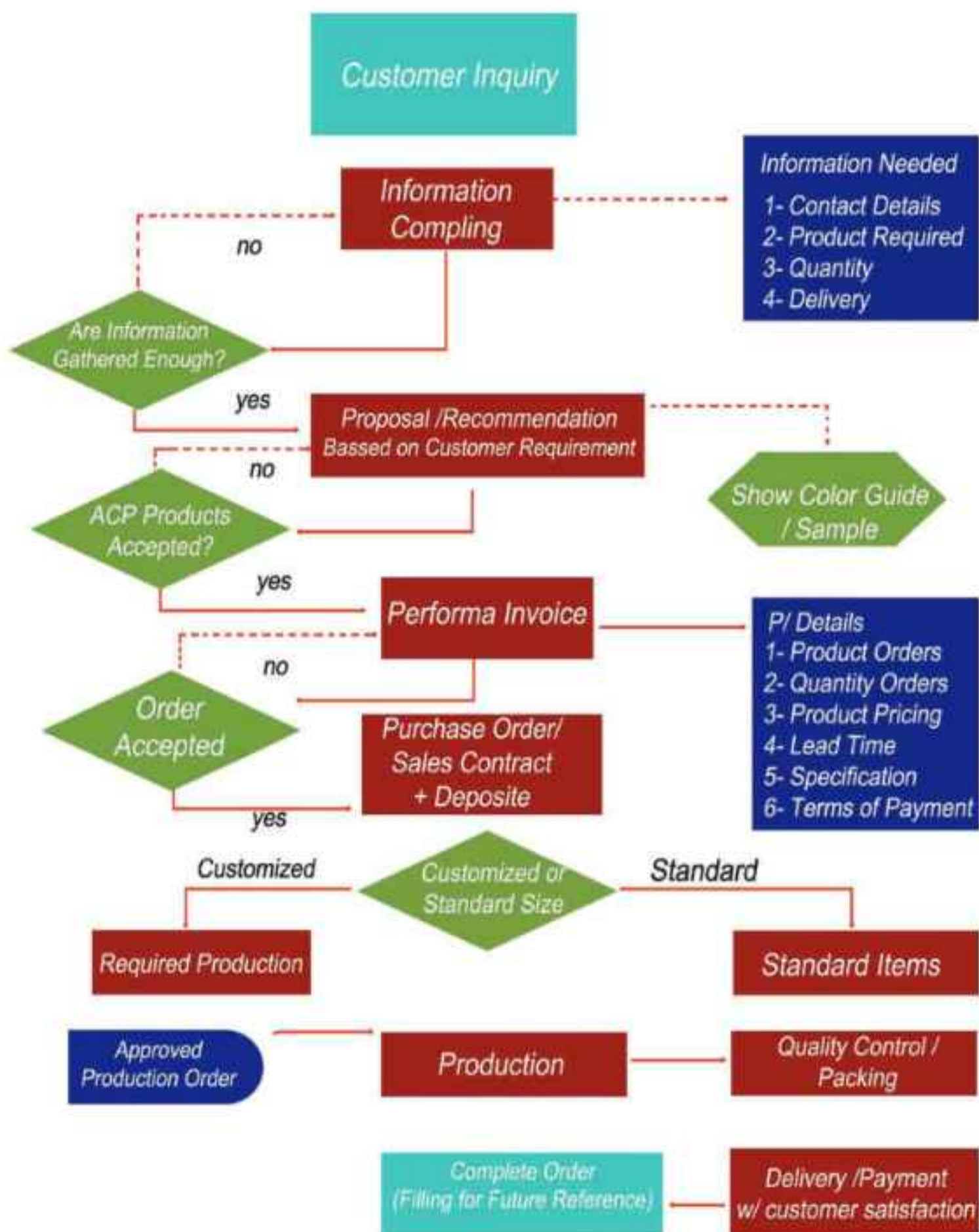
- ❖ Compliance with all applicable legal and other requirements.
- ❖ Continual improvement in quality, environmental, health and safety performance with the ultimate goal of zero complaints, zero injuries and zero emissions of toxic and hazardous materials.
- ❖ Design and operation of our plants and 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

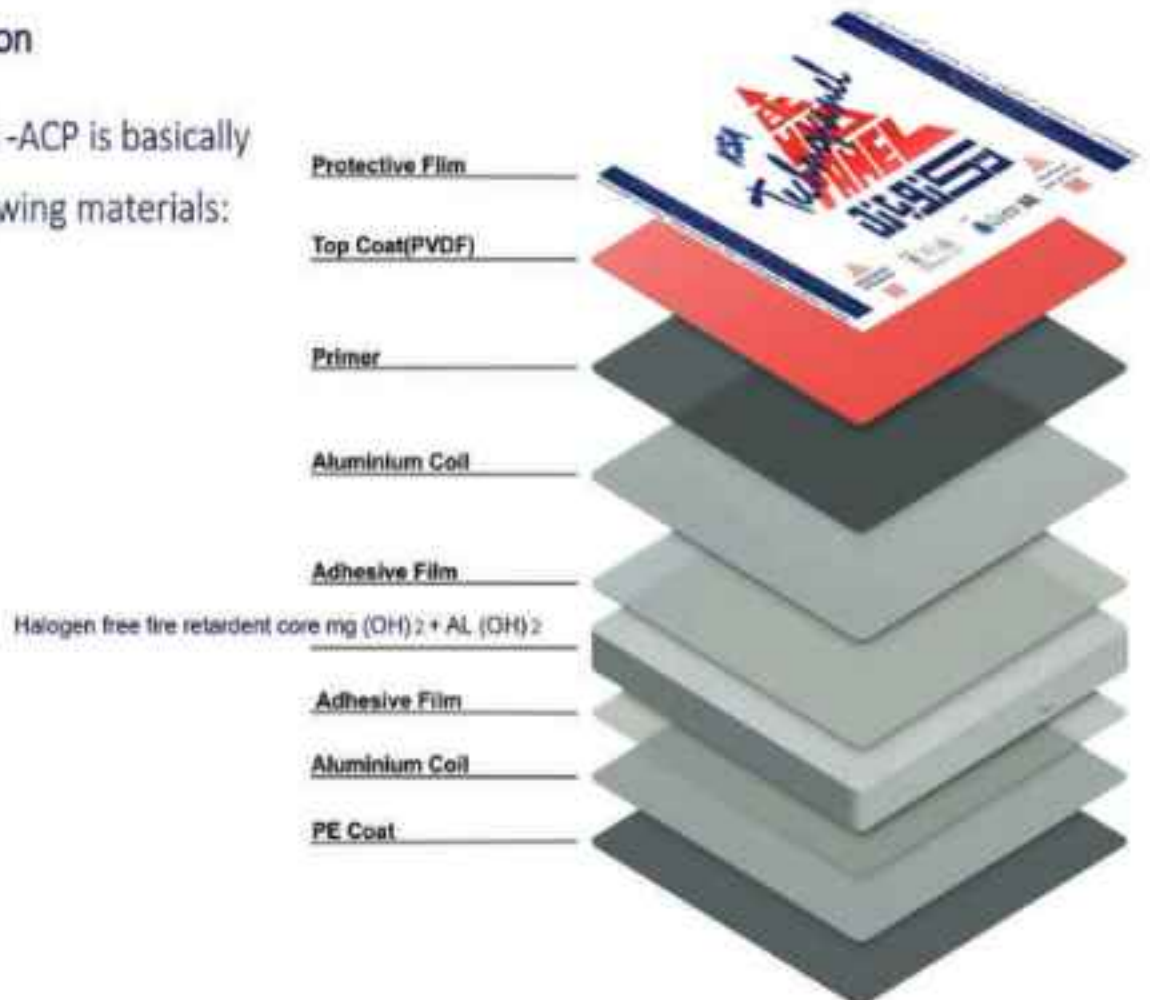
FR A2 - ACP TECHNICAL DATA SHEET

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 flouropolymer 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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ALUMINIUM COMPOSITE PANEL

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	Lµm	>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

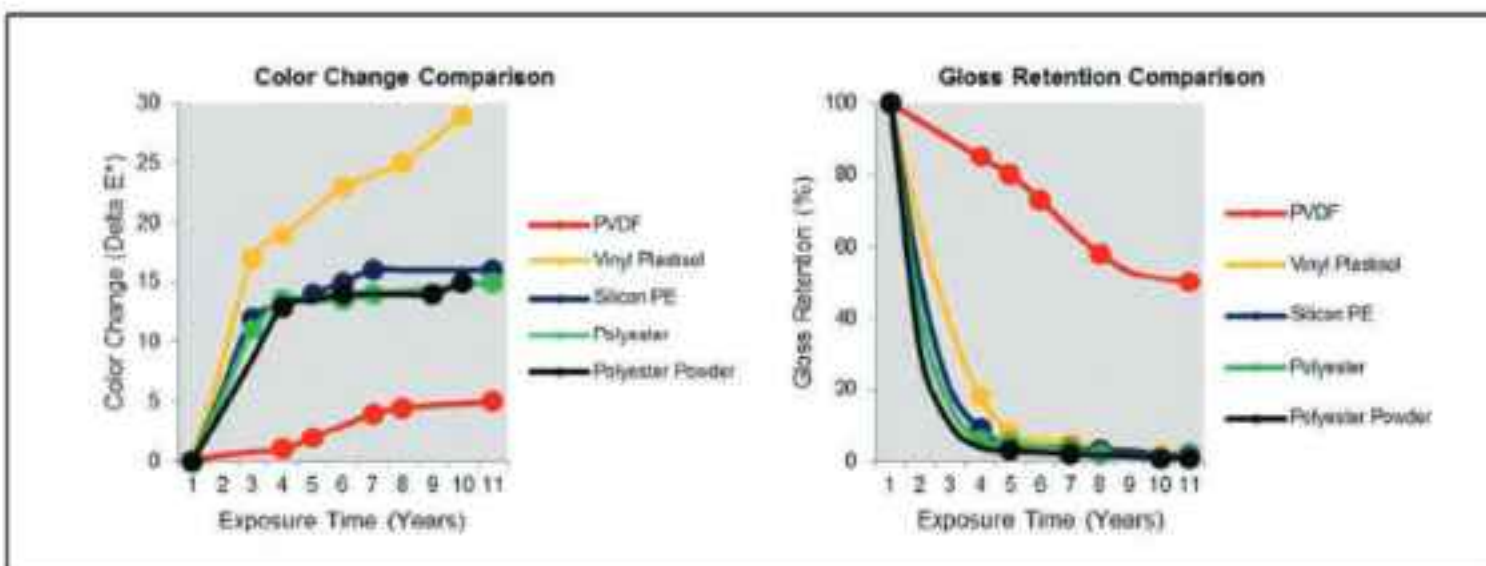
Weathering Properties	PVDF	Acrylic	Silicon Polyester	Polyester	Vinyl Plastisol	Urethane	Anodized
Color Retention	5	3	4	2	2	3	3
Gloss Retention	5	3	4	2	2	3	3
Chalking	5	3	4	2	2	3	3
Humidity Resistance	4	4	4	4	4	4	2

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: 25 - 50
	SMOKE DEVELOPED INDEX (SDI)			20	SDI ≤ 450
BS EN ISO-1718:2013 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 (n)	Compliance parameters
BS EN ISO-1718:2013	PCSs 4.0 MJ/m² (for External Non-Substantial component)	Topcoat + Primer	3	0.7	Compliant
		Back coat	3	0.2	Compliant
	PCSs 3.0 MJ/kg (for Substantial component)	Aluminium Skin	0	0	Compliant
		A2 Core	3	1.4	Compliant
	PCSs 4.0 MJ/m² (for Internal Non-Substantial component)	Adhesive	3	3.6	Compliant
	PCSs 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 (n)	Compliance parameters
BS EN 13823:2020	FIGRA0.2MJ ≤ 120 Wh		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'				
	SMOGRA, m²/s²		3	0	Compliant
	TSP600s ≤ 50 m²		3	16	Compliant
	CRITERIA for subclass 's1'				
	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	1	-	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 6946:2007	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	-

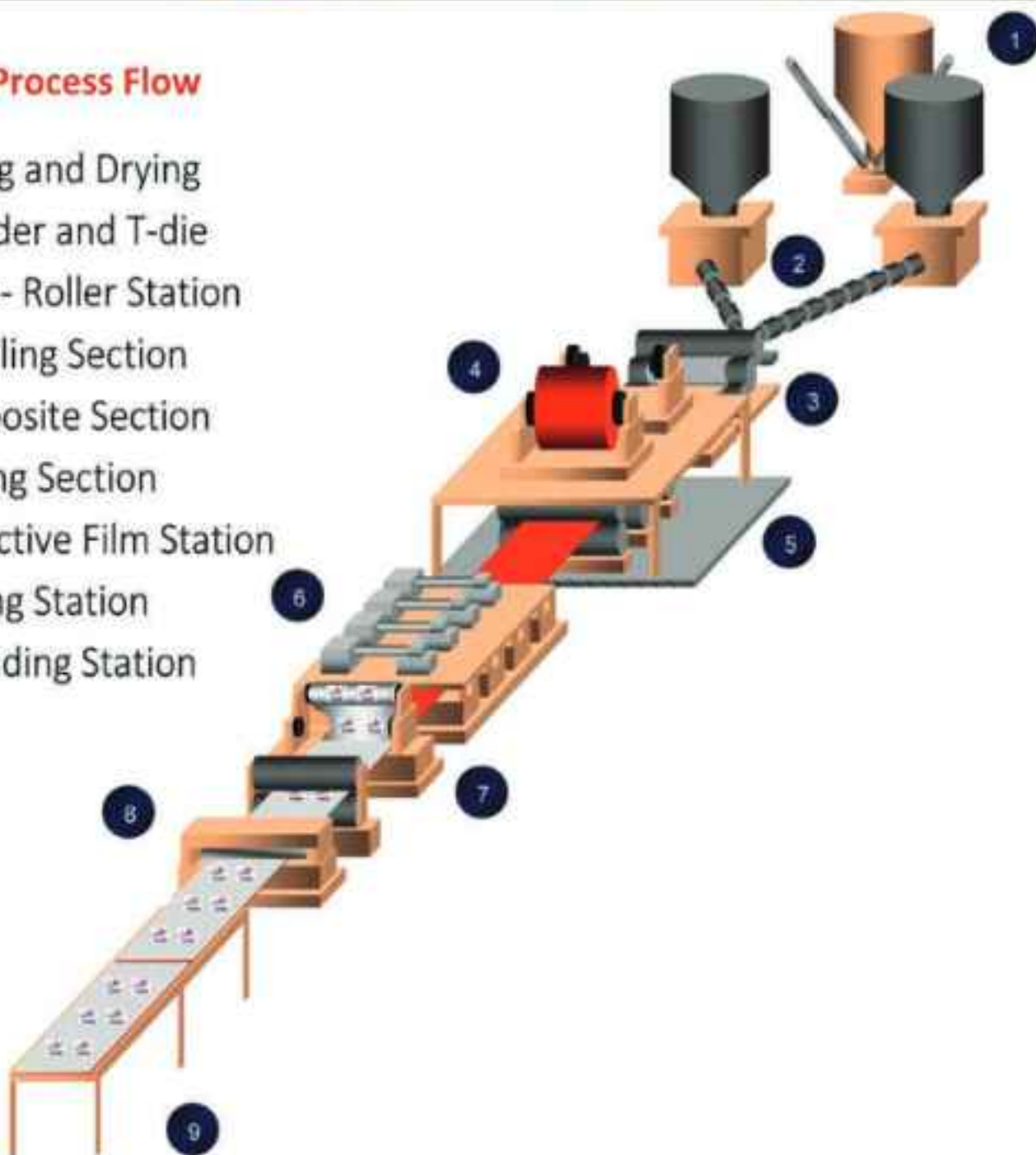
FR B1 PROCESS AND PRODUCTION LINE

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

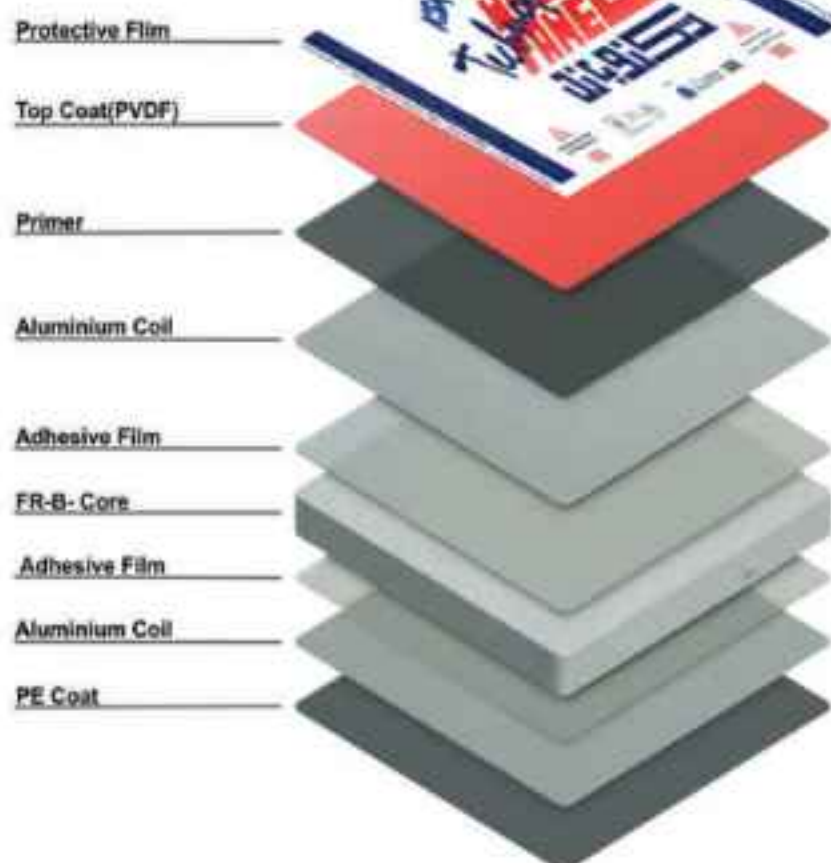
FR - B1 ACP - TECHNICAL DATA SHEET

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 fluoropolymer 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		m2KW	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	-	0.0088	-
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	-

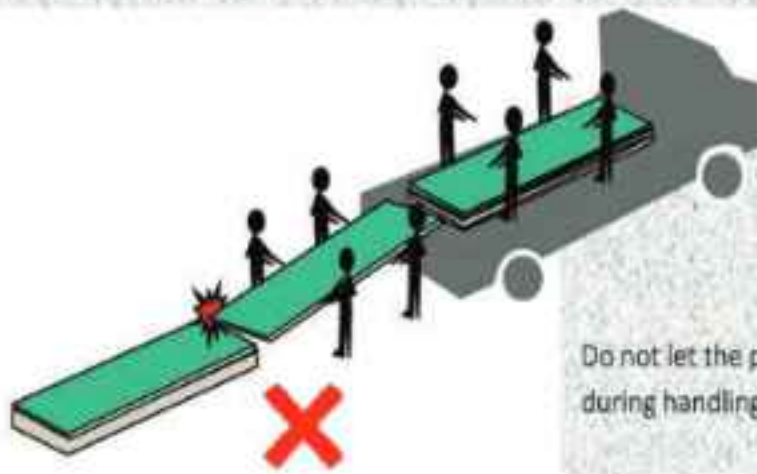
FR-B1-ACP- Fire Performance Properties				
ASTM E84 – 21a: Standard Test Method for Surface Burning Characteristics of Building Materials				
Test Method	Parameter	Results		
		Actual Result	SASO-Requirement	
ASTM E84 – 21a	FLAME SPREAD INDEX (FSI)	10	FSI: 51 - 75	
	SMOKE DEVELOPED INDEX (SDI)	30	SDI ≤ 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		Nil	Compliant
BS EN 13823:2020 Reaction to Fire Tests for Building Products — Building Products including 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	16	Compliant
	THR600s ≤ 7.5 MJ	3	1.6	Compliant
	Lateral Flame Spread < Edge of specimen	3	< Edge of specimen	Compliant
	CRITERIA for subclass "sf"			
	SMOGR0.4 m³/s²	3	0	Compliant
	TSP600s ≤ 50 m³	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	
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.

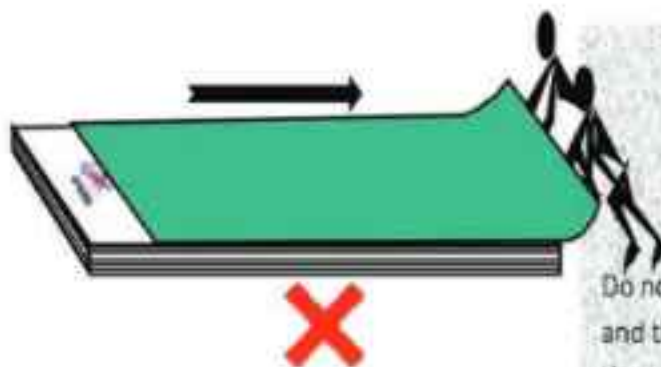
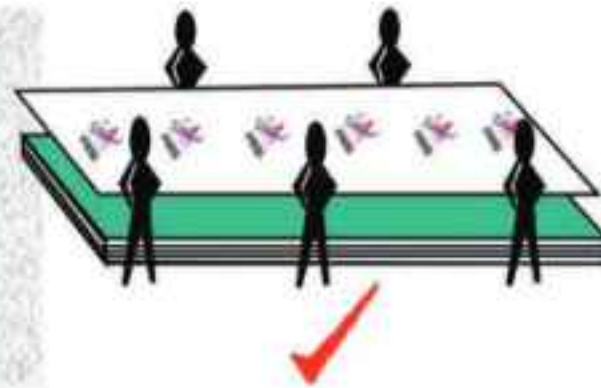
The recommended number of persons lifting the standard length (5.80 m) is at least four (4) persons in the truck and four (4) persons near the truck for transporting the panels.

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.



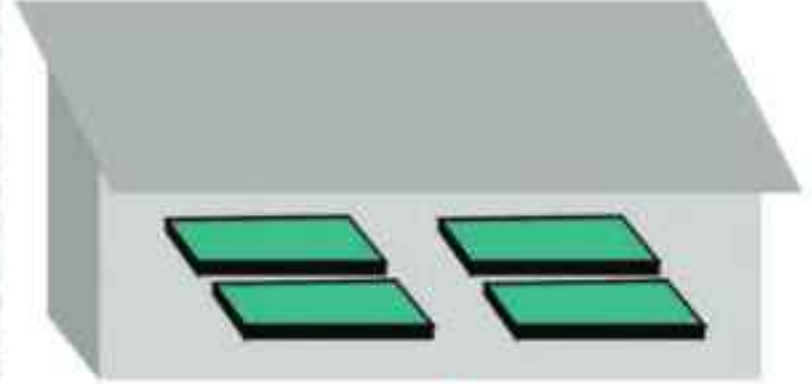
Do not pull the panel/s as it may damage or scratch any part of its surface and the other panel especially if it has any foreign material between them.

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.

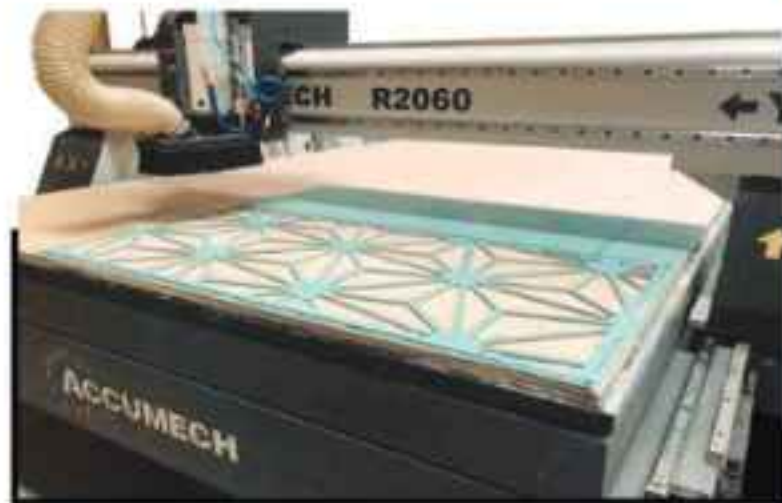
Typical cutting tools can be used for cutting with hard alloy blades. Saw blades and router bits are available through independent distributors who handle cutting tools. But for best cutting results, it is more suitable to use an automatic cutting machine.

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 Groove



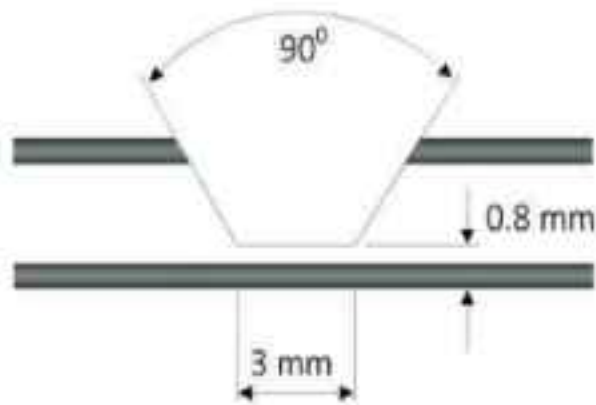
Circular Groove



Straight Groove



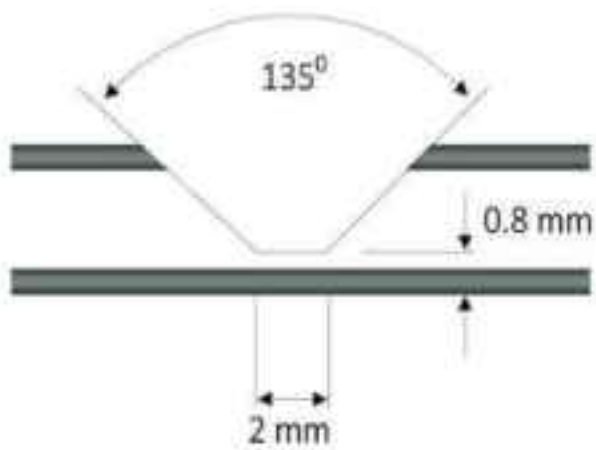
Grooving and Folding Techniques:



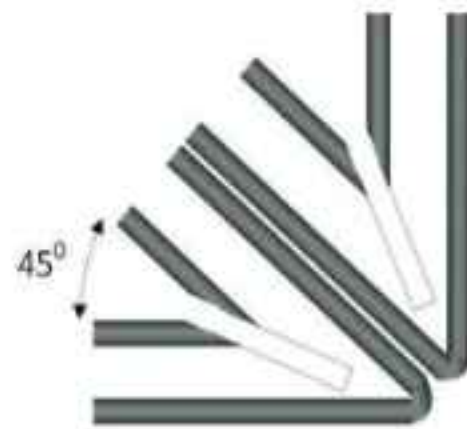
V-shaped 90° Grove



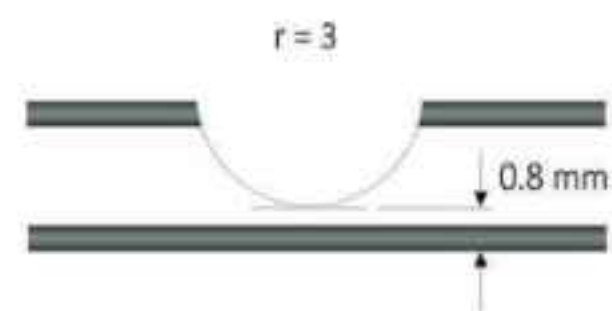
V-shaped 90° Grove if folded up to 90°



V-shaped 135° Grove



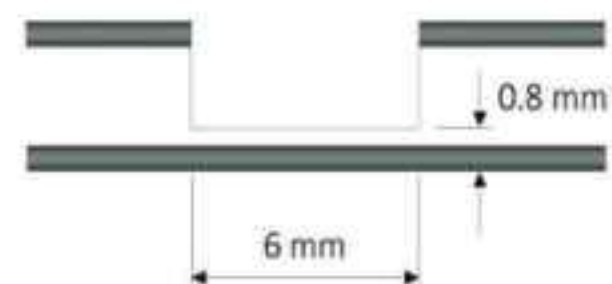
V-shaped 135° Grove if folded up to 45°



Circular Grove



Circular Grove if folded up to 90°



Straight Grove



Straight Grove 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.



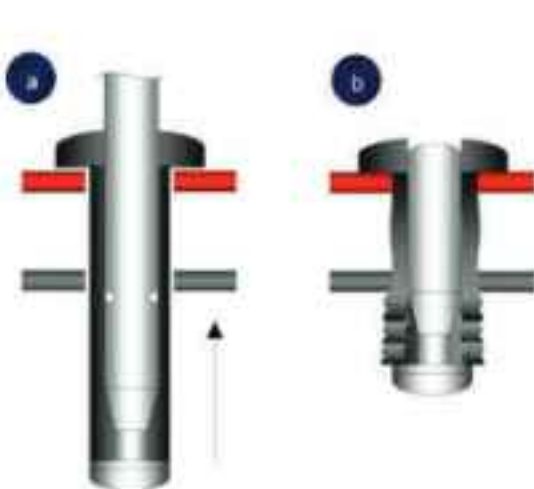
Three- Roller Bending Machine

Fastening

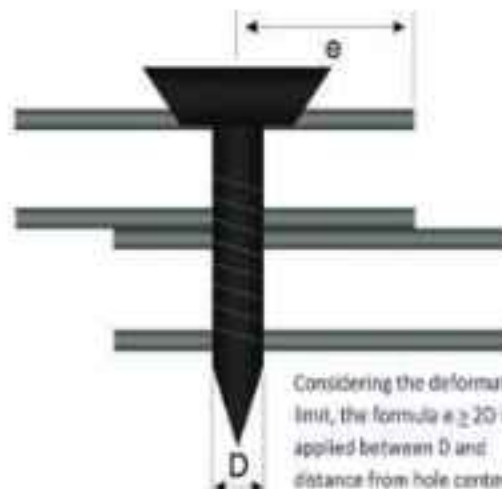
Fastening makes the structure more rigid enabling the edges to be fixed firmly. A variety of different fasteners is used to fabricate and install panels. Structural adequacy and selection of these fasteners is the responsibility of qualified engineers and in most instances where architectural panels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



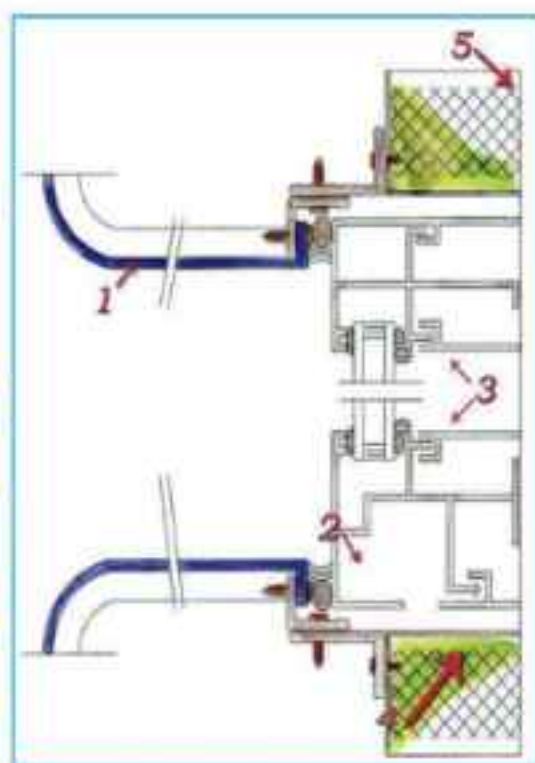
Rivet



Screw

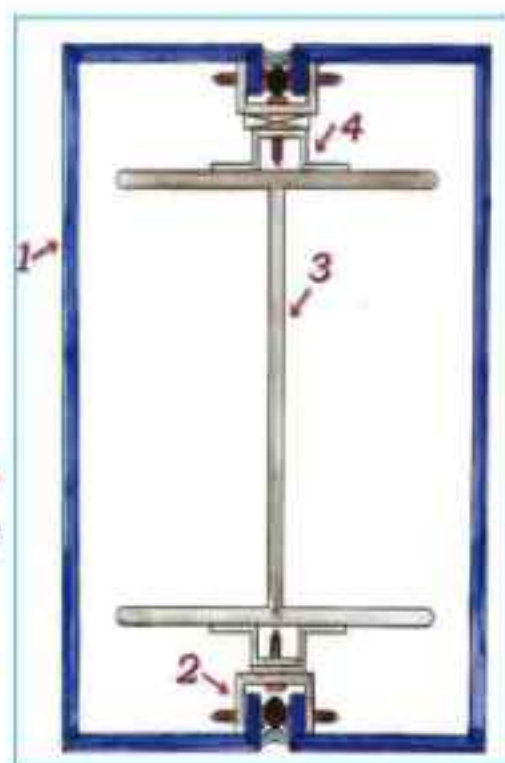
Considering the deformation limit, the formula $e \geq 2D$ is best applied between D and distance from hole center to the panel's edge.

TECHNOPANEL



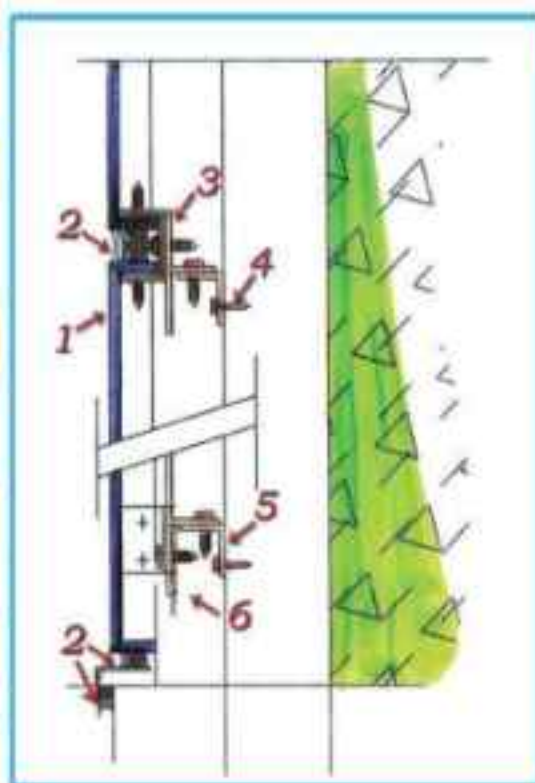
①

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



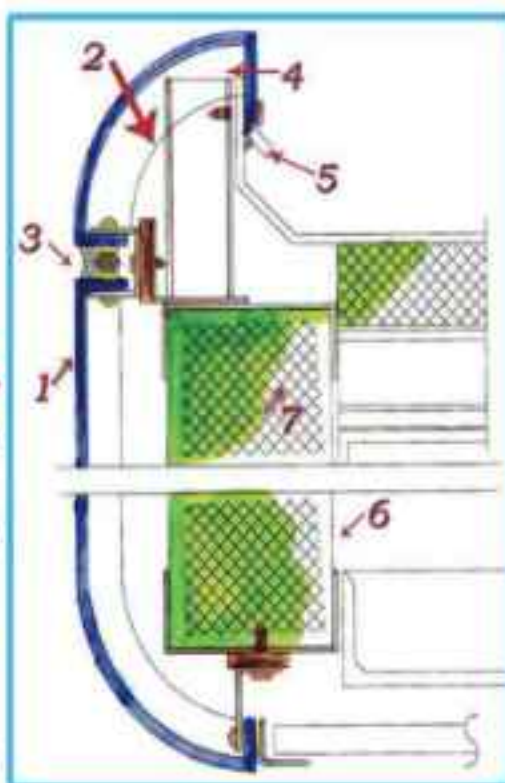
④

- 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



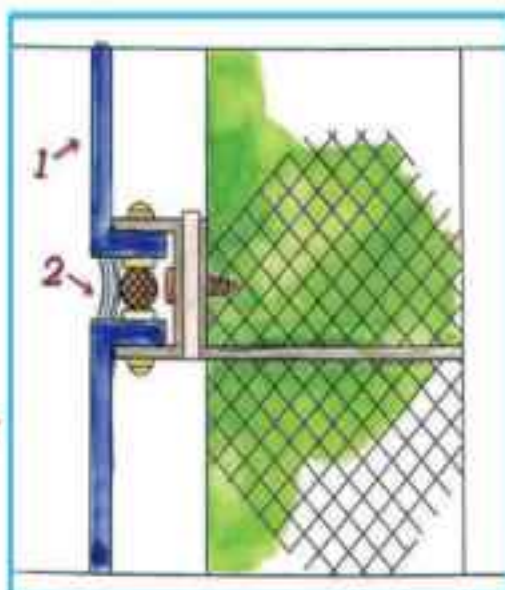
⑥

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



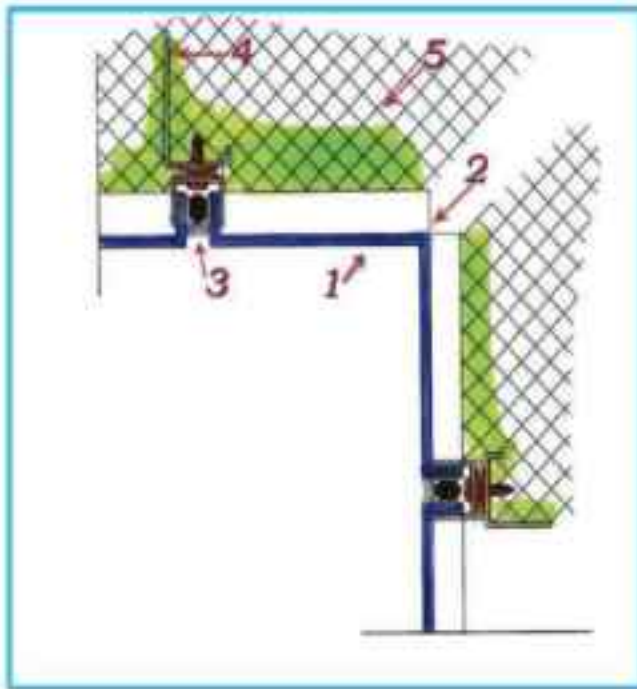
③

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



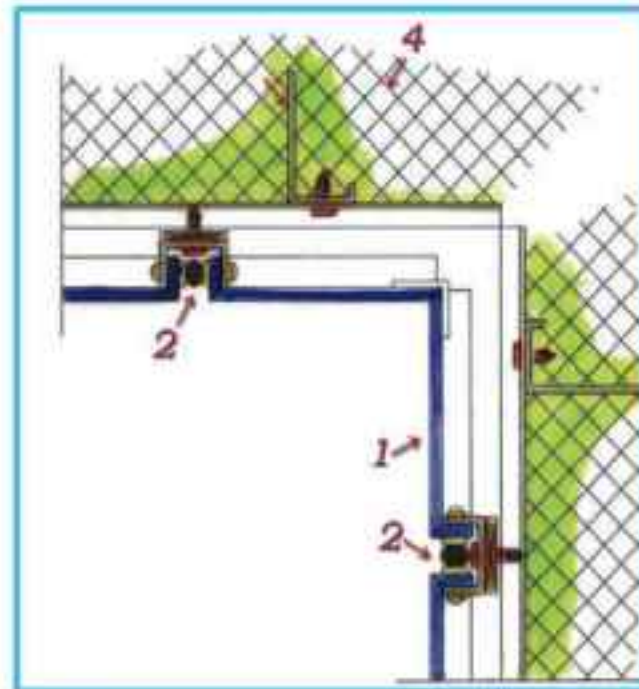
③

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



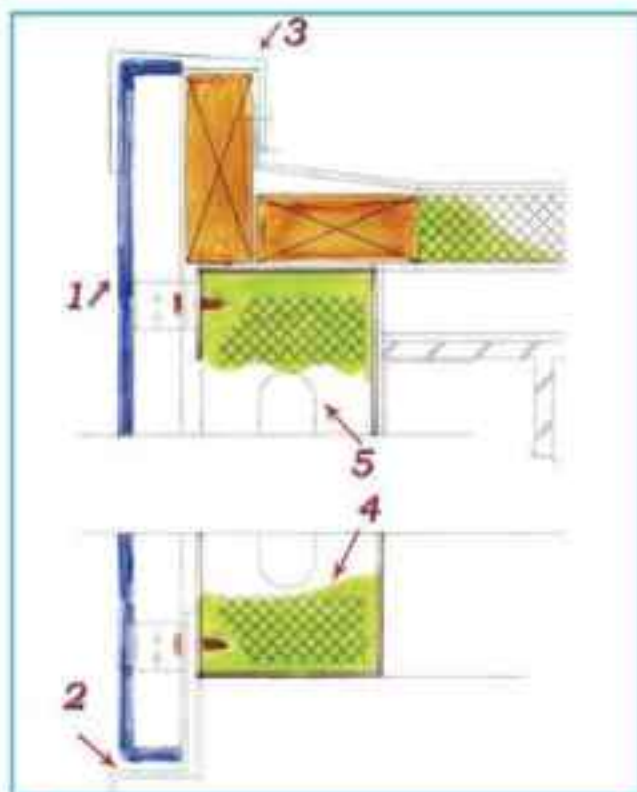
7

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



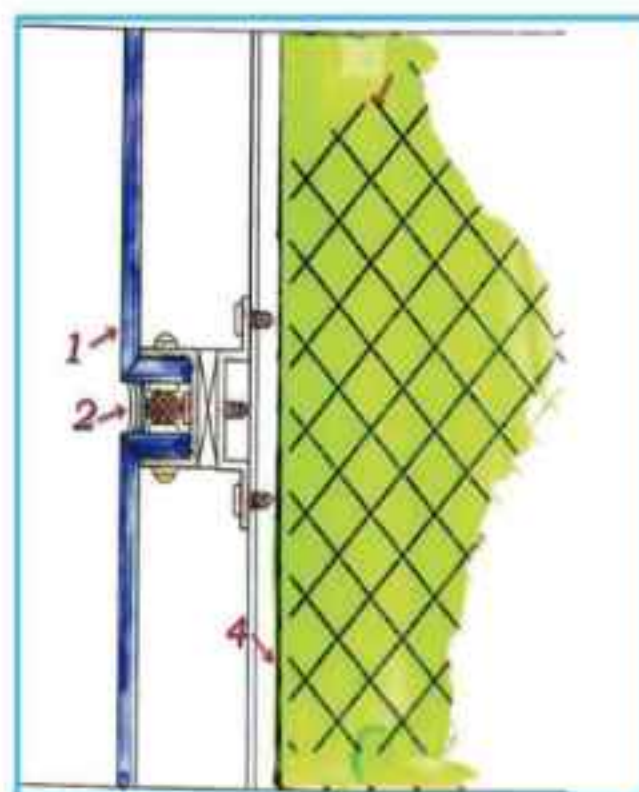
8

- 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



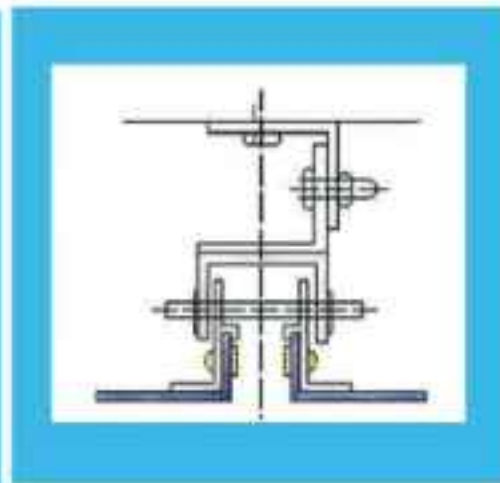
10

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

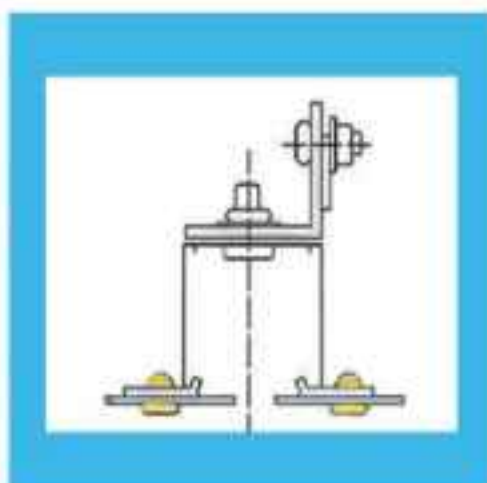
11



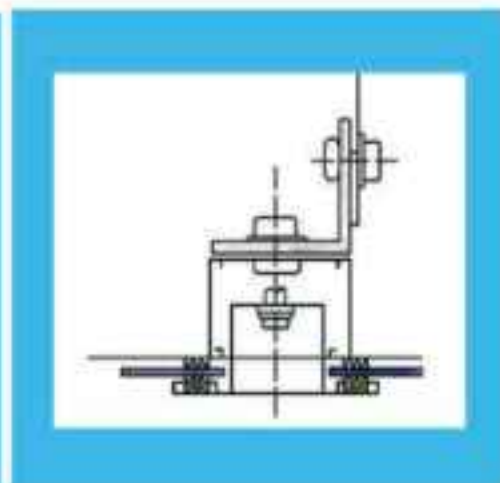
Screw Fastening



Fitting Part Suspending Fastening



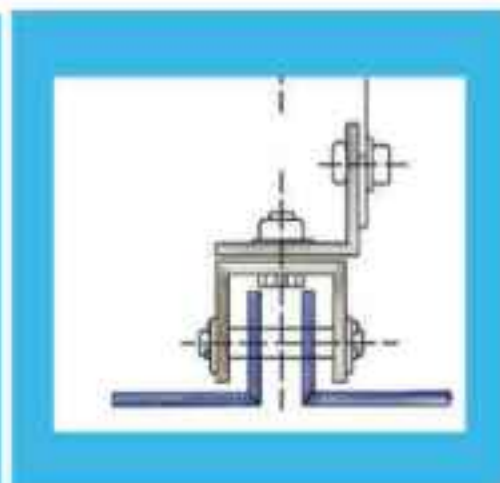
Fastener Fastening



Layerage Scres Fastening



Layerage Fastening



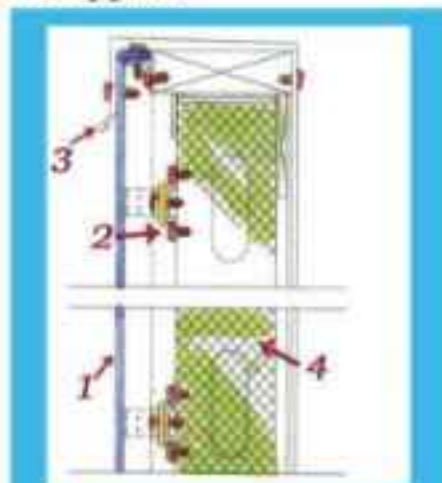
Suspending fastening

12



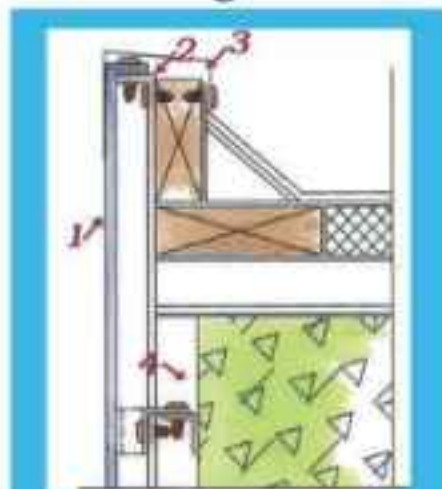
Cement Post Construction Method

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



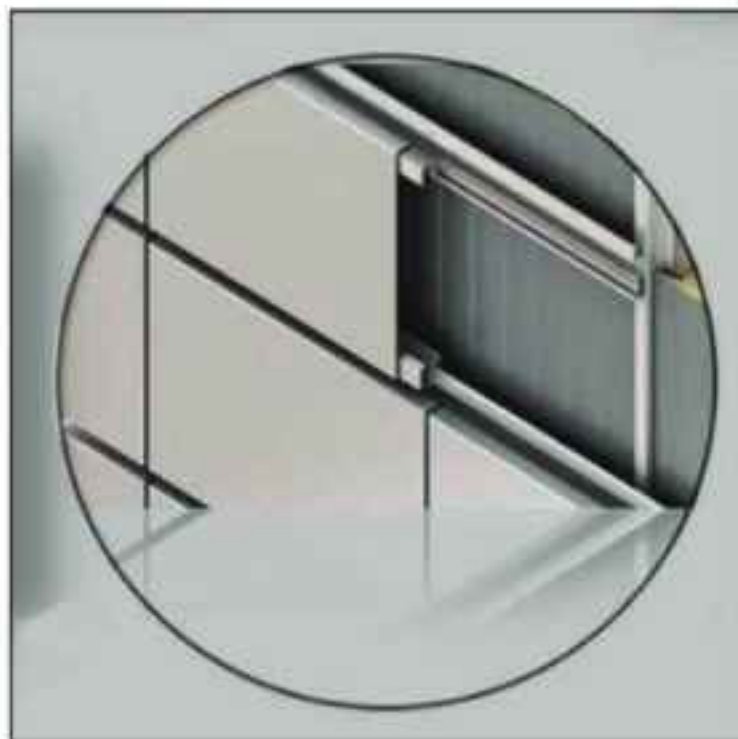
Aluminum Runner



Aluminum / Steel Tubes



Riveter and Rivets



Screw



Screw Driver



Sealant



Hand Drill

TECHNOPANEL

FINISHING AND MAINTENANCE

Protective Film Removal

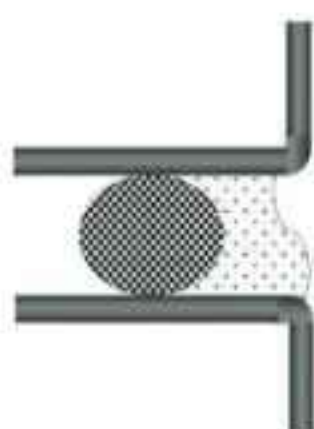
It is usual to remove the protective film after installation though 12 months warranty is provided as supplemental panel protection since the duration of certain projects may differ from one another.

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.

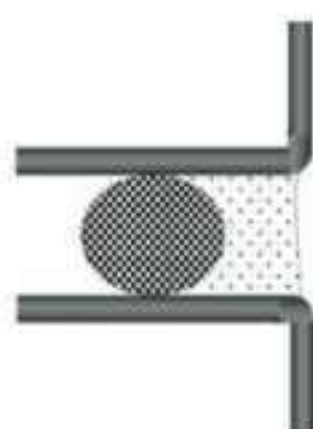
Sealant Finishing

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 - Makkah



Hadab Hotel Project



ATR Project





Hardees - Jordan



KUDU - Riyadh



King Fahd Road - Riyadh

Jodia Towers





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







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Saudi Standards



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شركة مصنع تقنية الألواح

المنشأة:

The Establishment's Address:

Al Mashael, Riyadh 14325, Saudi Arabia

عنوان المنشأة:

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:

تكنوبانل

العلامة التجارية:

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المنتج:
(تسجل المنتج في المنتج)

Date of Granting:

10/04/2023

تاريخ المنح:

Date of Renewal:

-

تاريخ التجديد:

Date of Expiry:

10/04/2026

تاريخ الانتهاء:

مدير عام الإدارة العامة لمنح الشهادات
Director General of Certification Department

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



لتأكد من صحة هذه الشهادة يرجى زيارة موقعنا على الإنترنت، وأي خلل أو تغيير في هذه الشهادة يلغيها.
To verify this certification visit SASO website, and any changes or modification on this certificate will affect its validity.

المملكة العربية السعودية
Kingdom of Saudi Arabia

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

T: 920009085
F: +966114520088

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. Mahesh

Bruce Mahesh, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please
contact a local UL Customer Service Representative at <http://ul.com/customer-service>





شهادة اشتراك
Membership Certificate

غرفة الرياض
Riyadh Chamber

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

الخدمات
الإلكترونية
E-SERVICES
920004565



- يُطلب التحقق من الوثيقة عبر الرابط <https://mybusiness.chamber.gov.sa> أو تطبيق 'استد' للأجهزة المحمولة أو الرقم الموحد دون أدنى مسؤولية على الغرفة عن محتوى الوثيقة.
- تعد هذه الورقة من الوثائق الإلكترونية لغرفة الرياض ويمكن تحديثها أول محاولة عبرتها بها وتصبح لأغنية حال محاولة تحديثها وتعرض صاحبها للملاحقة القانونية.



شهادة

اسم المنشأة : شركة مصنع تقنية اللوح
مركز : الرياض ١١٤٣٣
السعودية
رقم الإشراف : ٥٠١٢٣٥٤١٥
رقم السجل التجاري : ١٠١٠٢١٩٦٨٠

مصدره :

عدد المشتركين السعوديين
عدد المشتركين غير السعوديين
المجموع

رقمها
٣٦
٦٥
٩١
كتابة
سنة و عشرين مشتركا
خمس و ستون مشتركا
واحد و تسعون مشتركا

تشهد المؤسسة العامة للتشخيصات الاقتصادية بأن المنشأة المذكورة أعلاه قد أوفت بمتطلبات إنشاء المؤسسة وفقاً للوائح الفنية منها على تاريخ إصدار هذه الشهادة ، والتي لم تمنحها للتصديق إلا بعد التأكد ، وهي صالحة لجميع الأغراض التي نحن عليها أنظم التشخيصات الاقتصادية في المملكة (١٤٣٦) هـ.

هذه الشهادة سارية المفعول حتى ١٤٤٠/١٠/٢١ م
يطلب التحقق من صحة وصحة الشهادة عبر زيارة الرابط
أثناء في الموقع الإلكتروني للمؤسسة العامة للتشخيصات الاقتصادية



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



ننهادة



تعد هذه الشهادة من الوثائق الإلكترونية الصادرة الرسمية ، ويطلب التحقق من صحتها عبر الرابط <https://mybusiness.chamber.gov.sa> أو تطبيق 'استد' للأجهزة المحمولة أو الرقم الموحد دون أدنى مسؤولية على الغرفة عن محتوى الوثيقة.

المملكة العربية السعودية
وزارة التجارة والصناعة

بغداد

بغداد

الرقم: ٢٦٠٢٣

التاريخ: ١٩ رجب ١٤٣٩

الرقم: ١٩ رجب ١٤٣٩

سعادة مدير عام إدارة المشاريع
المؤسسة العامة للتقانة

المحترم

السلام عليكم ورحمة الله وبركاته

لقد أحاطت أن مصنع تقنية الألواح مرخص له بموجب القرار الوزاري رقم
(١٩٢٦/١١/٢٣) وتاريخ ١٤٣٦/١١/٢٣ هـ.

ونذكركم لإنتاج ألواح ألومنيوم معزولة ولدية الإمكانات لتأمين احتياجاتكم من إنتاج.

لذا نأمل الإيعاز للجهة المختصة لديكم بتأمين احتياجاتكم من منتجات الصناعة الوطنية
صلا بقرارات مجلس الوزراء المؤرخ بهذا الخصوص.

شكراً ودعمكم وتشجيعكم للصناعة الوطنية.

مع أطيب تحياتي وتقديري

مدير إدارة تشجيع الصناعة بالنيابة

بسام بن عبد العزيز الهزاعي
١٤٣٩ / ١٢ / ١٨

المملكة العربية السعودية
وزارة التجارة والصناعة

بغداد

بغداد

الرقم: ٢٦٠٢٥

التاريخ: ١٩ رجب ١٤٣٩

الرقم: ١٩ رجب ١٤٣٩

سعادة مدير عام إدارة المشاريع
وزارة التعليم العالي

المحترم

السلام عليكم ورحمة الله وبركاته

لقد أحاطت أن مصنع تقنية الألواح مرخص له بموجب القرار الوزاري رقم
(١٩٢٦/١١/٢٣) وتاريخ ١٤٣٦/١١/٢٣ هـ.

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مع أطيب تحياتي وتقديري

مدير إدارة تشجيع الصناعة بالنيابة

بسام بن عبد العزيز الهزاعي
١٤٣٩ / ١٢ / ١٨

المملكة العربية السعودية
وزارة التجارة والصناعة

قبري التجارة والصناعة

شؤون التجارة والصناعة

الرقم: ٢٦٠٢٤

التاريخ: ١٢ رجب ١٤٣٩

الموقع: الرياض

السيد مدير عام إدارة المشاريع
الهيئة العامة للتأمينات الاجتماعية

السلام عليكم ورحمة الله وبركاته

لقد أخطت أن مصنع تقنية الألواح مرخص له بموجب القرار الوزاري رقم
١٤٣٦/١١/٢٢ وتاريخ ١٤٣٦/١١/٢٢ هـ.

وتلك لإنتاج ألواح الألمنيوم معزولة ولدية الإمكانيات لتأمين احتياجاتكم من إنتاجه.

لذا نأمل الإعجاز للجهة المختصة لديكم بتأمين احتياجاتكم من منتجات الصناعة الوطنية
صلا بقرارات مجلس الوزراء المؤرخ بهذا الخصوص.

شكراً ودعم وتشجيعكم للصناعة الوطنية.

مع أطيب تحياتي وتقديري

مدير إدارة تشجيع الصناعة بالنيابة

بسم بن عبد العزيز الهزاعي

١٤٣٩ / ١٢ / ١٩

المملكة العربية السعودية

وزارة المياه والكهرباء

مكتب 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 القصير.
سعادة المدير العام للمياه بمنطقة المدينة المنورة.
سعادة المدير العام للمياه بمنطقة القصير.
سعادة المدير العام للمياه بالمنطقة الشرقية.
سعادة المدير العام للمياه بمنطقة حائل.
سعادة المدير العام للمياه بمنطقة تبوك.
سعادة المدير العام للمياه بمنطقة حائل.
سعادة المدير العام للمياه بمنطقة الحدود الشمالية.
سعادة المدير العام للمياه بمنطقة جازان.
سعادة المدير العام للمياه بمنطقة الباحة.
سعادة المدير العام للمياه بمنطقة الجوف.
السلام عليكم ورحمة الله وبركاته.

يرقد نسخة خطاب شركة مصنع تقنية الألواح (تكنو بانل) المؤرخ في ١٤٣٧/٣/٦ هـ، المتضمن
طلب اعتماد منتجات الشركة من ألواح الألمنيوم المعزولة (Cladding) في مشاريع الوزارة، وحيث
أفادت شركة المياه الوطنية بالخطاب رقم (٣٣/٢٠٧٠/٢٢)، وتاريخ ١٤٣٧/٤/٢٦ هـ، وبوكالة
الوزارة لشؤون الكهرباء بالخطاب رقم (١/٢٧٧٠) وتاريخ ١٤٣٧/٦/٢٨ هـ، باعتماد منتجات الشركة
من ألواح الألمنيوم المعزولة المستخدمة في تغطية واجهات المباني الخارجية والداخلية.

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

مع أطيب تحياتي

نسخة لشركة مصنع تقنية الألواح
٣١٥٣٨
التاريخ: ١٤٣٩ رجب ١٢
للتوثيق

الرقم: ٣١٥٣٨

الرياض - طريق الملك فهد - قريش ١١٣٢ - هاتف: ٢٠٢٧٤٨ - فاكس: ٢٠٢٧٤٩
Riyadh - King Fahd Road - Riyadh 11323 - Communications Dept. Tel.: 2032748 - Fax: 2032749

الهيئة العامة للغذاء والدواء
Saudi Food & Drug Authority
وزارة الصحة
Ministry of Health

مدير عام البحوث وضبط الجودة
المهندس / يونس بن عمر البراك

إشارة إلى خطابكم رقم ٣٤٥٣٧٧١٣ بتاريخ ٢٢/٢/١٤٣٤ هـ بخصوص طلب استخدام منتجاتكم في مجال الواجهات (كلاذنج) مشاريع الوزارة .

نثيروكم بأنه يمكنكم تقديم عيناتكم من خلال المفاوضين المنقذين لمشاريع الوزارة بضممان عشر سنوات وفق صيغة الضمان المعتمد بالوزارة وتعتبر مسؤوليتكم تضامياً مع المفاوض المنفذ وستتم إيداع استخدام منتجاتكم تلقائياً حال وجود عيوب صناعة أو ملاحظات على المنتجات المذكورة أعلاه وسوف يتم إعادة تقييم المنتجات بعد عام من تاريخه .

والسلام عليكم ورحمة الله وبركاته

المكتمل / شركة تقنية الألواح (تكنوبانل)
ص.ب. ١٠٣٤٢ - الرياض ١١٤٣٣
السلام عليكم ورحمة الله وبركاته

الردود: موقفاً استخدام منتجات
شركة تقنية الألواح (تكنوبانل)

الهيئة العامة للغذاء والدواء
Saudi Food & Drug Authority
وزارة الصحة
Ministry of Health

مدير عام الإدارة العامة للشؤون الهندسية
م. كنعان بن عيسى الكنعان

إشارة لخطابكم رقم ١٤٣٨/٣٥/١٦٠٦٨ وتاريخ ١٤٣٨/١٢/٢٢ هـ بخصوص اعطاك منتجاتكم ألواح الألومنيوم المعزولة (الكلاذنج) والتي تمت لمصنعكم بمدينة الرياض وذلك بتاريخ ١٤٣٩/١٢/٢٠ هـ لاتخاذ على منتجات المصنع وطرق ضبط الجودة ومواصفات المواد الأولية وبمراحل التصنيع المختلفة حتى المنتج النهائي .

نثيروكم بأنه لأمنع من اعتماد منتجاتكم عن طريق المفاوضين المنقذين لمشاريع الوزارة لكونهم المصنعين بتقييم المواد للأعتماد وطبقاً للمواصفات الفنية لمشاريع الوزارة والمواصفات القياسية السعودية مع الاستمرار برعاية وضبط الجودة بمنتجاتكم .

ولكم أطيب تحياتي

السادة/ شركة مصنع تقنية الألواح (تكنوبانل)
ص.ب. ١٠٣٤٢ - الرياض ١١٤٣٣
فكس (٠١١٢٤٢٩٠٤٠) ٩٦٦١١٢٤٢٩٠٤٠

المصنوعين

توضيح: اعطاك منتجاتكم لفترة

[illegible]

المملكة العربية السعودية
وزارة التجارة والصناعة

Received August 6, 1999

تاریخ

الملاحظات :
التاريخ : ٢٠١٦
الرقم :

المختبر
معداة مدير عام إدارة المناقصات والمشتريات
وزارة الصحة

لقد الإحاطة أن مصنع تقنيّة الألوح مرخص له بموجب القرار الوزاري رقم
١٩٢٦/١/٢٣ وتاريخ ١٤٢٦ هـ .

لذا نأمل الإيماء للجهة المختصة لديكم بتأمين احتياجاتكم من منتجات الصناعة الوطنية عملاً بقرارات مجلس الوزراء المؤرخ بهذا الخصوص .

شادى اءعمكم وتسجيعكم للصناعة الوطنية.

مع أطيب تحياتي وتقديرى
1444

مدير إدارة تشجيع الصناعة بالنيابة

بسم ابن عبد العزيز الهزاعي
١٤٢٥ / ١٤٢٦



Arch. Material Submittal Form		Received by Consultant
Project Name	D&P Sulay Project	Project No
Contractor	Rafic A. Kreidie Engineers & Contractor	Project Location
Contract No.		Shop Drawing Submittal No.
To The Engineer	ACES	Date
Shop Drawing No.		Contract Drawing (Ref. No.)
Drawing Title	TECHNOPANEL - fire resistant Aluminum composite panel - materials and color - dat sheet and samples provided	
Category	☒ Architectural ☐ Electrical ☐ Other (Specify)	☐ Mechanical ☐ As Built ☐ Structural ☐ Rubber's Work
The Contractor certifies that this submittal has been verified and coordinated by all related disciplines and relevant subcontractors		
Eng. Nizar Moumar		Date
Name	Signature	Date
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	☐ 1 - Approved ☒ 2 - Approved With Comments ☐ 3 - Not Approved. Review & Resubmit ☐ 4 - Rejected As Comments	☐ 5 - Not Approved. Review & Resubmit ☐ 6 - Rejected As Comments
Consultant PM Signature	Eng. Hassan Al Mawardi	Date: 24-10-2019 Specialist Signature:
A) - Review and only proceed when within limits in (1) or (2) B) - Action code (2) must be Resubmitted C) - Review does not return the Submittal from the responsibility of professionals at the project location and applications D) - Contractor For Compliance Co - Client For Info		
Received by Contractor	Project:	Date
Sulay & Paint Workshop Sulay, Riyadh for Mohamed Yousef Haghi Motors Co. Arabian Consulting Engineering Services P.O.Box 146 Riyadh 11411, Tel: 0114643338		

[illegible]



المجلة العربية للعلوم والتقنية
Journal of Arab Science and Technology

المؤرخ: تأهيل شركة كوكاكولا لدى الهيئة

المؤلفون

السادة/ شركة مصنع الأنوار تكوماتا

السلام عليكم ورحمة الله وبركاته

إشارة إلى كتابكم الوارد للهيئة برقم (١٧٠٤٤) وتاريخ ١٤٣٨/١١/٢٩ هـ بشأن طلبكم اعتماد منتجكم من الألواح المعزولة ضمن الموردين المعتمدين لدى الهيئة. عليه، وبناء على دراسة ملف منتجكم لحيطكم بأنه لا مانع من اعتماده وتقديمه لمعالي مشايخ الهيئة حال مطابقتها لمواصفات وشروط المشروع المقدم عليه.

ولكم تحياتنا،

مدير إدارة

الإشراف وتنفيذ المبانى الحديثة

۴. هاشمی بن سعید و بجانی

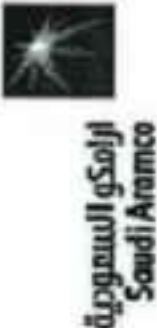
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[illegible]

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40002615

TECHNICAL APPROVAL FORM - RESPONSE Project: Community Support Facilities Project Number: BI 10-77803		Revision: 1 of 1 Submittal Received: August 28, 2019
		Technical Approval Reference: 007-020-1 Aluminium Cladding For Canopy (Rev.1)
PMAT ref No. Contractor:		
SELECT AS APPROPRIATE:		
SUBMISSION 1: ☒	DATE: 5-Sep-19	Approved with conditions
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: CSPO		
Response/Comment:		
Comments are as follows: 1. Material identification should be stenciled on the back of the panel, not a sticky label. 2. All the IBC Code Issues (2009 IBC, SECTION 1403, GENERAL) raised by LPO (David Leiker) in his e mail dated July 27th must be clearly addressed. 3. Additional Fire Test Certificates in the process of being procured by Technopanel at the moment should be forwarded to CSPO 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 Khumaini for the Package 7 canopies) will also need to be provided. ***Nothing Follows***		
Signed: Oliver Quinn		Date: Thursday, September 05, 2019
Distributions:		Lead Engineer: Oliver Quinn

		A.S. ALSAYEF PARTNERS CONTRACTING CO. LTD	
REQUEST FOR TECHNICAL APPROVAL			
TO: Name: Mr. Tawfik A. Al Position: Project Manager Department: Community Project Dept. Location: Al Khobar, KSA		Project Title: COMMUNITY SUPPORT FACILITIES PHD 3 Location: DHAKKA, KSA Contract No: 9880039701 10-77801-0001	
ATTN: Name: Mr. Walid Safid Position: Sr. Project Engineer		MATERIAL DESCRIPTION RTA FOR: ALUMINUM CLADDING FOR CANOPY ALS-RTA-007-020 REV 01	
FROM: Company: A.S. ALSAYEF & PARTNERS CONTRACTING CO. LTD Address: Tel/Fax No: E-mail: lsayef@asayef.com		SA ENGINEERING STANDARDS NA SA ENGINEERING PROCEDURES NA SPECIFICATION SA PM007	
SUBMITTAL CODE A V ARCHITECTURAL C CIVIL S STRUCTURAL M MECHANICAL E ELECTRICAL I INSTRUMENTATION O Other		SA MATERIALS SPECIFICATION SYSTEM NA	
NEW SUBMITTAL X	RESUBMITTAL 1	REF. SUBMITTAL NO. ALS-RTA-007-020	SA DUBBY P.D. NO. NA
FORM SA-175 NA		HMR FORM NA	
INSPECTION LEVEL "NON INSPECTABLE"		(FOR SAUDI ARAMCO USE ONLY) REVIEW / COMMENT / APPROVAL / ACTION	
SA # 1	Material Description ALUMINUM CLADDING FOR CANOPY Technopanel FR 01 TO BE USED FOR COMMUNITY & RECREATION BUILDING CANOPY SAMPLE AT PROJECT SHOWROOM	MANUFACTURER NAME PRIMA METAL INDUSTRY LIMITED LIABILITY COMPANY OR 1004276 	VERDICT NAME PRIMA METAL INDUSTRY LIMITED LIABILITY COMPANY OR 1004276 See attached response from proponent. ☐ NO OBJECTION ☒ NO OBJECTION AS NOTED ☐ CORRECT & RESUBMIT ☐ REJECTED
Reviewed by:  Architectural Engineer	Reviewed by:  Procurement Manager	Approved by:  Project Manager	Approved by (SAPMT):  Sr. Project Engineer
Name: Husein Husein Husein Date: 26/08/2019	Name: Walid Safid Date: 27/08/2019	Name: Jamal Alkhayat Date: 27/08/2019	Name: Walid Safid Date: 9/11/19



AECOM

Material Submittal Form (Complete All Fields)

Contributor	MOBICO Civil Construction	Material Submittal No.	14-662000-4800000322-MOB-ARC-MAT-000012
NEOM Contract No.	4800000322009	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			
Specification Reference	SECTION 074213.23 METAL COMPOSITE MATERIAL WALL PANELS	Applicable Code / Standard	
Locally Manufactured (Identify Country of Origin if imported, with justification)	☐ Yes ☐ No		☐ Yes ☐ No
Listed in NEOM Mandatory List	☐ Yes ☐ No		
Contractor's Representative	MOBICO Civil Construction	Signature	

Discipline:

☒ Architectural	☐ Civil / Structure	☐ Interior Design	☐ Landscape	☐ MEP/HVAC
☐ Wet Services	☐ Transportation	☐ Sustainability	☐ Mechanical	☐ Electrical
☐ Geotechnical	☐ Traffic	☐ Fire Protection	☐ Telecom, ICT & ELV	☐ Others

Manufacturer/Supplier

Company Name	TECHNOPANEL / CUBE METAL INDUSTRIES		
Address	P.O. Box 17851 Jeddah 21404, Saudi Arabia	Other details	
Local agent	P.O. Box 10342 Riyadh 11433, Saudi Arabia		
Scheduled Date of Delivery on Site	As agreed	Delivery Duration (Long Lead/ Short Lead)	Long Lead

Checklist for Attachments (as applicable):

☐ Index & Separators/ Flare	☐ Drawings / Specification	☐ Specification Compliance Sheet
☒ Product Data	☐ Design Mixes (Concrete / Asphalt / JWP)	☐ Mill Certificates
☒ Test Reports	☐ Compliance Certificates	☐ Warranties
☒ Prequalification Approval reference	☐ Source Quality Control Reports	☐ Certificates & Approvals
☐ LEED Submittals	☐ Welding Certificates	☒ Safety Data Sheet
☒ Previous Client Approvals	☒ Completed Projects (Similar in feature)	☐ Delegated Design Submittals
☐ Samples	☐ Mockups / Record Data	☐ Maintenance Data

01-710000-100113-ACM-COM-FRM-000022 - Rev 003
September 2021

Page 1 of 4

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

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

TECHNOPANEL

ALUMINIUM COMPOSITE PANEL

Revision



Document history

Revision code	Description of changes	Purpose of Issue	Date
01	First Issue	For Approval	22-06-2022

Document approval

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

شركة مصنع تقنية الألواح
Panels Technology Factory Co.



شهادة ضمان

منتج مقاوم للحريق فئة B1

اسم المركب و مستلم المواد:
اسم المشروع:
مالك المشروع:
المنطقة:
الموقع:

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



- تكون مسؤولية المنتج مارية فقط على القيمة المضافة في القوائم.
- يوافق المالك والموقع العمل على مسؤولية التركيب.

شركة التسويق للتسويق المحدودة

شركة المساهمة المحدودة
الرمز المساهمة
رأس المال: 100,000,000 ريال



TAS'HELAT MARKETING CO. LTD.

A Limited Liability Company
Head Office
Capital: 100,000,000 S.R.

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

السادة	شركة مصنع تقنية الألواح (تكنوبانل)
المستلم	مدير الشركة
الموضوع	إعتماد منتج مصنع تقنية الألواح (تكنوبانل) لدى شركة التسويقات للتسويق

السلام عليكم ورحمة الله وبركاته .

إشارة إلى طلب مبادلتكم لإعتماد منتجكم لدى محلات سهل (شركة التسويقات للتسويق) (ألواح بكتالديج مقاوم للحريق سمك اللوح 4 مم للونين 102 و 403 طبقاً لمقتضيات الألواح الخاصة بشركتكم مصنع تقنية الألواح (تكنوبانل) .

نريدكم بأنكم بمحلاتكم تقدم عيناتكم لمتجري مشاريع التطوير بمحلات سهل (شركتكم التسويقات للتسويق) وفق إشرافنا الهندسية والدفاع المدني . على أن تقوم شركتكم مصنع تقنية الألواح بشركتكم مصنع تقنية الألواح (تكنوبانل) .

والسيادتكم جزيل الشكر



م. محمد طارق أبو

2016/03/23
تاريخ التوقيع



شركة تسويق - ج.م.س. 11511 - الرياض - 11511 - 11511
Head Office : P.O. Box 88279 - Riyadh 11511 - Tel: 011 2800000 - Fax: 011 2800000 - E.R.: 1512100180 - C.C.: 1512100180
Head Office : P.O. Box 88279 - Riyadh 11511 - Tel: 011 2800000 - Fax: 011 2800000 - E.R.: 1512100180 - C.C.: 1512100180
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Richard B. Cuddeback
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Technical Polymers

elf atotechm

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CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

**Tqneyat Al Alwah (Panels
Technology Factory,
Technopanel)**

Main Site: Bldg 214-217 Al Madain Industrial Zone, New Al Khair Road,
PO Box 10342 Riyadh 11433 Kingdom of Saudi Arabia

Additional Site: Tqneyat Al Alwah (Panels Technology Factory,
Technopanel), King Fahd Road, Opp. Municipality of Mitham, Riyadh,
Kingdom of Saudi Arabia

has been registered by Intertek as conforming to the requirements of:

ISO 9001:2015

The management system is applicable to:

Manufacturing of Aluminium Composite Panel

Certificate Number:
180235-01

Initial Certification Date:
05 August 2021

Date of Certification Decision:
05 August 2021

Issuing Date:
05 August 2021

Valid Until:
04 August 2024



Calin Milford

Calin Milford

President, Business Assurance

Intertek Certification Limited, 204 Victory
Park, Victoria Road, Derby DE21 8DT, United
Kingdom

Intertek Certification Limited is a
UKAS accredited body under
schedule of accreditation no. 3124



With reference to the scope of the certification, the management system of the certified body is subject to surveillance audits and re-certification audits. The certification is valid only if the certified body complies with the requirements of the standard and the scope of the certification. The certification is not a guarantee of the quality of the products or services. The certification is not a recommendation of the standard or the scope of the certification. The certification is not a guarantee of the quality of the products or services. The certification is not a recommendation of the standard or the scope of the certification.



Certificate of Compliance



You have been awarded:

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

Standards: ASTM E84 (2016)

Certificate number: WH117-30486701

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: 647-439-5667 Fax: 647-439-7320

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.

Report No.: METS-R 3322-02/2022
Date of analysis: 08/04/2023-03/07/2022

Parameter	Test Method	Unit	Result	Specification Limit SASO 2752:2019
Thermal properties (core thermal properties)				
Heat Deflection Temperature	SASO ISO 75-2:2014	°C	88	85 Min
Linear Thermal Expansion Coefficient	ASTM D 696-16	µm/m.°C	151	300 Max
Self-ignition temperature	SASO ASTM D1629-2015	°C	>350	343 Min
Temperatures Resistance (B-50 to +180)	Visual	-	No defect	-
Thermal conductivity of core, K _c		W/mK	0.4148	-
Thermal resistance of core, R _c		m ² °C/W	0.0559	-
Internal surface resistance, R _{si}	ASTM C 518-17 / BS EN ISO 846:2007	m ² °C/W	0.13	-
External surface resistance, R _{se}			0.04	-
Total Thermal resistance, R _t			0.2259	>0.08
Thermal Transmittance (U value)	ASTM C 518-17	W/m ² .K	4.43	<4.5
Dynamic panel strength	ASTM D1781-98 (2021)	N/mm ²	107	>100
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 11967-1:2017	-	No change observed	Shall have no change
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 C280/C 393 M-16	MPa	109	>100
Band Elastic Modulus	ASTM C280/C 393 M-16	MPa	21856	>20000
Thickness of aluminium layer	ASTM A 370-04	mm	0.55	-
Mass per unit area	ASTM B 787-02	kg/m ²	8.46	-
Close initial value at 20°	SASO ISO 2813:2015	-	66.9	-
Close initial value at 60°	SASO ISO 2813:2015	-	80.9	-
Close initial value at 85°	SASO ISO 2813:2015	-	93.4	-

Test Results:



Page 3 of 4

P.O. Box: 31442, Ajman - UAE | Tel: +971 67 443338 | E-mail: info@metstestlab.com

Web: www.metstestlab.com

Report No.: METS-R 3322-02/2022
Date of analysis: 08/04/2023-03/07/2022

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 6721 Frequency range 100 - 3200 Hz	-	0.0086	-
Technical Properties				
Section Modulus W	DIN 53293-1982	cm ³ /m	1.77	-
Rigidity - Poisson's ratio	DIN 53293-1982	mm/mm	0.31	-
Lacquer*	FT-IR / METS-IR 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 cuts are completely smooth, none of the squares of the lacquer is detached.

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

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-End of Report-



Page 4 of 4

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Web: www.metstestlab.com

TEST REPORT

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

Client / Establishment : M/s. Alloy Technology Factory Company
Kingdom of Saudi Arabia

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

Sample Information:

Sample Description : Aluminium Composite Panel 374 FR-B1-ACP "20 x 30" & FR Core B1

Brief Evaluation of the Results

Test	Test	Compliance
METS-S22-3322-01	Physico-Chemical Analysis	Pass

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

The corresponding test results are furnished in following page

Prepared by: [Signature]
Verified by: [Signature]
Team Head
Material Science Division (MSD)
Employee Code: METS-AJ-EG-152
Material Science Division (MSD)
Employee Code: METS-AJ-EG-136

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

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

Specification Limit: SASO 2752:2019

Parameter	Test Method	Unit	Result	Specification Limit
Material				
Length	SASO 2752:2019 Cl. 10.3.1	mm	301.80	±3
Width	SASO 2752:2019 Cl. 10.3.1	mm	301.06	±2
Thickness	SASO 2752:2019 Cl. 10.3.2	mm	4.176	±0.2
Deviation of flatness	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				
Wrinkle	-	-	Absent	Not allowed
Bubble	-	-	Absent	Not allowed
Spot-Site	-	mm	Not observed	≤3
Spot-Number	-	-	Not observed	≤3/m²
Crack	-	-	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-observed in visual observation, ΔE≤2
Panel mechanical properties requirements				
Coating thickness	SASO ISO 2262:2012	µm	43.1	≥30
Pencil hardness	SASO ISO 15184:2015	-	F-3H	≥2H
Coating Flexibility (T-Bent test)	ISO 17133:2007	-	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 968:2017	Lum	2	≥2
Stain resistance	SASO ISO 11668:2007	%	2	≤5
Chemical resistance				
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 21468:2015	-	Resistant	Shall be resistant

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

Parameter	Test Method	Unit	Result	Specification Limit: SASO 2752:2018
Thermal properties (core thermal properties)				
Heat Deflection Temperature	SASO ISO 75-2:2014	°C	91	≥5 Min
Linear Thermal Expansion Coefficient	ASTM D 596-16	µm/m-°C	140	200 Max
Self-ignition temperature	SASO ASTM D1192-2015	°C	>350	≥43 Min
Temperature Resistance (B-50 to +80)	Visual	-	No defect	-
Thermal conductivity of core, K _c		W/mK	0.3240	-
Thermal resistance of core, R _c		m²K/W	0.0028	-
Internal surface resistance, R _{si}		m²K/W	0.13	-
External surface resistance, R _{se}		m²K/W	0.04	-
Total Thermal resistance, R _t			0.2528	≥0.06
Thermal transmittance (U value)	ASTM C 518-17	W/m²K	3.98	≤4.5
Drum peel strength	ASTM D1781-98 (2021)	N/mm	109	≥100
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
100 degrees Peel Strength	SASO ISO 8519-2:2008	N/mm	9.66	≥9.0
Shear Strength	ASTM C393 / C393 M-16	MPa	25	≥22
Bonding Strength	ASTM C393M-16	MPa	113	≥100
Bond Elastic Modulus	ASTM C393M-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 80°	SASO ISO 2813:2015	-	40.7	-



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

Parameter	Test Method	Unit	Result	Specification Limit: SASO 2752:2018
Acoustic Properties				
Sound Absorption Factor	ISO 354:2003	-	0.040	-
Sound Transmission loss	ISO 717-1:2020	dB	24	-
Loss Factor	EN ISO 6721 Frequency range 100 - 2000 Hz	-	0.0088	-
Technical Properties				
Section Modulus W	DIN 53230-1982	cm³/m	1.62	-
Rigidity - Poisson's ratio	DIN 53230-1982	mm²/m	0.34	-
Lacquerings*	FT-IR / METS-IP 160	-	Polyester	-

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

* Parameters 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.

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-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



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INTERNATIONAL CONSULTANTS

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DUBAI DOHA RIYADH

Test Date: 2-Aug-22
Issue Date: 08-Feb-23
Test Reference No: WCD29-5 (Rev.01)



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DUBAI DOHA RIYADH

Test Date: 02-Dec-22
Issue Date: 04-Jan-23
Test Reference No: WCD29-7

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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: +966 920 006 292
Website: www.technopanel.com.sa

Test Material / Assembly:

4mm thick Aluminium Composite Panel-FR A2



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INTERNATIONAL CONSULTANTS

Issue Date: 04-Jan-23
Classification Report Reference No: WCD29-8

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DUBAI DOHA RIYADH

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TEST REPORT REACTION TO FIRE TEST

Test Sponsor:

Panel Technology Factory (Technopanel)
Al Masha'el 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



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Test Date: 13-May-22
Issue Date: 04-Jan-23
Test Reference No: WCD29-6

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DUBAI DOHA RIYADH

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TEST REPORT REACTION TO FIRE TEST

Test Sponsor:
Panel Technology Factory (Technopanel)
Al-Mashael
Riyadh, Saudi Arabia
T: +966 92 000 6292
Website: www.technopanel.com.sa

Test Assembly:
4mm thick Aluminium Composite Panel-FR81
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



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INTERNATIONAL CONSULTANTS**

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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-Mashael
Riyadh, Saudi Arabia
T: +966 92 000 6292
Website: www.technopanel.com.sa

Test Material / Assembly:
4mm thick Aluminium Composite Panel-FR81



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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-Mashael
Riyadh, Saudi Arabia
T: +966 92 000 6292
Website: www.technopanel.com.sa

Test Material / Assembly:

4mm thick Aluminium Composite Panel-FRB1

Test Standard

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



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DUBAI DOHA RIYADH

Test Date: 08-Jun-22
Issue Date: 13-Feb-23
Test Reference No: WC029-2

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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 B1

Test Standard:

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



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INTERNATIONAL CONSULTANTS

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DUBAI DOHA RIYADH

Test Date: 2-Aug-22
Issue Date: 08-Feb-23
Test Reference No: WC029-1 (Rev.01)

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