TRIMAX

introduction to Products

Aluminium Composite Panel ACP

3-MAX (ACP) is a new-age , highest standard roofing material used for outdoor shading solutions.

3-MAX (ACP) are thin sandwich-type panel in which a non- aluminium core is bonded between two aluminium sheets , which can be used as external roofing because of their lightweight and sturdiness .

3-MAX (ACP) considered as perfect for appealing and modern designs along with their exclusive colours availability.

3-MAX (ACP) has several feature whith easy installation , excellent rigity to weight ratio and high water , uv resistance , weather-proof , chemical & corrosion resistance , attractive colour and recyclability & reusability make aluminium composite panel the major product used for roofing purposes.

SOUND INDSULATION

Proper installation, good sealing and the correct framing system can provide some degree of sound insulation.

ADVANCED TECHNOLOGY

The advanced technologies used in ACP have resulted in improved performance , durability, and design flexibility.

HEAT RESISTANCE

ACP has developed advanced technology. Use mineral-filled core material, which is less flammable than other types of core material.

WIDE COLOUR CHOICE

The surface coating uses Aluminum nanomaterials.This enhances weather , corrosion and dirt resistance,Improve its self-cleaning performance.

EASY PROCESS

Reasons why ACP is considered an easy-to-process material.ACP panels are lightweight, which makes them easier to cut and install.

HEAT PERFORMANCE

The aluminum skin of the ACP panel has high thermal conductivity, which helps to quickly dissipate heat and reduce the temperature of the building envelope.

EXCELLENT SERVICE

Its durability, versatility, low maintenance , energy efficiencyand aesthetic appeal will serve a wide variety of applications well.

HIGH STRENGTH

Aluminum Composite Panel (ACP) is a lightweight, stiff and durable construction material consisting of two aluminum sheets bonded to a non-aluminum core usually made of polyethylene (PE) or a flame retardant mineral filled core (FR) production. Due to their high strength-to-weight ratio, ease of installation and weather resistance, these panels are widely used in the construction industry for facade, roof and cladding applications.

TRIMAX

Aluminum composite panels (ACP) are lightweight, durable, and versatile materials that are widely used in the construction industry. Here are some common applications of ACP:

Cladding:

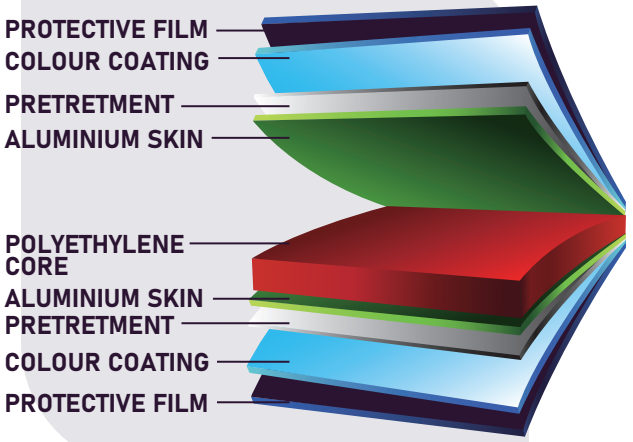
ACPs are commonly used as cladding materials for buildings, especially for the exterior walls. They provide a sleek and modern look while also providing protection against weather elements.

Signage:

ACPs are often used for signage purposes due to their flatness, lightweight, and ease of fabrication. They are used for outdoor and indoor signage, billboards, and advertising panels.

Interior decoration:

ACPs can also be used for interior decoration, such as wall cladding, partitions, and ceilings. They come in a variety of colors and finishes, which can add an aesthetic appeal to any interior space.



PANEL COMPOSITION

3-MAX

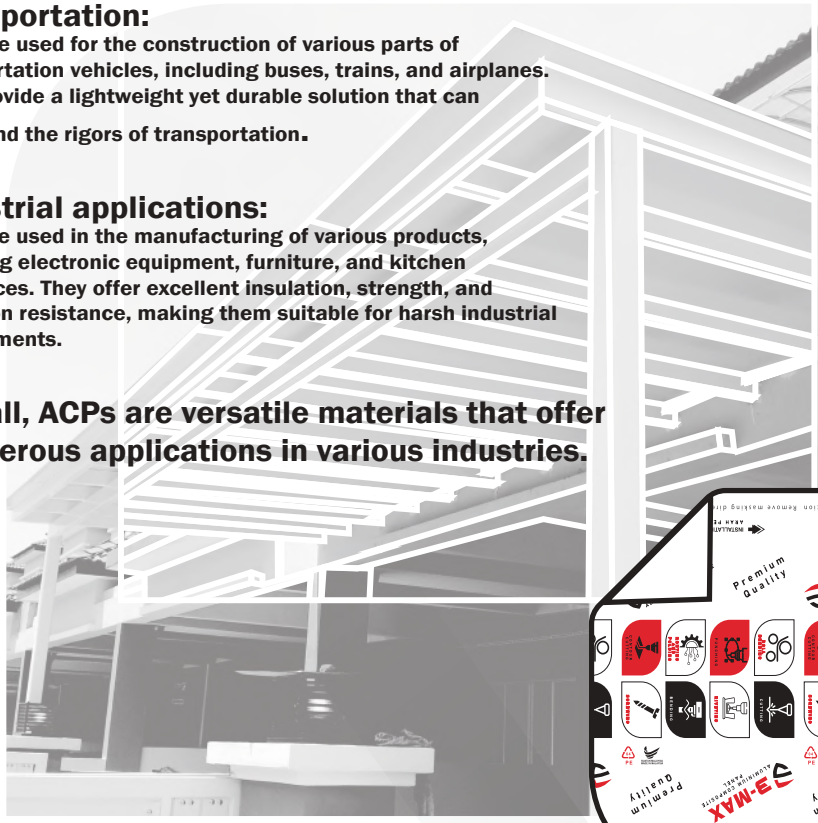
Transportation:

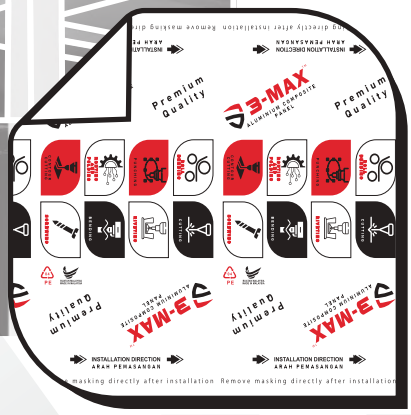
ACPs are used for the construction of various parts of transportation vehicles, including buses, trains, and airplanes. They provide a lightweight yet durable solution that can withstand the rigors of transportation.

Industrial applications:

ACPs are used in the manufacturing of various products, including electronic equipment, furniture, and kitchen appliances. They offer excellent insulation, strength, and corrosion resistance, making them suitable for harsh industrial environments.

Overall, ACPs are versatile materials that offer vnumerous applications in various industries.





PROTECTIVE FILM

TRIMAX

Technical Data

COATING PERFORMANCE

ITEM	PERFORMANCE
GLOSS(ECCA t2)	15-35 UNITS GARDNER 60
COLOUR RETENTION	Δ ‹ E 2
SALT SPRAY(ASTM B117)	PASSED 3000HRS
BENDING(ASTM D4145)	‹ 2T
SOLVENT RESISTANCE	
(ASTM D5402)	› 100 DOUBLE RUB WITHVMEK
ACID RESISTANCE (ASTM D1308-87)	PASSED
ALKALI RESISTANCE (ASTM D1308-87)	PASSED
HUMIDITY RESISTANCE (ASTM D714-87)	3000 HRS NO BLISTER
PENCIL HARDNESS(ECCA T4)	› F

PRODUCT SPECIFICATION & TOLERANCE

ITEM	SPECIFICATION	
	STANDAND	CUSTOMIZE
PANEL THICKNESS	3&4 MM	6 MM
ALUMINIUM THICKNESS	0.12 MM	0.2 MM
ALUMINIUM ALLOY	AA1100	AA 3003
PANEL WIDTH	1220 MM	800-1500 MM
PANEL LENGTH	2440 MM-6100 MM	9144 MM
SURFACE COATING	PE COATING	PVDF COATING
	TOLERANCE	
DIAGONAL	± 5.0 MM	
WARPAGE	± 5 MM/M	
THICKNESS	± 0.2 MM	
LENGTH	± 4.0 MM	
WIDTH	± 2.0 MM	

TRIMAX

Technical Data

MECHANICAL PROPERTIES

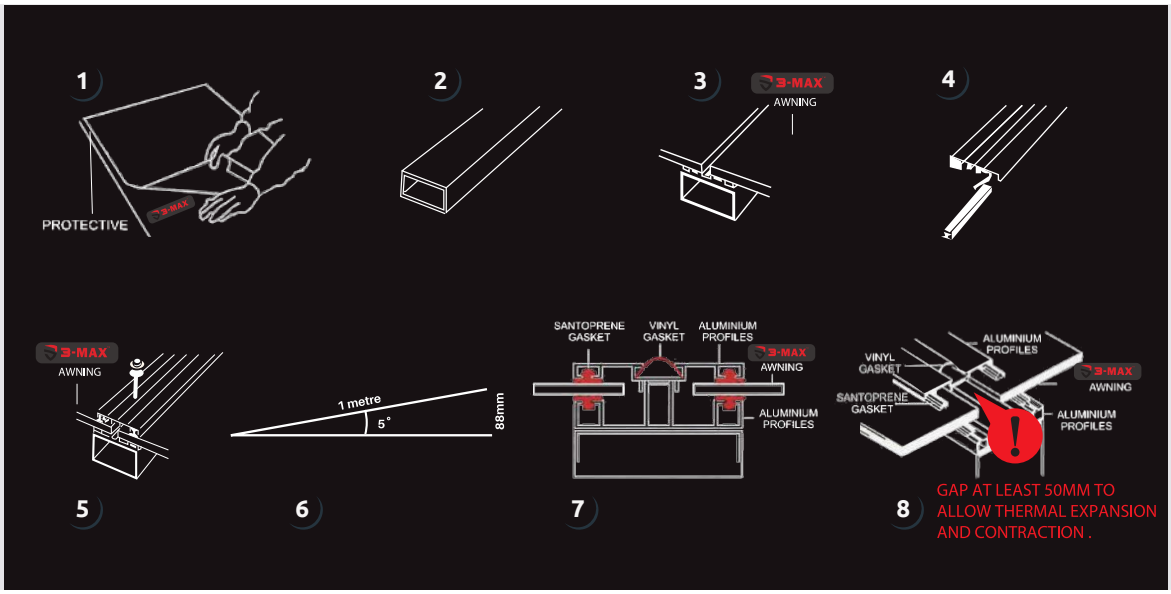
ITEM	PERFORMANC
PANEL WEIGHT	5.5KG /M2
TENSILE STRENGTH	4.9KG/MM2
RIGIDITY	2,400kNcm2/m
BENDING STRESS	11,500ib/in2
ELOGATION(ASTM E8)	14%
TEMPERATURE RESISTANCE (ASTM D2246)	-50 C ~80 C
WIND LOAD PRESSURE RESISTANCE (ASM E330-84) NONE DEFORMATION OR CRACKING	452KG/M2
SOUND INSULATION(ISO 140/3)	RW= 26
PUCHING SHEAR RESISTANCE (ASTM D732)	22N/MM2
MPACT TEST (1KG STEEL BALL WITH HEIGHT 50MM)	2.2MM (DENT DEPTH)

3-MAX

PERFORMANCE FACT SHEET (0.5MM THICKNESS CALL)	TEST METHOD	RESULT
FIRE CLASSIFICATION/ PERFORMANCE		
FIRE PROPAGATION INDEX(I)	BS 476:PART 6: 7989+A1: 2009	0.5
SURFACE SPREAD OF FLAME	BS 476: PART 7: 1997	CLASS 1
FIRE & RESCUE DEPARTMENT OF MALAYSIA (BOMBA)		CLASS 0
EXTERNAL CLADDING SYSTEM FULL SCALE FIRE TEST	BS 8414 - 1:2015+A1:2017	PASSED
FLAME SPREAD INDEX (FSI)		15
SMOKE DEVELOPMENT INDEX (SDI)	ASTM E84 - 19b EN13501 - 1:2018 (EN 13823 + ISO 11925 -2)	5
SMOKE PRODUCTION & FLAMING DROPLETS		B,s1,d0
MECHANICAL PROPERTIES		
TENSILE STRENGTH (N/MM)	MS 2571: 2017	197
FLEXURAL STRENGTH (MPA)		202.9
BENDING ELASTIC MODULUS (MPA)		8.8x10
ACOUTIC PROPERTIES		
AIRBORNE SOUND REDUCTION INDEX(RW)	ISO 10140-2: 2010, PART 2	33 dB
THERMAL PROPERTIES		
THERMAL RESISTANCE [(M2-K)/W]	ASTM C518- 17	0.025
THERMAL CONDUCTIVITY [W/M-K]		0.166@36 C 0.162@25 C

TRIMAX

Recommended Installation Guide



1. 3-MAX Aluminium Composite Panel (3-MAX ACP) is produced with a protective PE film on one or both sides which should be kept on until the panel fastened . Make sure the clearly marked protective film surface of 3-MAX Awning is facing outside of installation .
2. Ensure the framework and structure must completely clean and dry without any solvent remains .
3. Before install , about 50mm of protective film should be peeled off from the edges of the sheet to allow the clean sheet insertion into the roofing system . Check the centre distance of rafters and screw on the framework according to the design .
4. Put the santoprene gasket on the aluminium linkage profile .
5. Place fixing screws with seals in the support frame line .
6. A minimum slope at 5° roof pitch is recommended for all 3-MAX Awning to allow adequate rain water run-off .
7. Fixed the sheets on the framework by assembly system , which consists of aluminium linkage profile and santoprene gaskets .
8. Ensure to leave a gap at least 50mm in between of the sheets for thermal expansion and contraction . The sheets not be allowed to fixed or clamped too tight as this to prevent thermal expansion and contraction will adversely affect the installation .

TRIMAX

Aluminium Composite Panel Production