



CLADS
EXTERIOR GRADE COMPACT LAMINATED

EXTERIOR CLADS

ARCHITECTS
PRESENTATION



GREENLAM INDUSTRIES

LTD. **GREENLAM DECOLAN**
Your partner in Italy and Europe
SA www.greenlam-decolan.com

Importance of facade



Gives unique look



Creates Recall Value



Beau t ificat ion

What are GreenlamClads ? Two Grade of Compact Laminate

- **Exterior Grade** – Made with exterior grade décor paper, added with special treatment to take wear and tear of the outside rough weather
- **Interior Grade** - Made from solid grade high pressure compact laminates.

Interior Grade



Suitable for internal wall claddings.

Exterior Grade

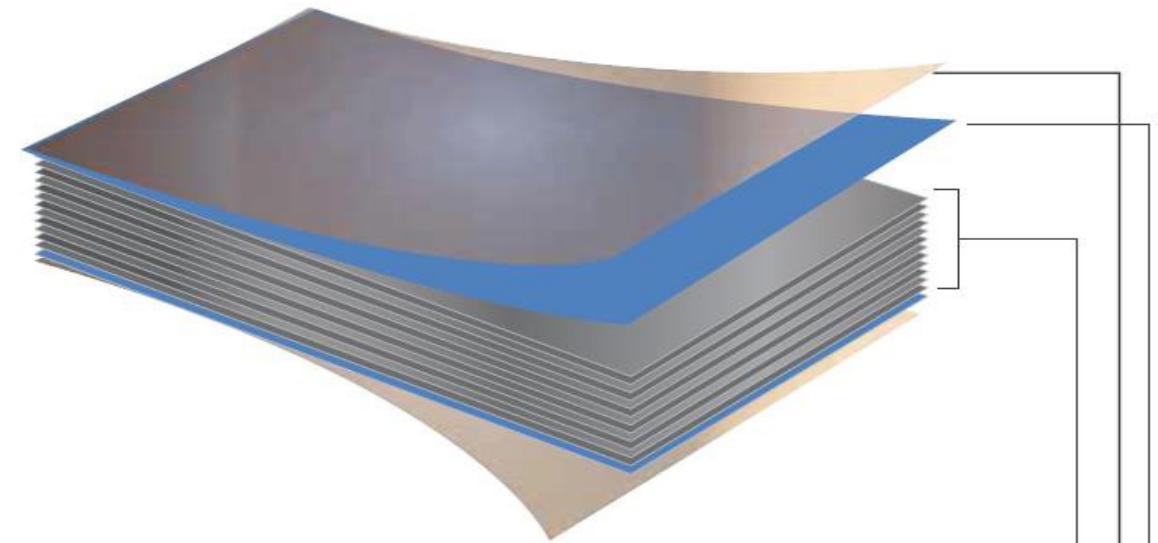


Greenlam Exterior Grade Clad

- Superior quality Exterior grade HPL in accordance with EN 438-6 Type EDF for exteriors.
- Only Indian Company in the category to use specially processed high quality exterior grade European paper in production.
- A premium brand / player in exterior cladding in India.
- Greenlam Clads have a range of 28 exclusive designs of exterior grades finishes.

Greenlam Clad is self supporting HPL with decorative surface with composition of three layers of specially treated papers that ensure –Protection, Color Fastness & Structural Strength.

Product Internal Structure

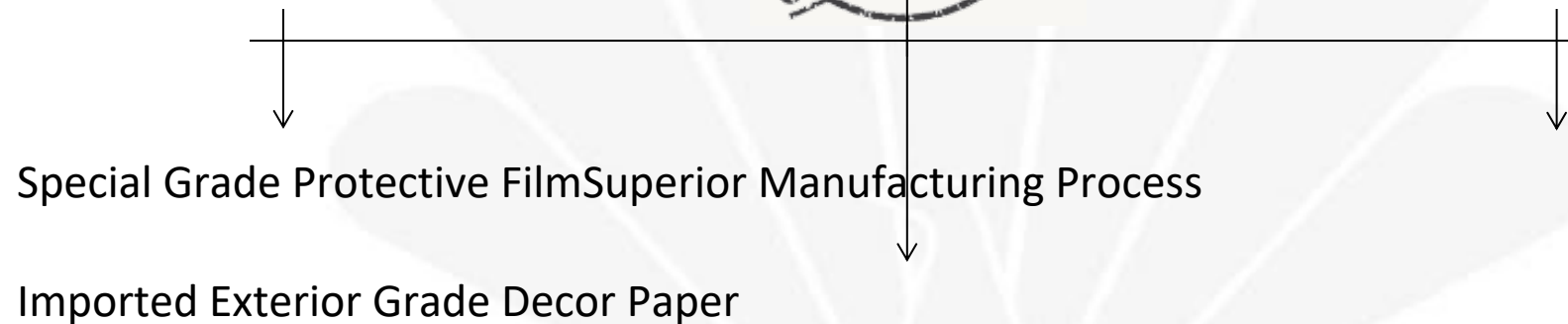


PRODUCT CONSTRUCTION

- 1- Special Polymeric Film for Surface Protection
- 2- Special Exterior Decor Paper Impregnated with Thermosetting Resin
- 3- Brown Kraft Core Treated with Special Chemicals in Phenolic Resin

Details of the innovation : GLE TECHNOLOGY

Manufactured with a patented Innovative GLE –Technology, that ensures precision, perfection & performance, thereby making our product best in its class.



Advantages : GLE Technology

The superior GLE technology from our R&D team make Greenlam Clads a sturdy product that can withstand extreme weather conditions and makes it perfect for exterior use.

SPECIAL PROTECTIVE FILM



- Excellent UV performance
- Extreme weather stability
- Excellent chemical resistance
- High anti soiling properties
- Scratch resistant
- Resistant to corrosion
- High anti-static properties
- Frost resistant
- Excellent anti-graffiti properties
- Resistance to acid rains
- Easy clean ability of surface



Advantages : GLE Technology



SPECIAL DÉCOR PAPER



- Use of high quality exterior grade décor/design paper made using extreme light stable pigments and special chemical & inks.
- The decor paper is rated 7-8 on blue wool scale & 3-5 on grey scale, hence further making product fit for usage in exteriors.
- Décor papers are certified for light fastness (EN-438-2)
- A combination of special UV protective film and of specialized European Exterior Grade Décor Paper.
- *Unmatched* and unbeatable 10 years warranty.

Advantages : GLE Technology

The superior GLE technology from our R&D team make Greenlam Clads a sturdy product that can withstand extreme weather conditions and makes it perfect for exterior use.



- High bonding strength
- Mechanically sturdy
- No splintering
- Easy machinability
- Excellent fire retarding properties
- High dimensional stability
- High impact resistance EN ISO 178
- High bending resistance EN ISO 178



THE SUPERIOR MANUFACTURING PROCESS

Properties and Features



Exclusive Range



Superior Manufacturing
Process with
GLE Technology



Complementing Hardware
(Rivets)



Light Fastness Property



Environment Friendly
Green DNA



Fire Retardant



10 Year Warranty

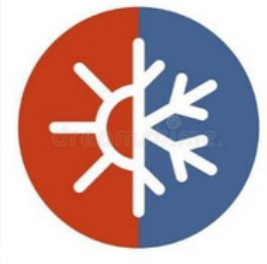
Features - Superior manufacturing process, which leads to:

Weather Stability

- Clads achieve extreme weather stability, ranging from as low as -50 degree centigrade to as high as 80 degree centigrade.

- Frost resistant

- Resistance to acid rains.



**EXTREME
TEMPERATU RES**



FROST RESISTANT



**ACID RAIN
RESISTANT**

Features – Superior Surface Performance

Superior Surface Performance

They are also, Chemical resistant, Scratch resistant, Resistant to corrosion, and have High anti-static properties.

Waterproof

They are non-porous and waterproof in nature

Ease of cleaning and maintenance:

Because of the special protective polymeric film on top, the product has excellent Anti-soiling properties with excellent anti-graffiti properties giving Easy clean ability of surface.



Features –Environment Friendly

Environment Friendly

- Where mostly others FACADE CLADDING PRODUCTS practice closed system for installation, Greenlam Clads saves up to 30% energy using the rear ventilation façade that helps the building breath.
- The product is Greenguard certified and hence qualifies for low VOC emission hence making it safe and healthy to use.



Range & Collection

Range & Collection: *Irresistible exteriors*

What comes along with the plethora of colours, variety of patterns, and magnificent aesthetics are exceptional natural lighting and superior air flow; all in line with the increasing adoption of green and sustainable building practices.

Colours: Available in 28 decors



WIDE RANGE

Added advantage

Available with Matching Rivets

Greenlam Clads comes along with essential fasteners made using non-corrosive materials like Stainless Steel. Big head of these fasteners (rivets) are colour lacquered with epoxy paints so as to compliment the Greenlam Clads range and are UV coated for better colour fastening properties.

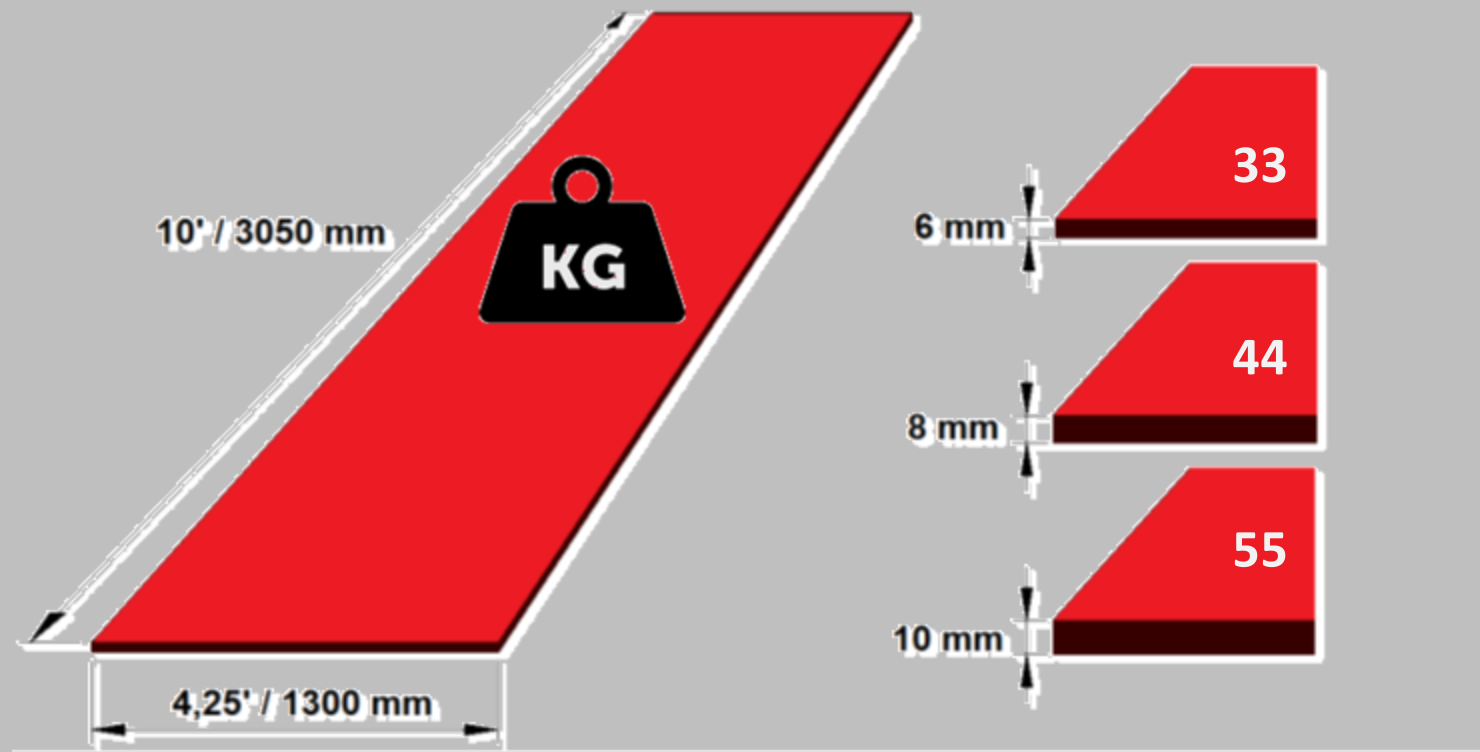


Why Décor paper is given on both sides?

- Décor paper is given on both sides so that the properties of the Clad are same on both sides. This removes the chances of warping.
- Also this way, the clad can be said to be homogenous if looked at it horizontally. Some green building makers ask for products that are homogenous in nature.



Technical properties –size, thickness and weight



Density
 1400 kg/m^3

Flame Retardant Property

- This basically means that the fire won't spread. Our product Clads, comes under B category of materials. We have been certified as BS1D0 product.
- This means that:
 - a)B: Class of material
 - b)S: Smoke released from product.
 - c)D: Droplet after fire is 0

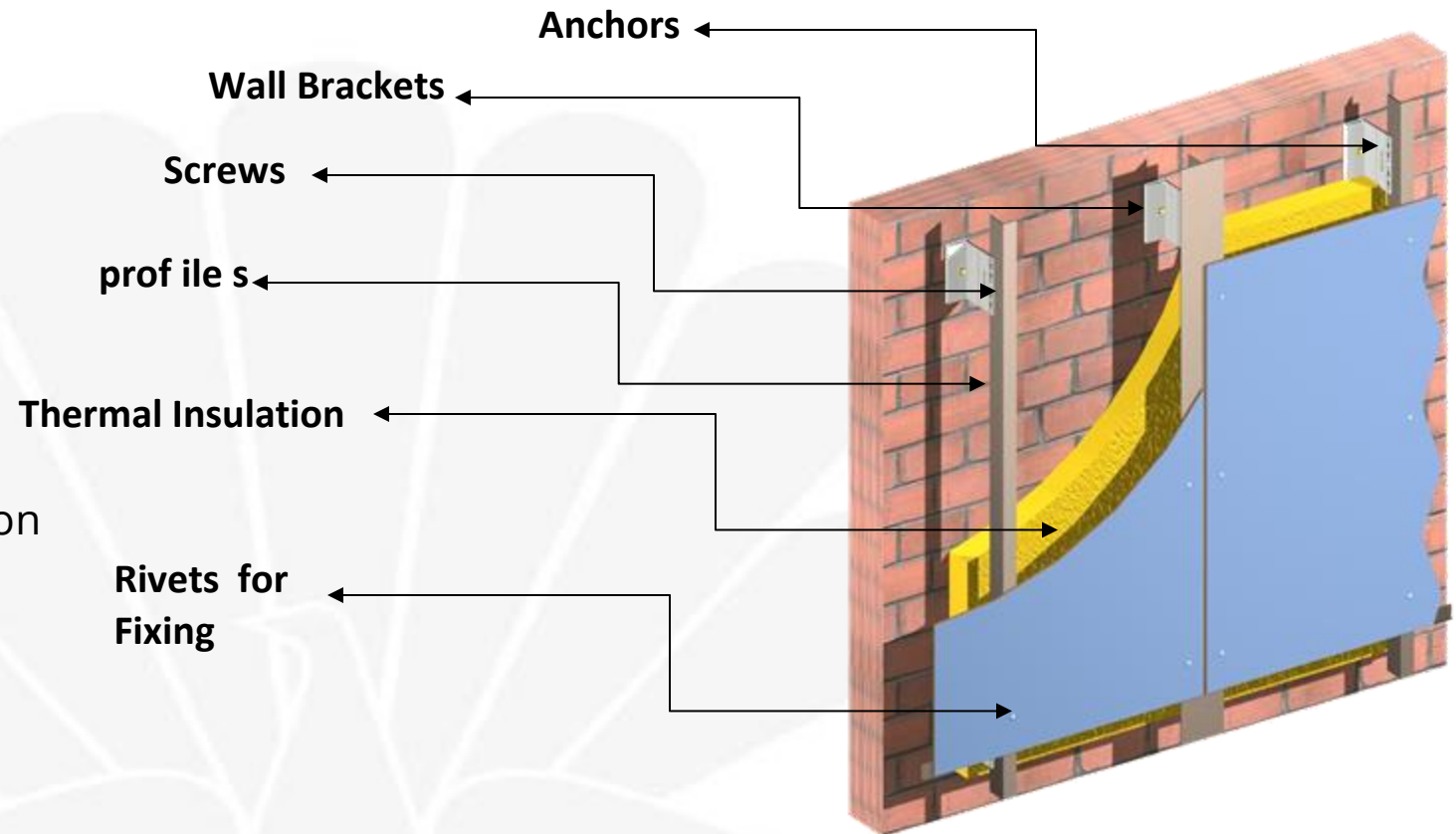


Other Important Properties

- Thermal Expansion-close to 1 mm per meter.
- Normal standard of density-1400kg/cum for exterior grade [Density varies with paper GSM]
- **We are certified with EN 438 bar 6 EDF. Which means we qualify under all the standards or norms for HPL of thickness more than 4mm. (EDF-Extremely durable Flame retardant material)**
- On a gray scale of 1 to 5, we have 4. Normal standard is 3.
- Tested under 3000 hours of raining and 1600 hours of UV exposure and no effect was seen on CLADS.

Why Ventilated Facade ?

- Ventilated facade reduces temperature within the building. It allows air cavity to flow through.
- It helps in air circulation. This in turn reduces to the temperature of the building and helps in saving up to 20-30% of electricity.
- There should be some gap between the wall and the material for ventilation to be present. This ventilation allows the building to breath and thus controls the temperature within.
- It also helps in sound proofing and reduces noise levels by 8db.



Installation of Clads?

- Take a first reference point on one of the corner. Distance from the edge should be 40mm horizontally and 20 mm vertical ly.

- If the reference point is on one corner then drill a hole of 5.1 mm.

- The same spot should be used as reference point in the consecutive panel.

- This fix point would let the panel expand.

- Pie brackets should be used for fixing the channels on the wall.

There are 2 types of brackets:

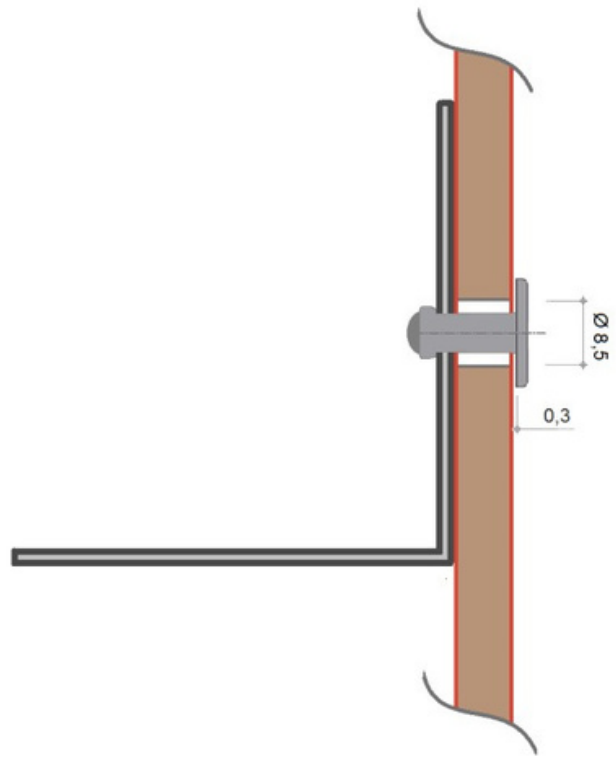
a.Wind load: takes care of thermal expansion, earthquake etc.

b.Dead load: Transfers the load of façade onto the wall

- Distance between two rivets should be maximum 450mm.



Rivet Fixing through Gun



Fixed Rivet Detail.



Summary

Superior
manufacturing
process with GLE
technology

Light Fastness
Property

Fire Retardant

Environment
friendly Green
DNA

10 Years Warranty

Exclusive Range

Complementing
Hardware(Rivets)



Different applications

Areas covered in facade



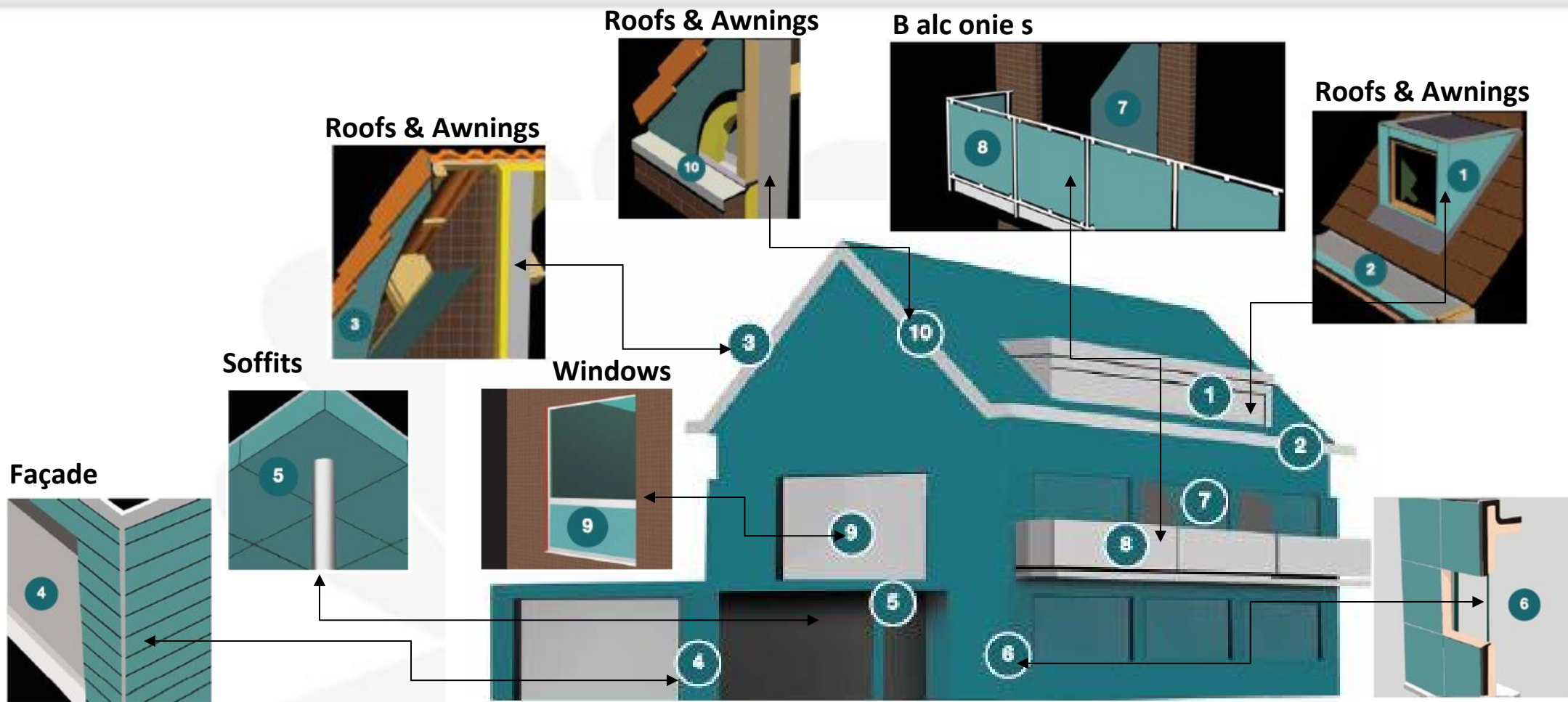
Residential

- Outer Walls
- Gates
- Fences / Boundaries
- Roofs
- Balcony With Railings
- Porticos
- Visible Heights Of Open Terraces
- Name plates

Commercial

- Outer walls Of Building elevation.
- Signage
- Doors
- Gate s

Application zones of a Clad in a house



Application Possibilities



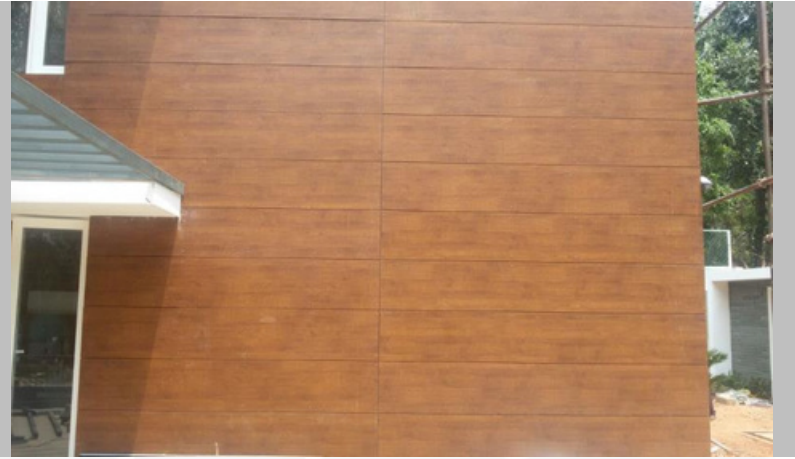
Facade
Balcony
Railings
Awnings
Sports facilities
Outdoor furniture
Partitions
Ceilings
Children play school
Public facilities



Cladding On Main Gates of Buildings



Exterior Cladding on Facade



Exterior Cladding on Facade



Different Applications of External clads



CNC cut Design on Clads



Bended Balconies applications



Sun protection Louvers on Balconies



Thanks for Listening
