



ALUCOBOND®

WORLD OF HONEYCOMB WITH ALUCORE® AND ALUCORE® CLAD

www.alucobond.com.sg

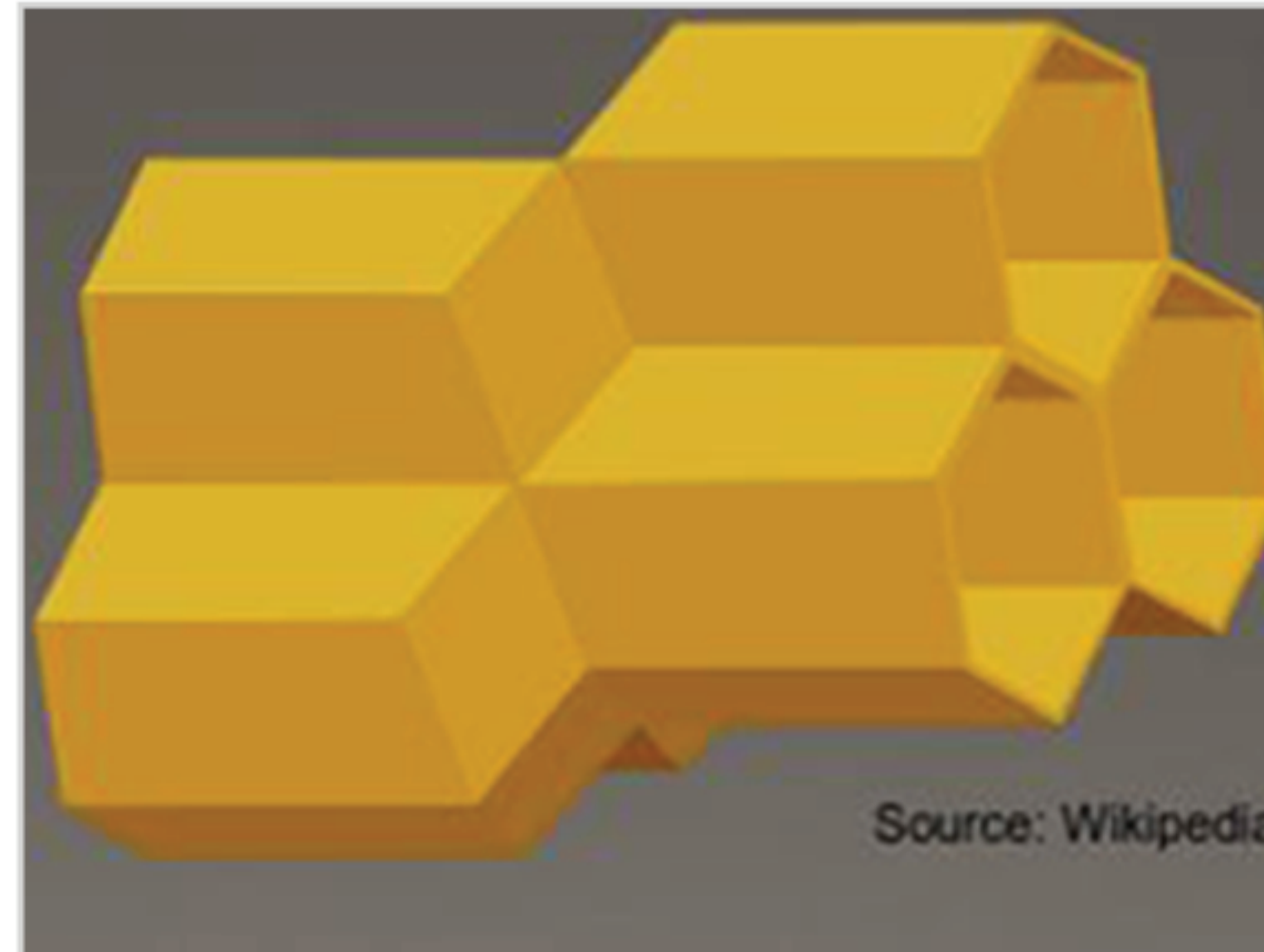
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THE WORLD LEADER IN ALUMINIUM COMPOSITE MATERIALS



NATURE DOES IT BEST: HONEYCOMB CHARACTERISTICS

- A honeycomb is a mass of hexagonal wax cells built by honeybees in their beehives to store a relatively heavy and dense load: honey!
- The walls of these hexagon are extremely thin and therefore the structure uses the least material to create a comb of cells to produce a body volume
- This honeycomb structure is a material with minimal density and high compression and shear properties
- As in many cases, nature demonstrates the most efficient use of input materials to achieve a highly performing structure



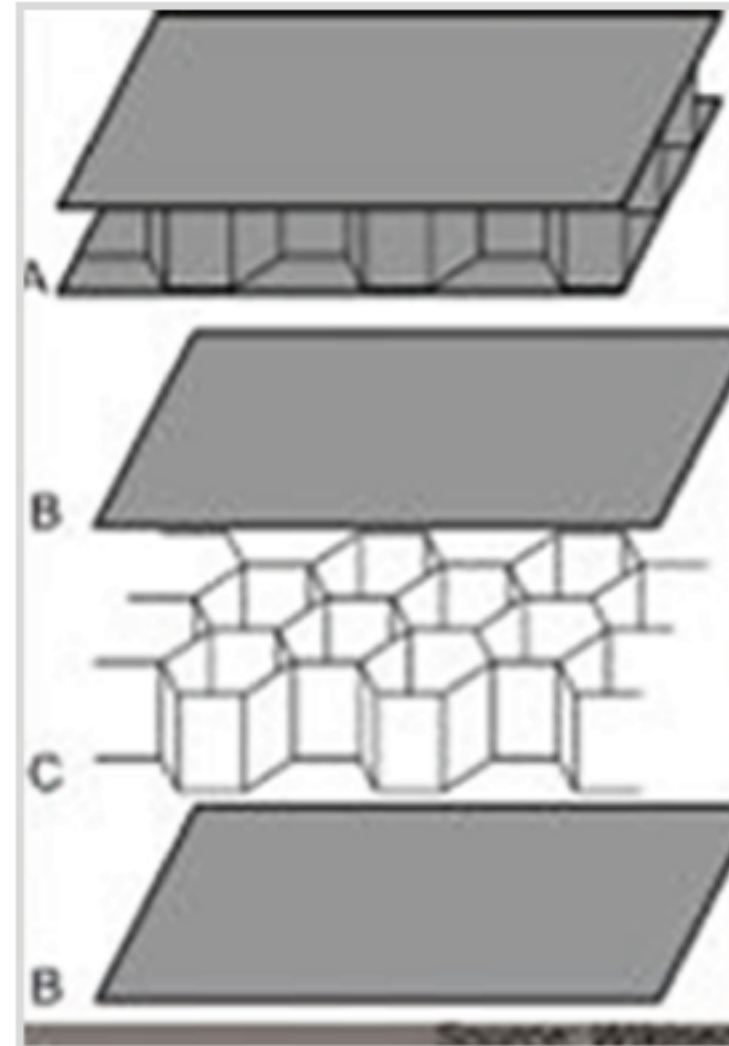
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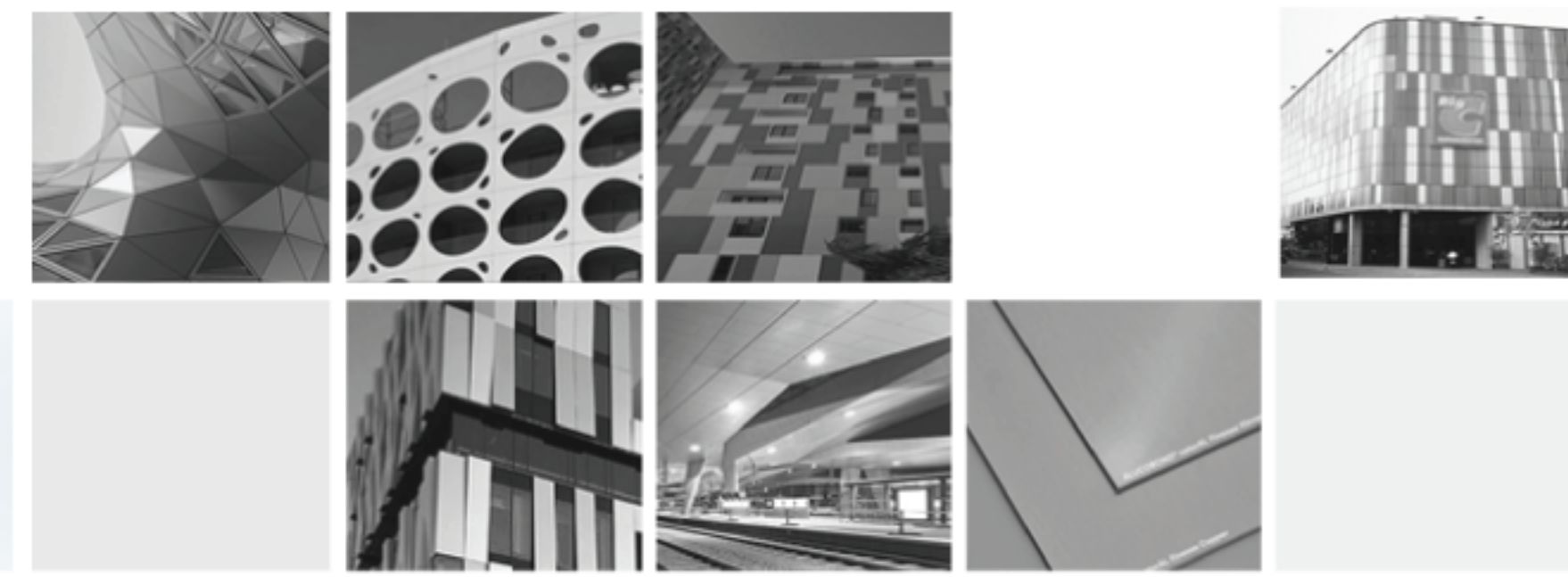
MAN-MADE HONEYCOMB

- Man-made honeycomb structural materials are commonly made by layering a honeycomb material between two thin layers that provide strength in tension
- The first man-made honeycomb is said to have been manufactured more than 3000 years ago
- Pantheon in Rome is an early example of a honeycomb structure (interior ribbing and hidden chambers)
- The first use of honeycomb structures for structural applications had been independently proposed for building application in early 1900's



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MODERN DAY APPLICATIONS FOR HONEYCOMB

Applications :

- Aerospace/ Rail/ Marine
- Automotive
- Industry & Sports
- Furniture and Packaging
- Building Construction



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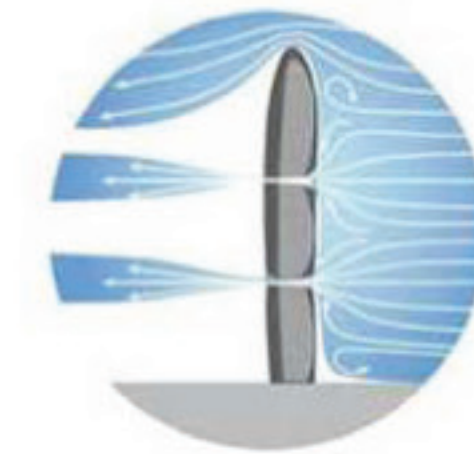
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WHY USE HONEYCOMB IN BUILDING CONSTRUCTION AT ALL?

Can withstand high wind load pressures

- Possible to use larger panel sizes with high strength and low weight
- Self supporting large roofs and high rise façades
- Does not need heavy sub structures



Fire Retardancy

- Full aluminium product, inherently fire retardant / non-combustible



Sound and heat absorption

- Without having to use too much of insulation materials in the structure



All the above along with the no compromise on aesthetics of the building!

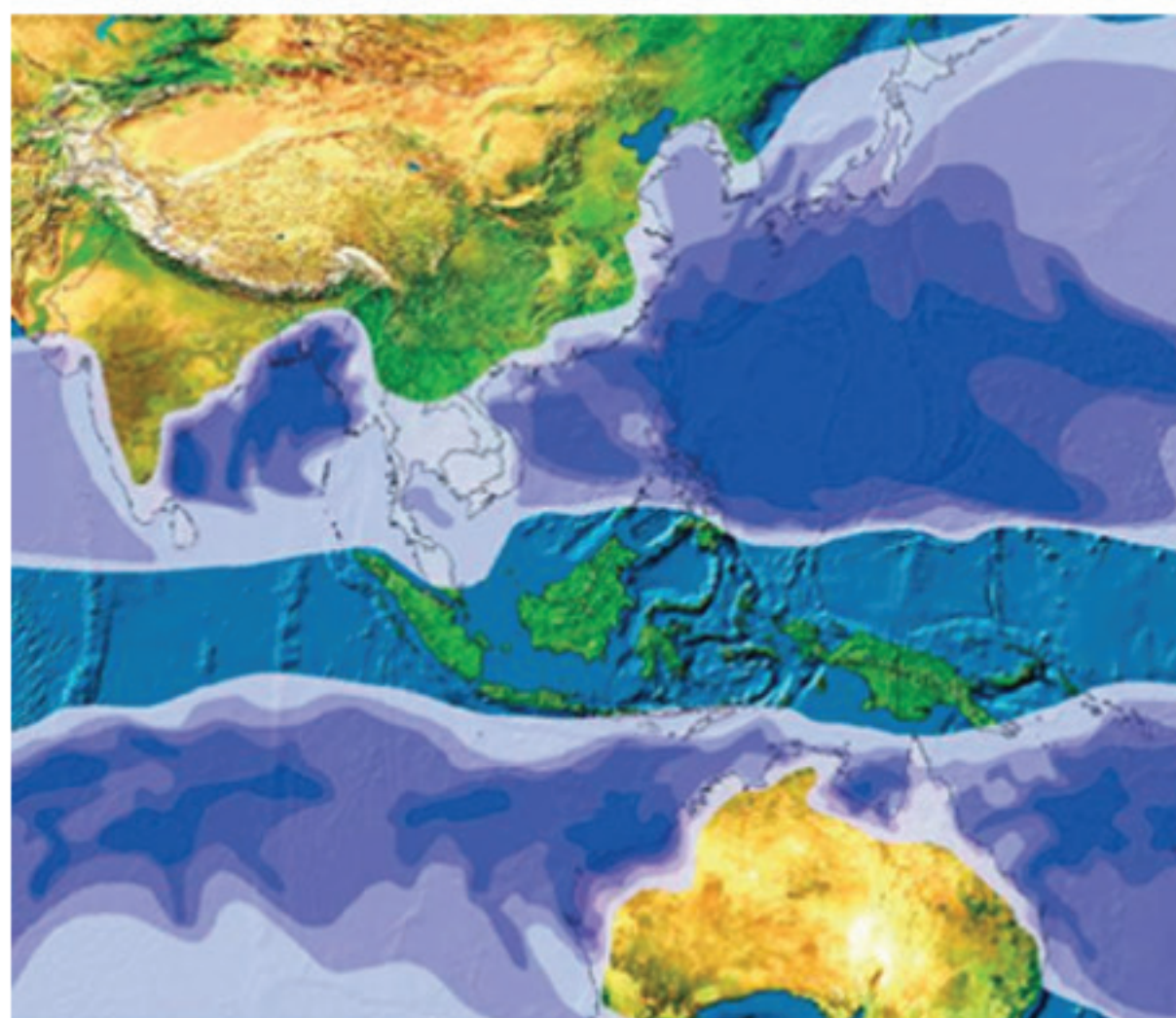
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HOW DOES A HONEYCOMB PANEL REACT IN TYPHOON AREAS?

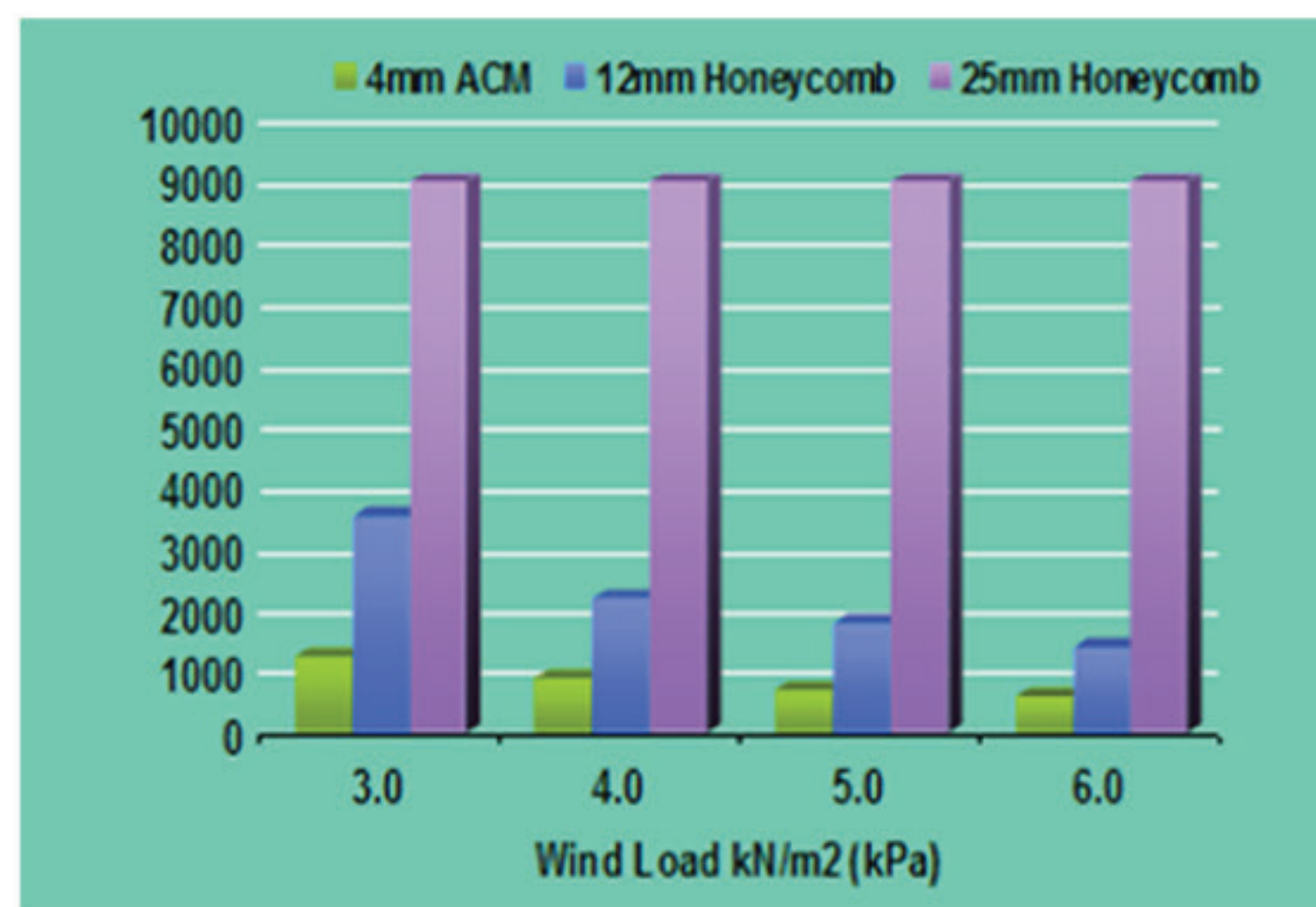
Possibility of using large panels in adverse weather conditions



Tropical Storm Intensity Zones



MAXIMUM PANEL LENGTHS FOR 1250MM WIDE PANEL



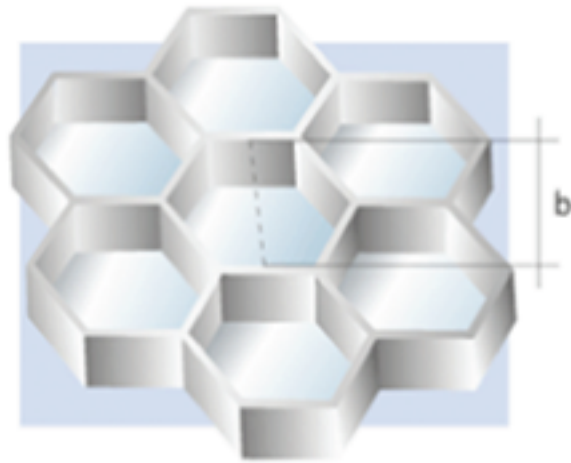
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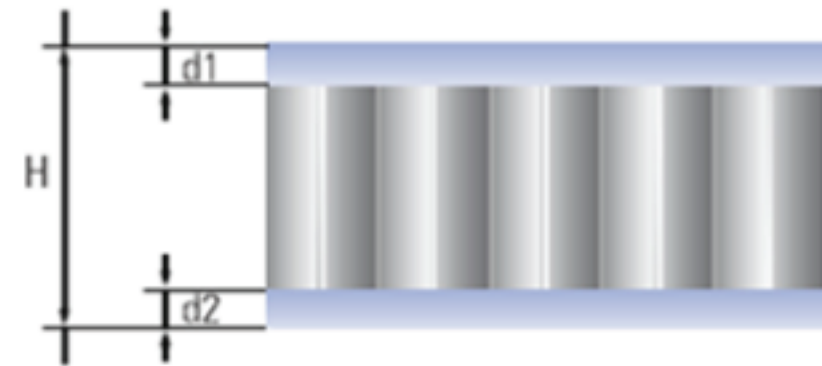


FEATURES OF ALUCORE®

The system components of **ALUCORE®** are bonded in a continuous laminating process allowing larger panel sizes (upto 9m) maintaining superior flatness.



Structure
H: total thickness (from 6mm to 25mm)
d1: thickness of AL front sheet (1mm)
d2: thickness of AL back sheet (0.5/ 0.7/ 1mm)



Standard Core consists of Aluminium
Alloy foils (cell size: 6.3- 19mm)

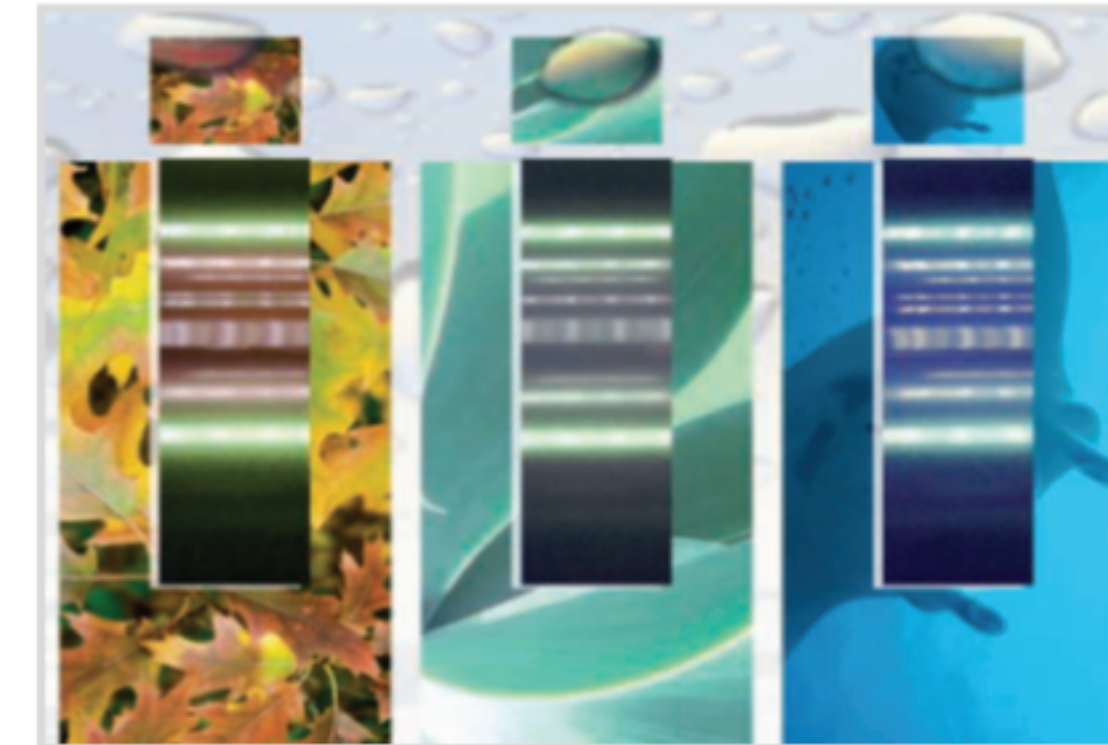
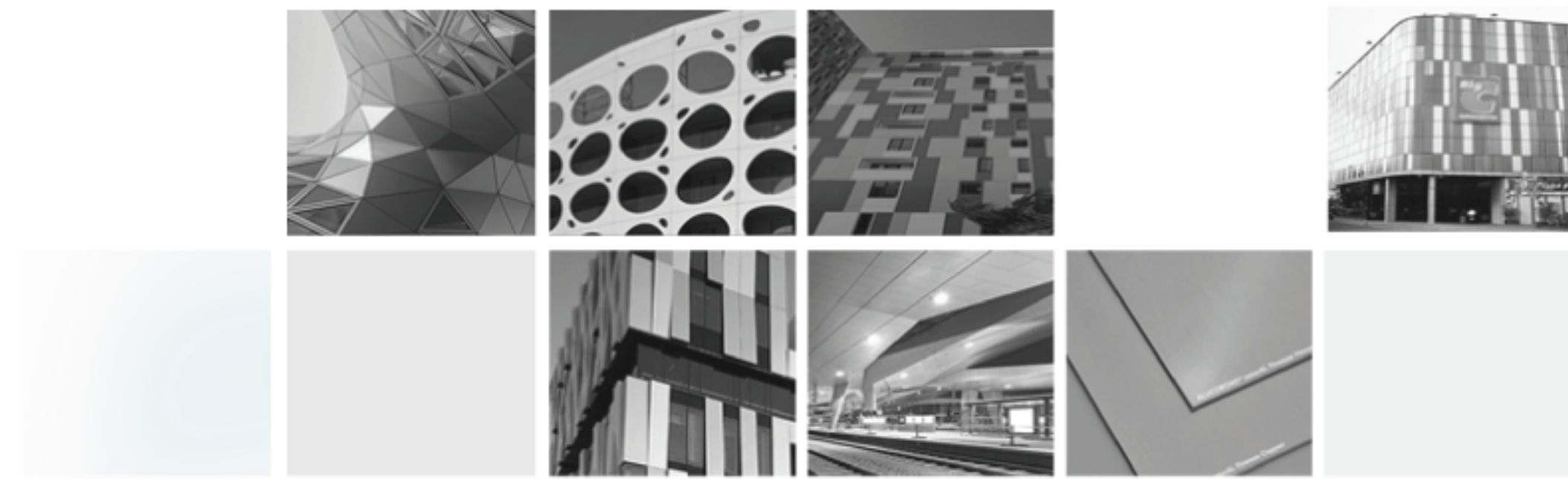
- Gives easily fabricated applications with perfect details, while using ordinary tools.
- Its characteristics make **ALUCORE®** the ideal choice not only for outdoor applications such as façade cladding, roofing, balconies, shelters, etc., but also for interior design like artistic ceilings, or for applications in transport and industry

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FEATURES OF ALUCORE®

- Multi-layer coating applied in optimum factory controlled quality conditions
- Absolute protection assured with minimum and even coating thickness
- High grade pre-treatment (adhesion & protection)
- High level of colour continuity through excellent control of coating thickness
- High end PVDF online coating



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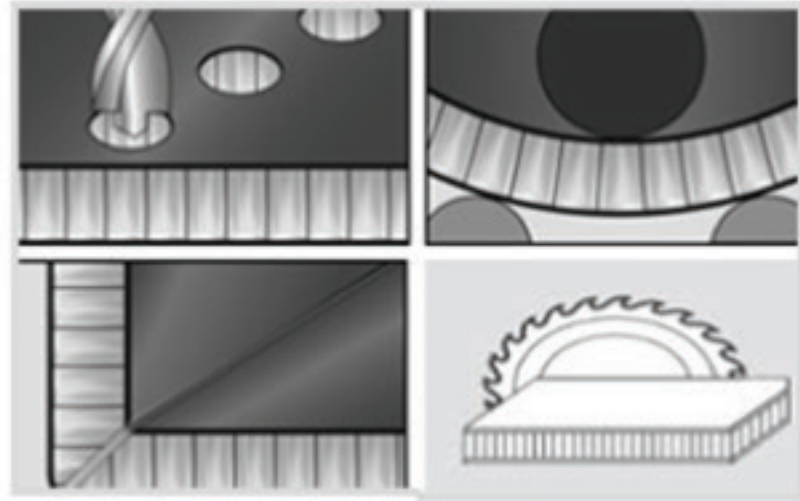
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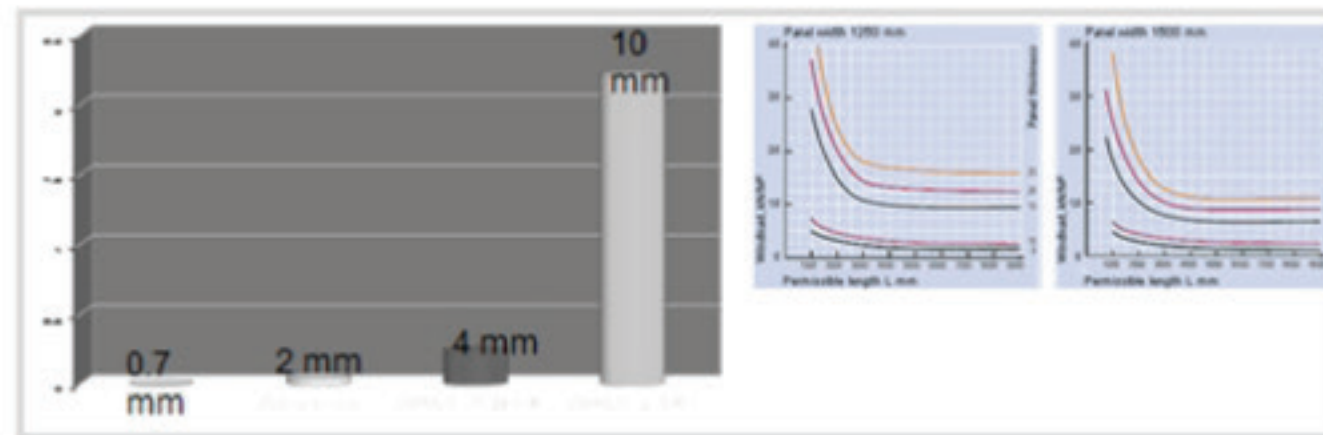
ADVANTAGES OF ALUCORE®

Ease of Processing

Eg- Roll bending which no other supplier has



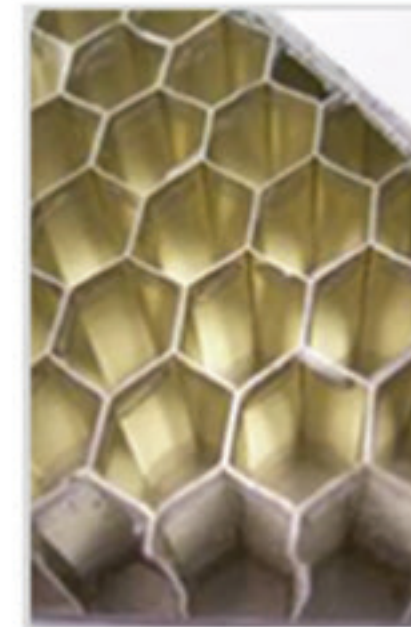
Stiffness/Weight ratio withstands high wind load pressure and human weight as the application may be.



All ALUCOBOND® finishes available



Durability, Flatness
High peel strength and long life



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SHANGHAI INFORMATION CENTRE | CHINA



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YMCA-FEDERATION HALL | S.KOREA



FORD CAR SHOP | JAPAN



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SHANGHAI ORIENTAL ART CENTRE | SHANGHAI, CHINA



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SHANGHAI OPERA | CHINA



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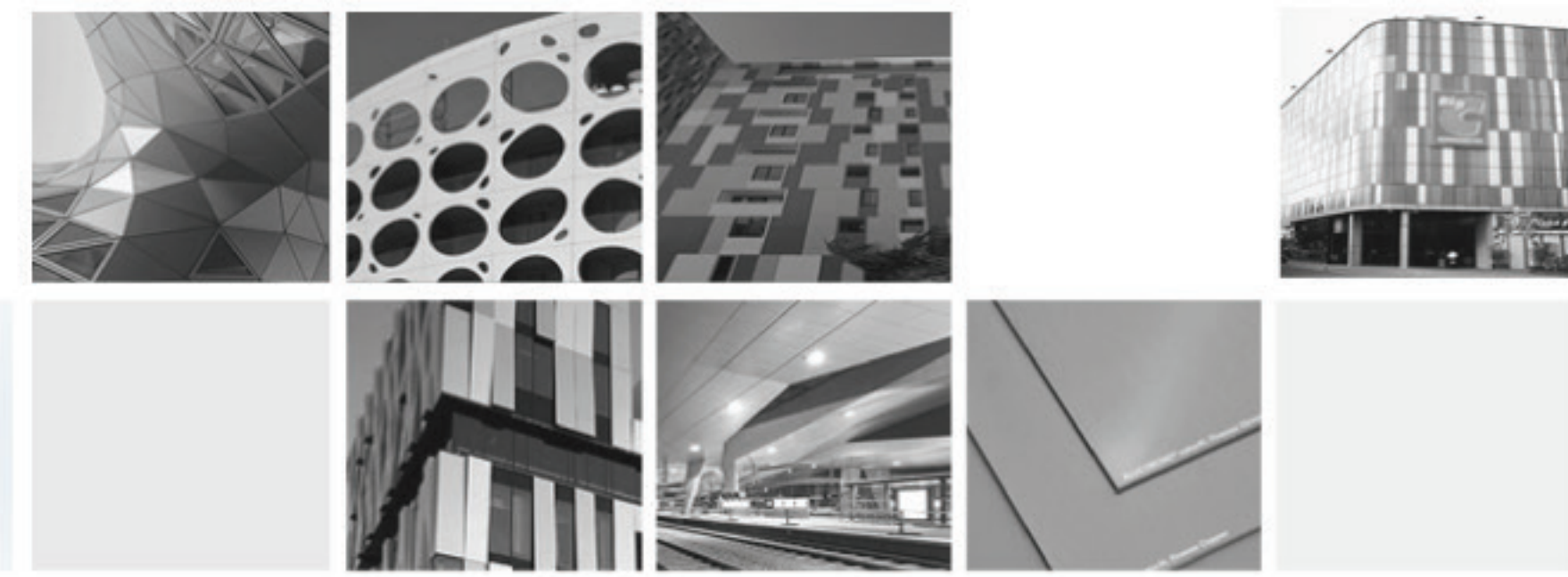


SHANGHAI PUDONG CADRE TRAINING CENTRE | SHANGHAI, CHINA



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MUSEUM REINA SOFIA | MADRID, SPAIN



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CULTURE AND CONGRESS CENTRE | LUZERN, SWITZERLAND



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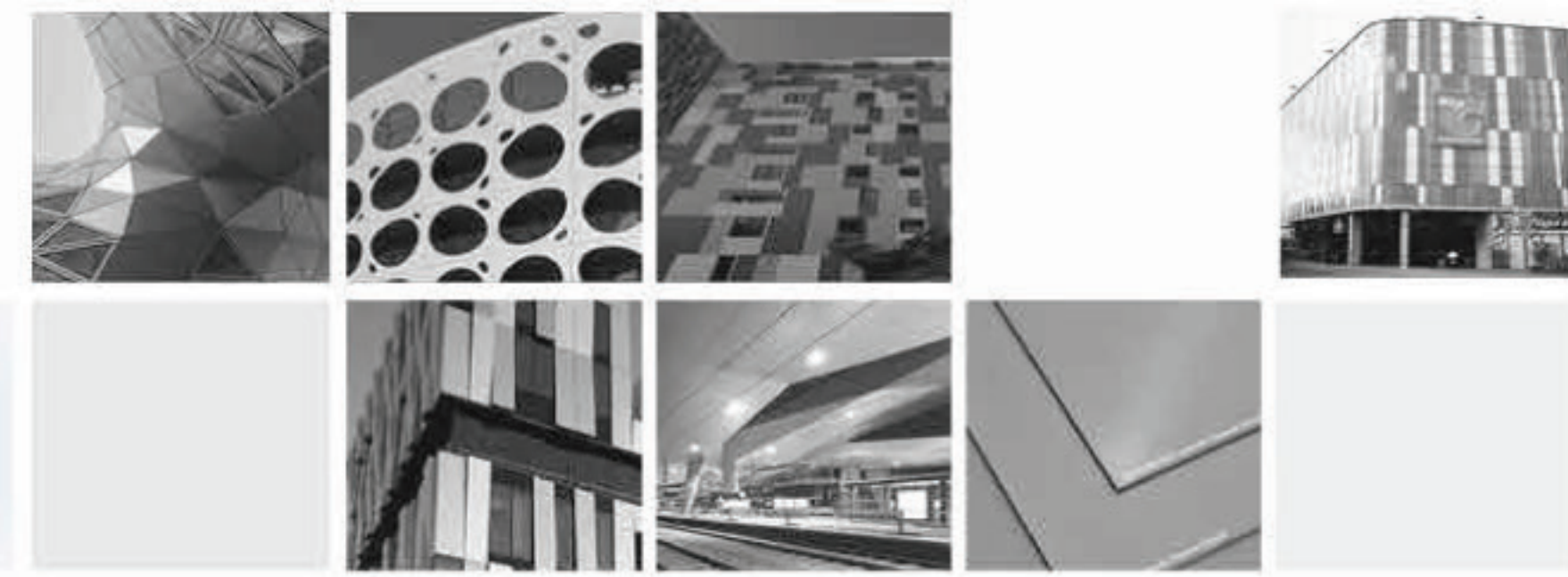


COOP MITTELLAND | CH



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RUROPARK | SWITZERLAND



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SHOPPING MALL RENOMIA | BRESLAU, POLAND



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CARREFOUR SHOPPING MALL | KRAKAU, POLAND



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LES PORTES DE LA DÉFENSE | PARIS, FRANCE



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AQUALAND | NEUILLY SUR SEINE, FRANKREICH



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SOCCKER STADIUM | REUTLINGEN, GERMANY



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WHY ALUCORE®

- Low weight, extremely high rigidity with perfect flatness
- Withstands heavy wind load pressure
- Freedom to design and plan owing to its high formability
- Various panel thickness for all kinds of applications.
- Vibration-damping, therefore no additional sound-damping needed
- Thermal Insulation hence cutting down heat transmission
- Simple processing using conventional tools, e.g. for folding and bending
- Smooth handling on the site, even with large size panels
- Reduced substructure hence saves cost
- Excellent weather resistance and long-term properties
- Large variety of colours and finishes





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ALUCORE® CLAD : A VALUE ADDED SERVICE FROM THE MAKERS OF ALUCOBOND®

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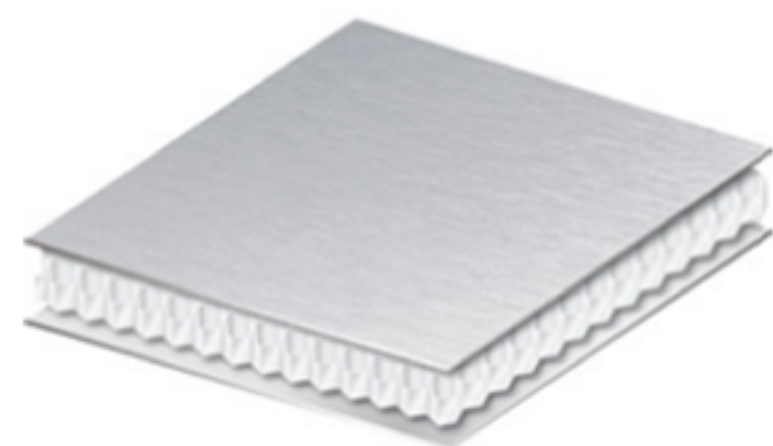
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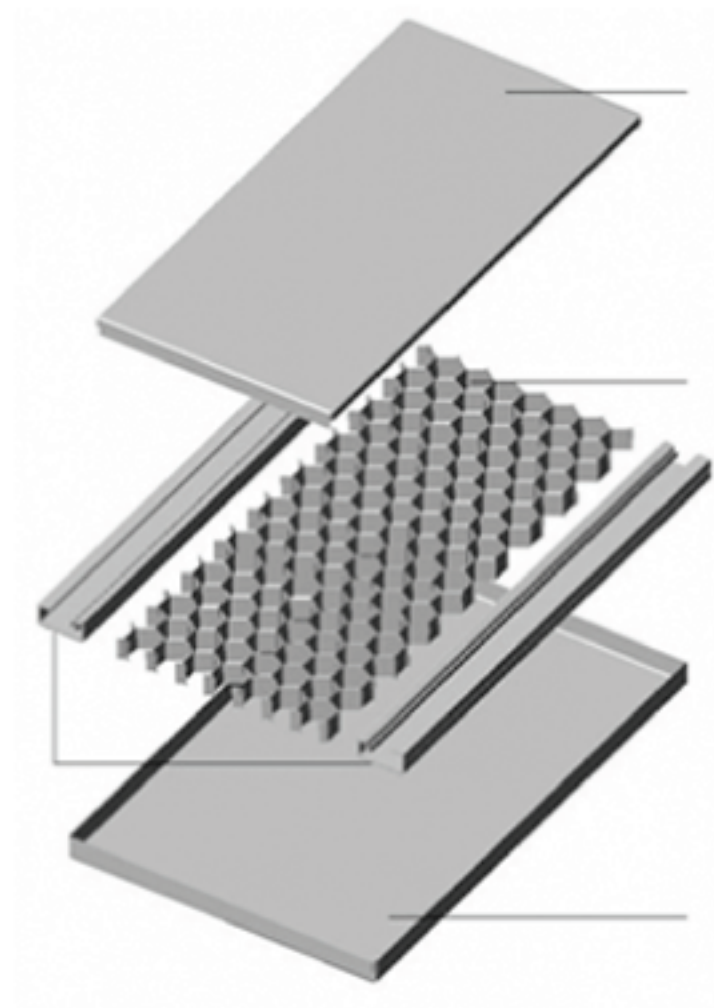


ALUCORE® AND ALUCORE® CLAD

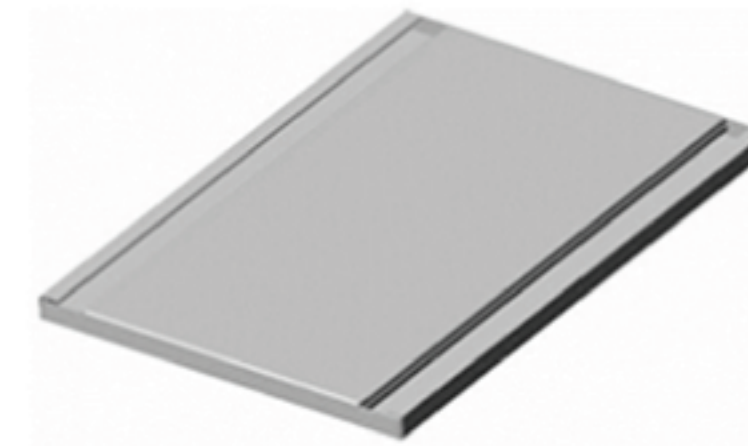
ALUCORE®



Processing Extrusions Fixing Systems



ALUCORE® clad Ready to Install



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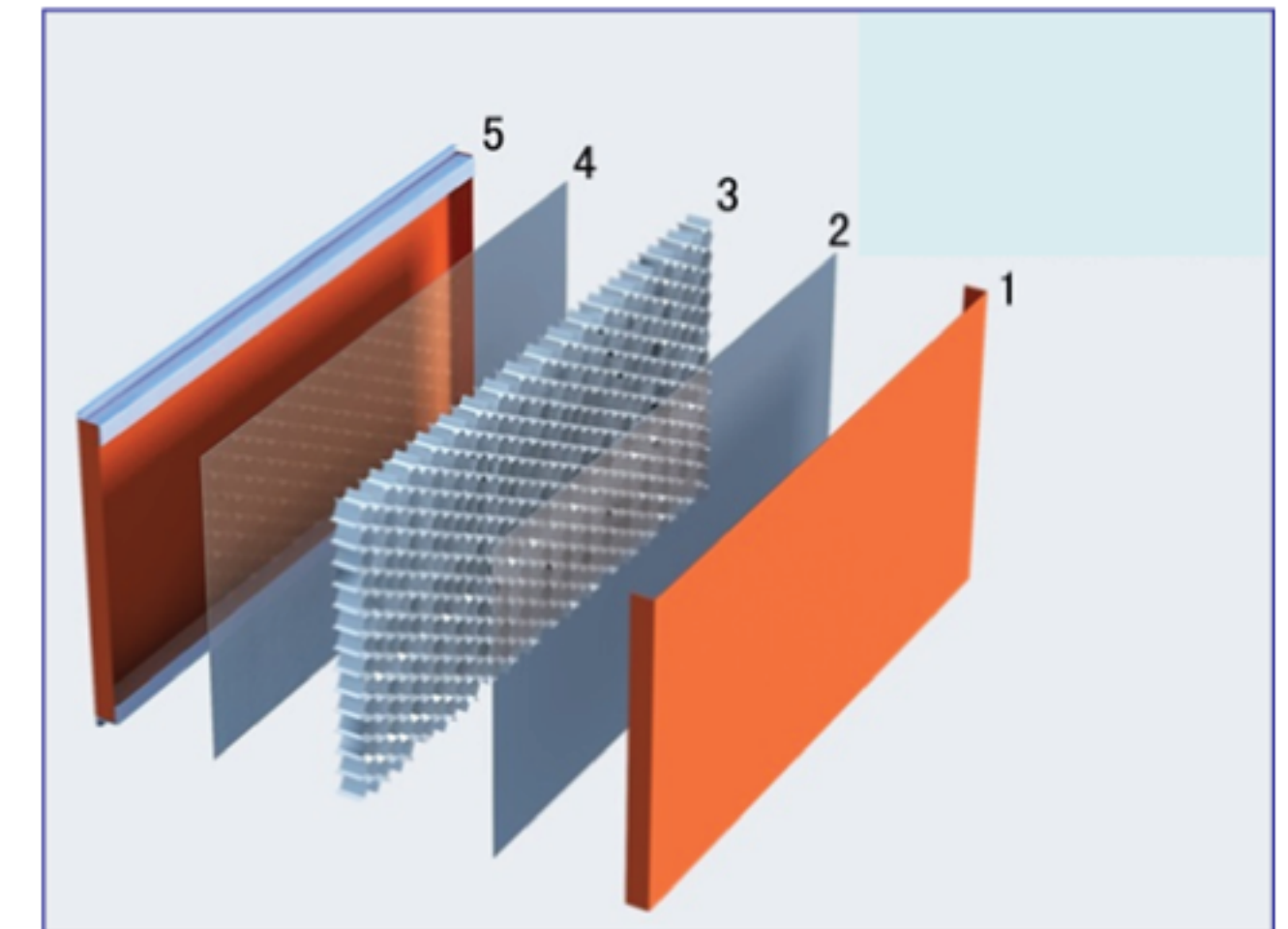
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WHAT IS ALUCORE® CLAD?

Simply put it's a Value Added Solution from the makers of ALUCOBOND® which comprises of honeycomb panels pre-fabricated with aluminium extrusions which are Ready to Install.

1. Pre-coated Aluminium front skin
2. Adhesive
3. Aluminium Honeycomb core
4. Adhesive
5. Pre-coated Aluminium back skin and fixing extrusion



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WHY ALUCORE® CLAD SOLUTION?

No Split responsibility

- Ready to Install panels prepared by the manufacturer in the plant itself (all under one roof)
- Combining all the qualities of honeycomb panels with appropriate extrusions/ fixing systems
- Unsure about quality of fabrication/ usage of honeycomb panels:
 - ALUCORE® is a very superior product but at the same time needs equally superior processing,fixing and installation
 - 3A Composites provides the expertise with end to end solution especially when there is a need for cranked, curved, double-curved, tapered & triangular panels with its solution-ALUCORE® clad.
- Risk Mitigation
 - Minimizing the risk of application by providing pre-fabricated fixing accessories along with the panels.

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FEATURES OF ALUCORE® CLAD

- ALUCORE® clad is unique, as it combines a custom solution, with the best available industrial coating and lamination technology.
- Ready to Install panels which comes with different configurations (Finishes/Coating/Thickness), made to suit individual project requirements.
- Panel perimeter fixing, anchors both panel skins to the supporting structure hence giving a better strength to the overall installation
- Pre-fixed extrusions help in easy & quick installation be it horizontal or vertical orientation
- The fixing system used in ALUCORE® clad allows for quick panel replacement / removal in different structures, rather than taking out all the panels in case there is a need for the same.
- All the salient features of ALUCORE® combined with high quality 'ready to install' system for a perfectly designed building!

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ADVANTAGES OF ALUCORE® CLAD

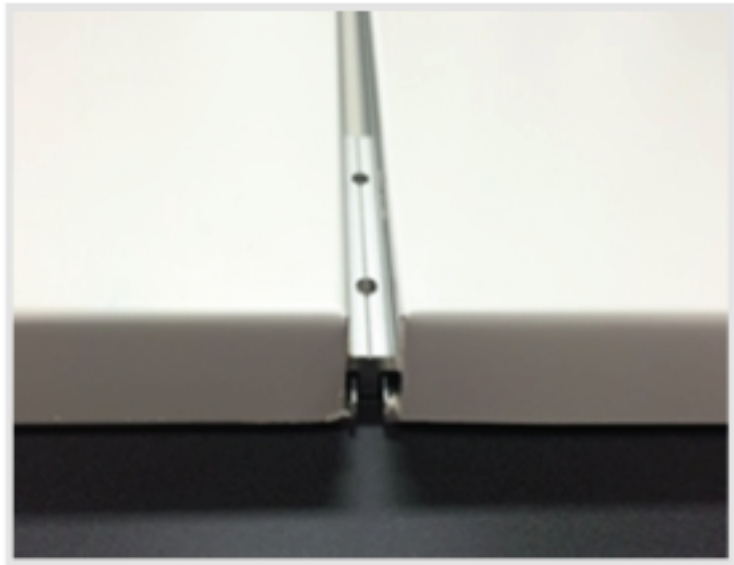
- Best quality of materials and processes
- Custom-made – Manufactured to meet each client's unique requirements.
- Saves Cost – less wastage, lesser external fixing accessories required.
- Saves Time- Ready to Install pre-fixed with the right extrusions at the production stage.
- Quality Assurance – Done under supervised and controlled factory environment.
- Risk Mitigation – Best quality of materials used and processed in ALUCOBOND® factory reducing chances of failure
- No compromise on design aesthetics
 - Can be molded as per the design
 - Provides flatness par excellence
 - Comes in variety of finishes/ colors

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ALUCORE® CLAD SOLUTIONS



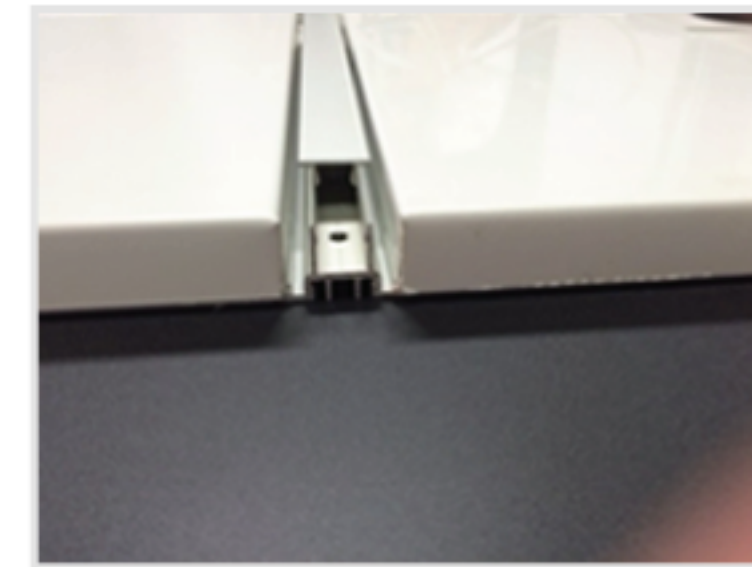
Silicon joint system

- Exterior and Interior Wall Cladding/ Roofing
- 12mm and 25mm
- Vertical and Horizontal Installation



Metal cover joint system

- Exterior and Interior Wall Cladding/ Roofing
- 12mm and 25mm
- Vertical and Horizontal Installation

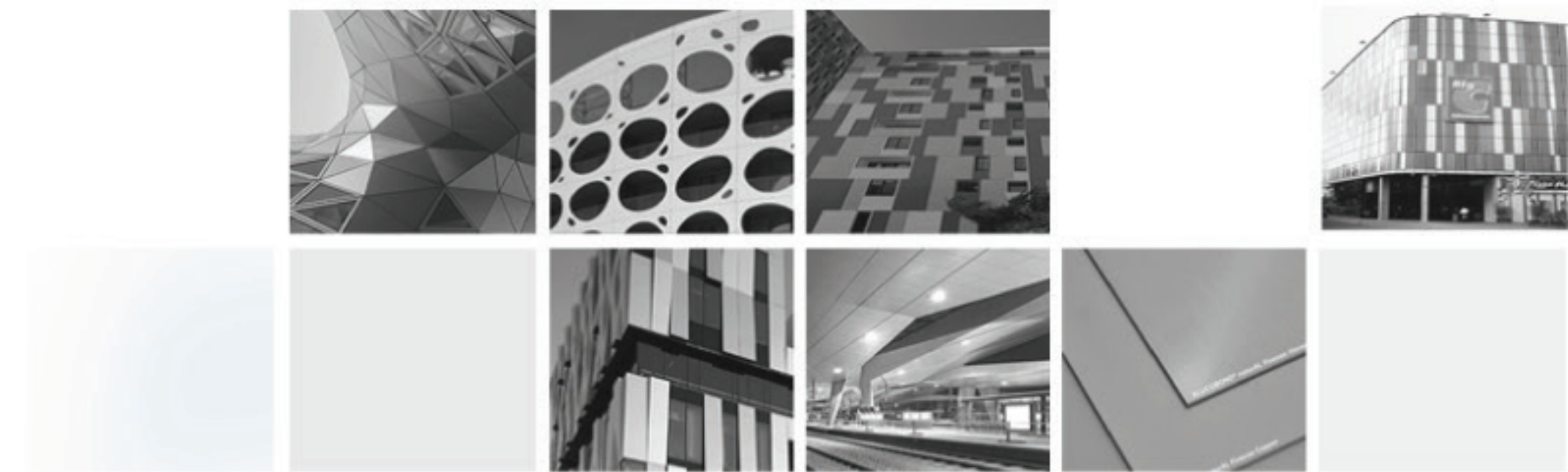


Interior Ceiling System

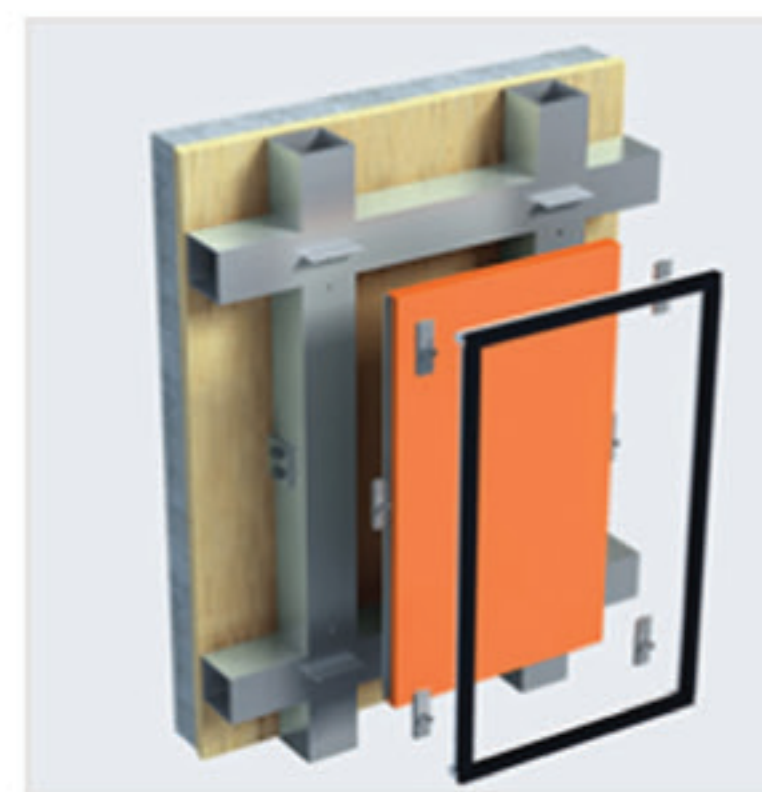
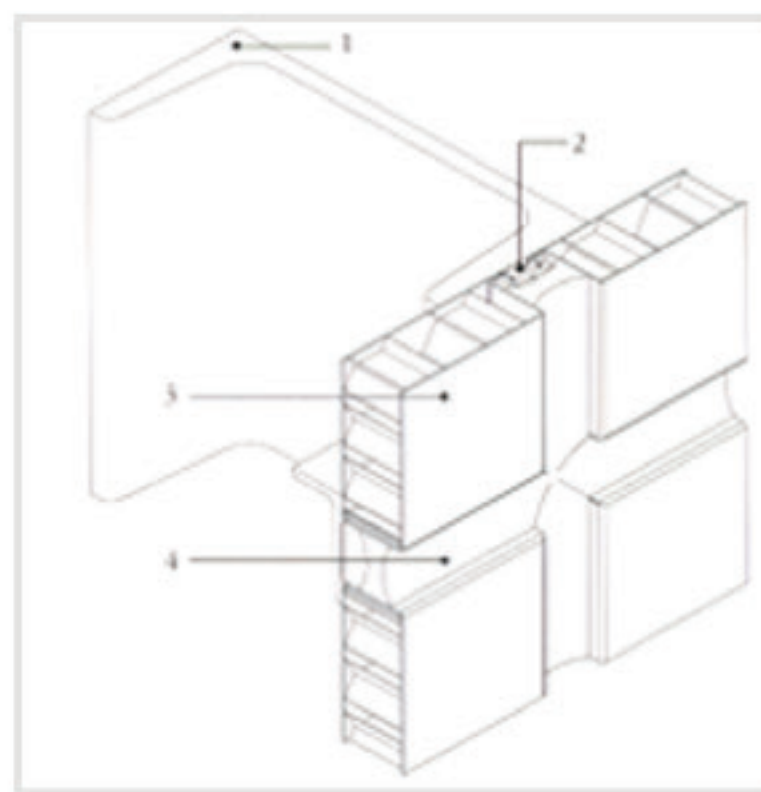
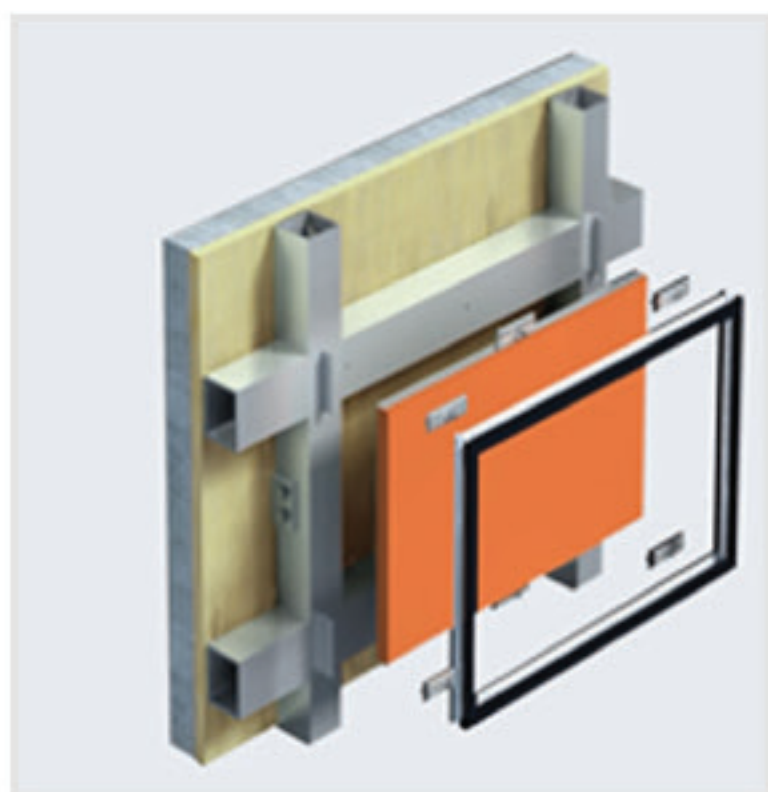
- Interior ceilings
- 12mm
- Vertical and Horizontal Installation

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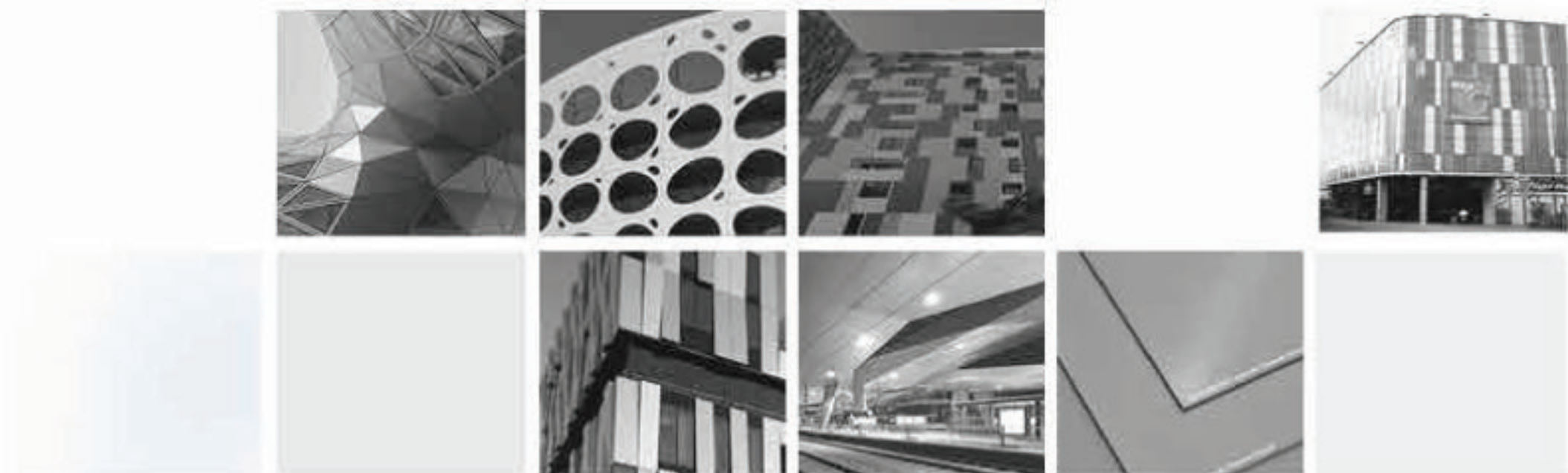


SILICON JOINT SYSTEM

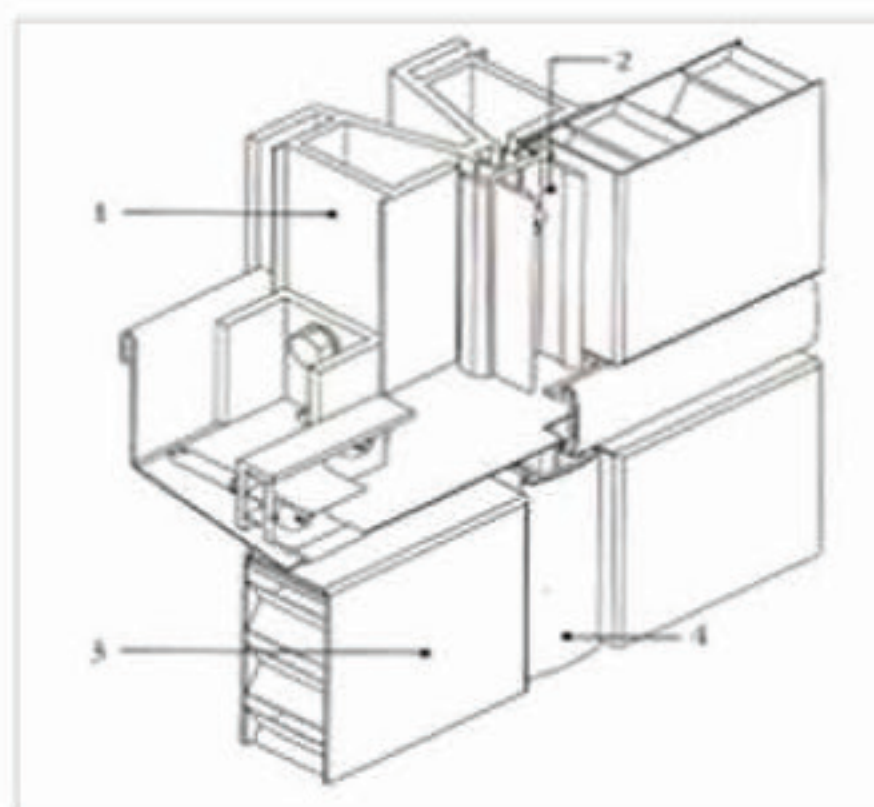
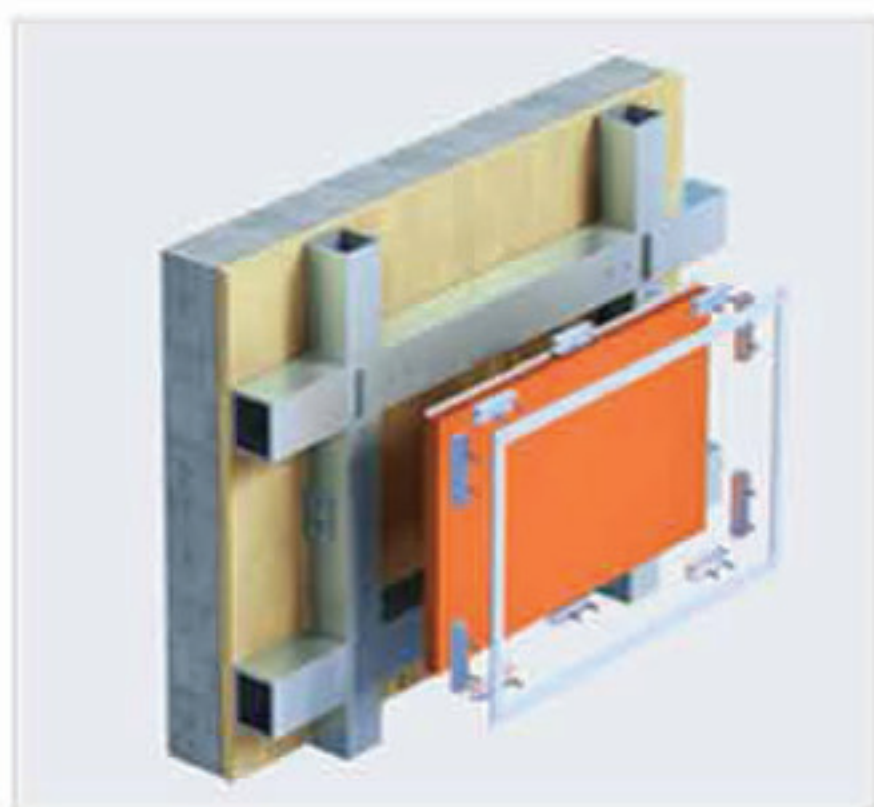


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METAL COVER JOINT SYSTEM

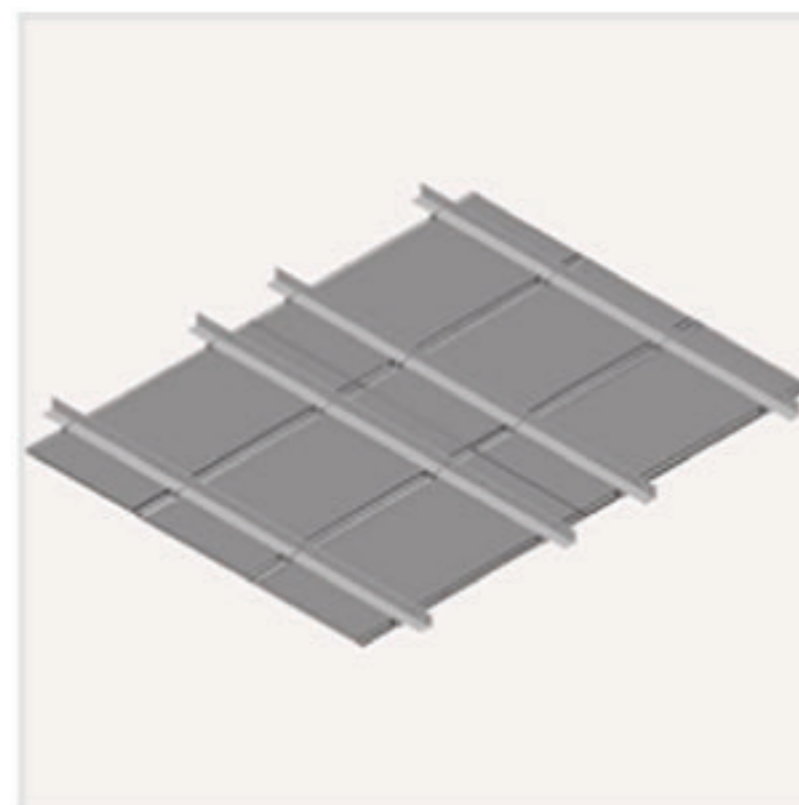
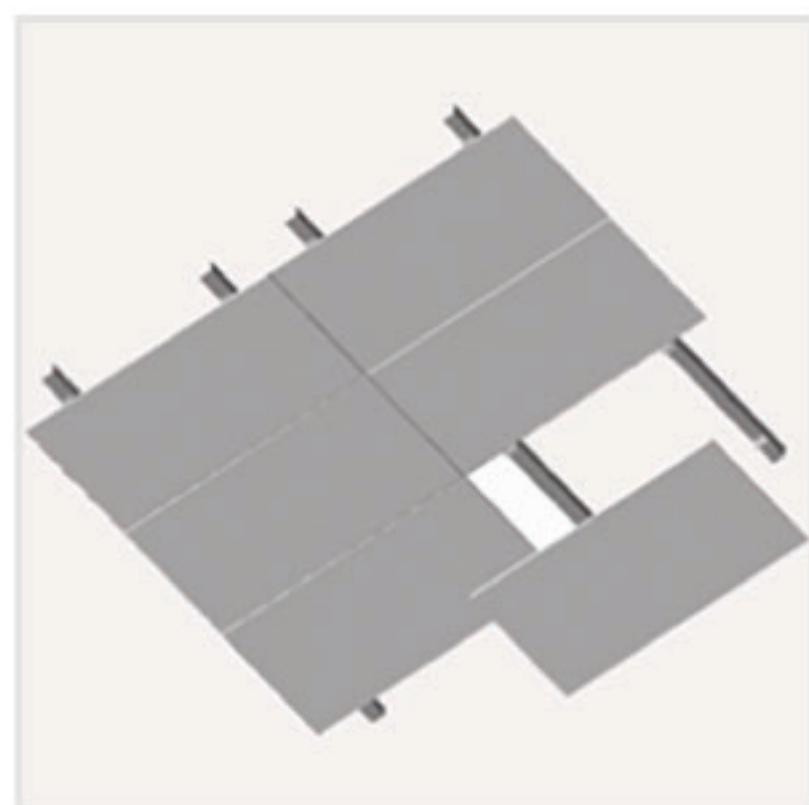
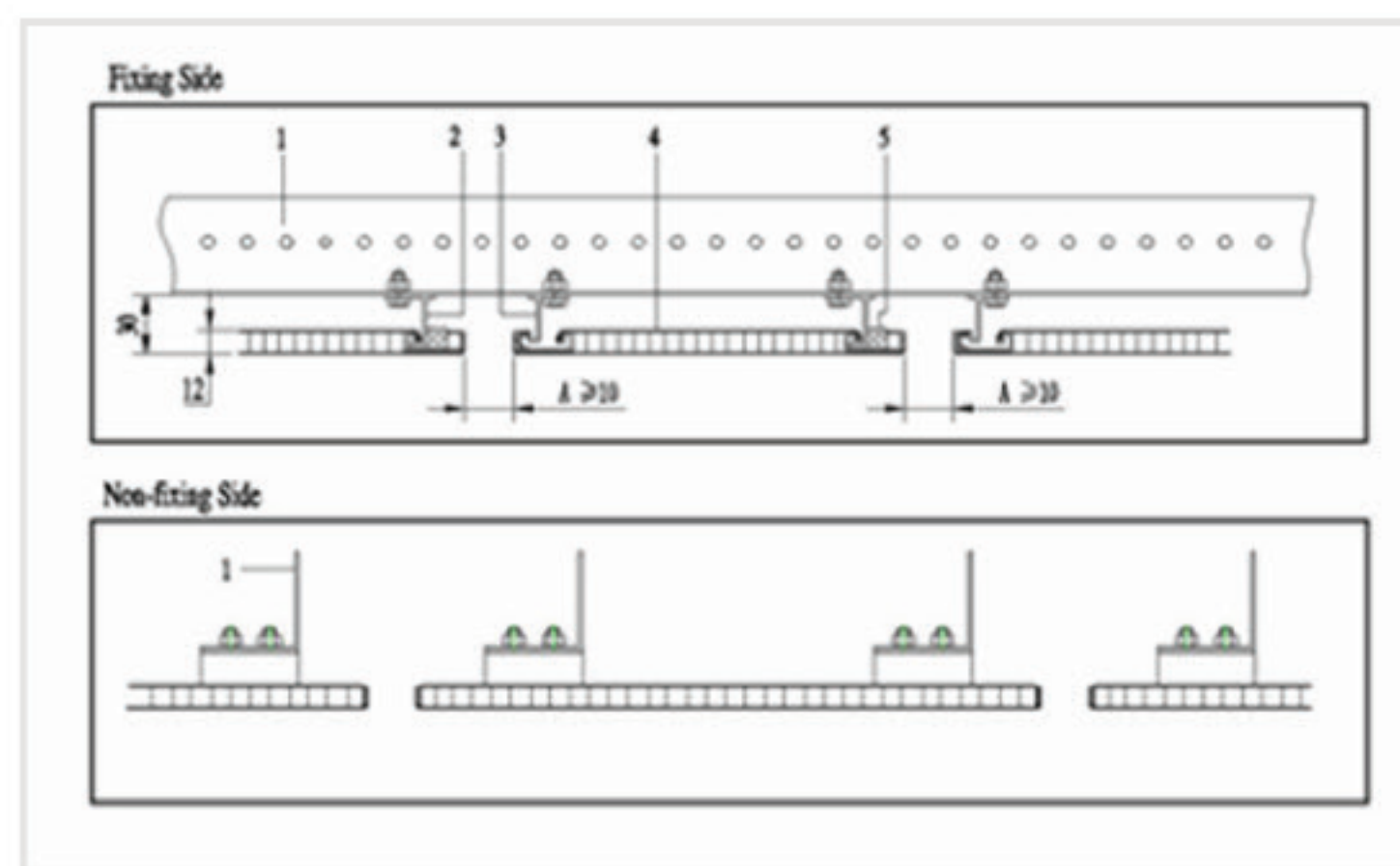
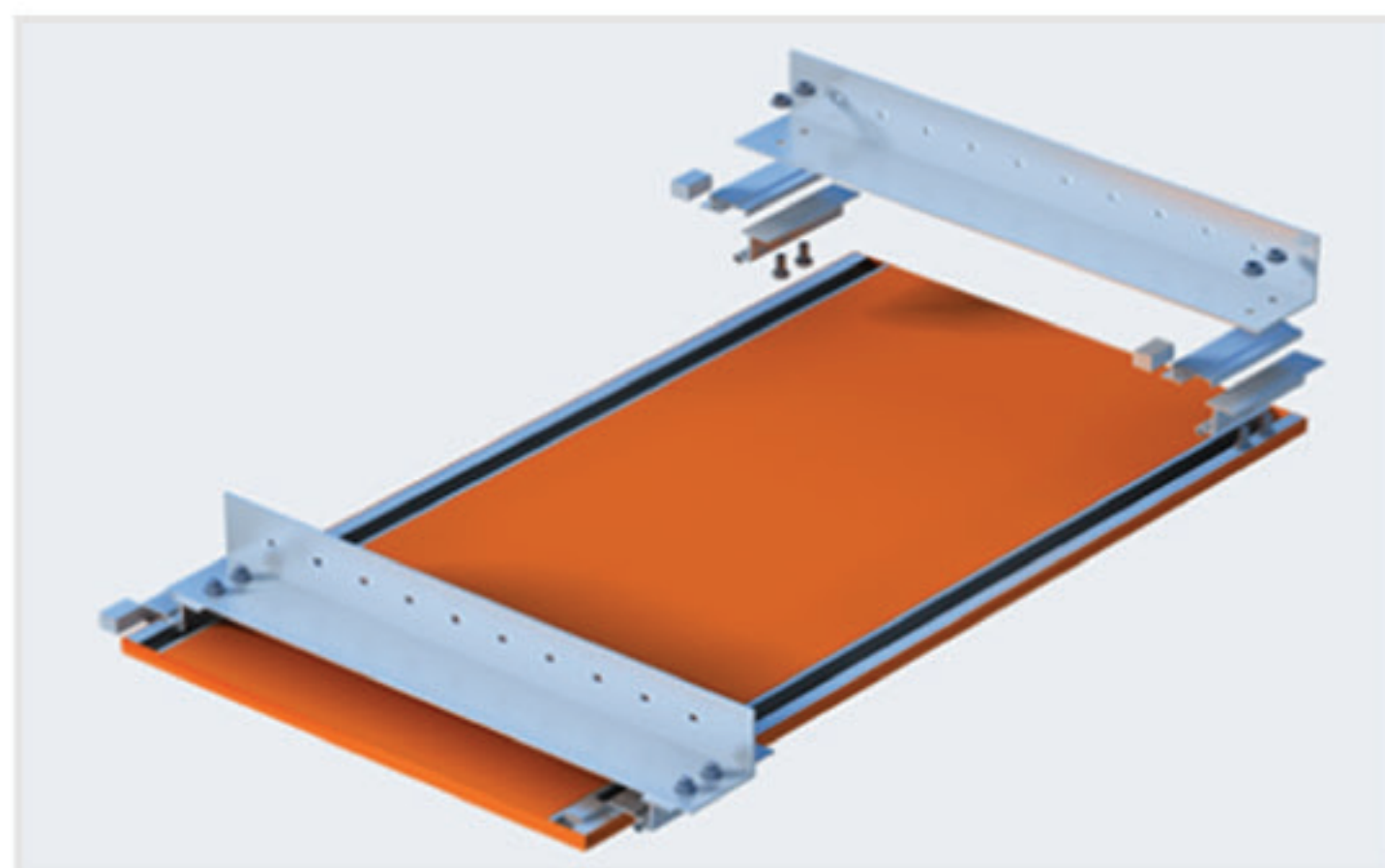


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INTERIOR CEILING SYSTEM



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IF YOU HAVE AN APPLICATION.....
ALUCORE® CLAD HAS A SOLUTION

- Airports
- Exhibition Centers
- Mass Transit
- Stadiums
- Office Buildings
- Schools/ Institutions
- Industrial buildings





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APPLICATIONS OF ALUCORE® CLAD

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FAÇADE CLADDING APPLICATION



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ROOFING APPLICATION



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SOFFIT APPLICATION



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COLUMN CLADDING APPLICATION

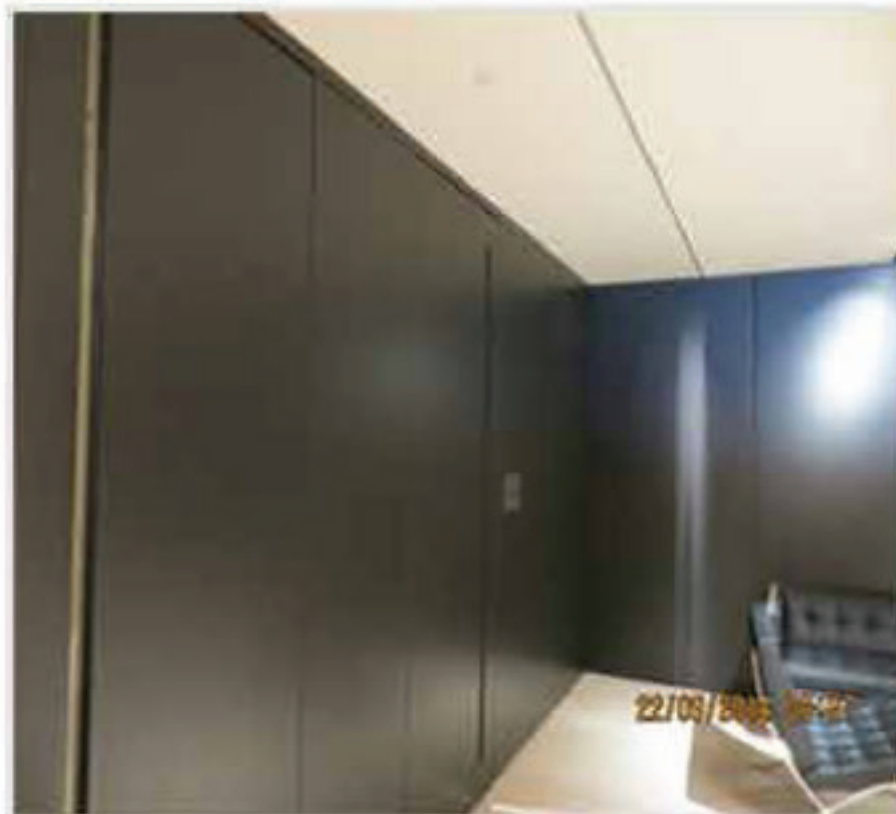


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INTERIOR WALLS/CEILING CLADDING APPLICATION



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THANK YOU!!