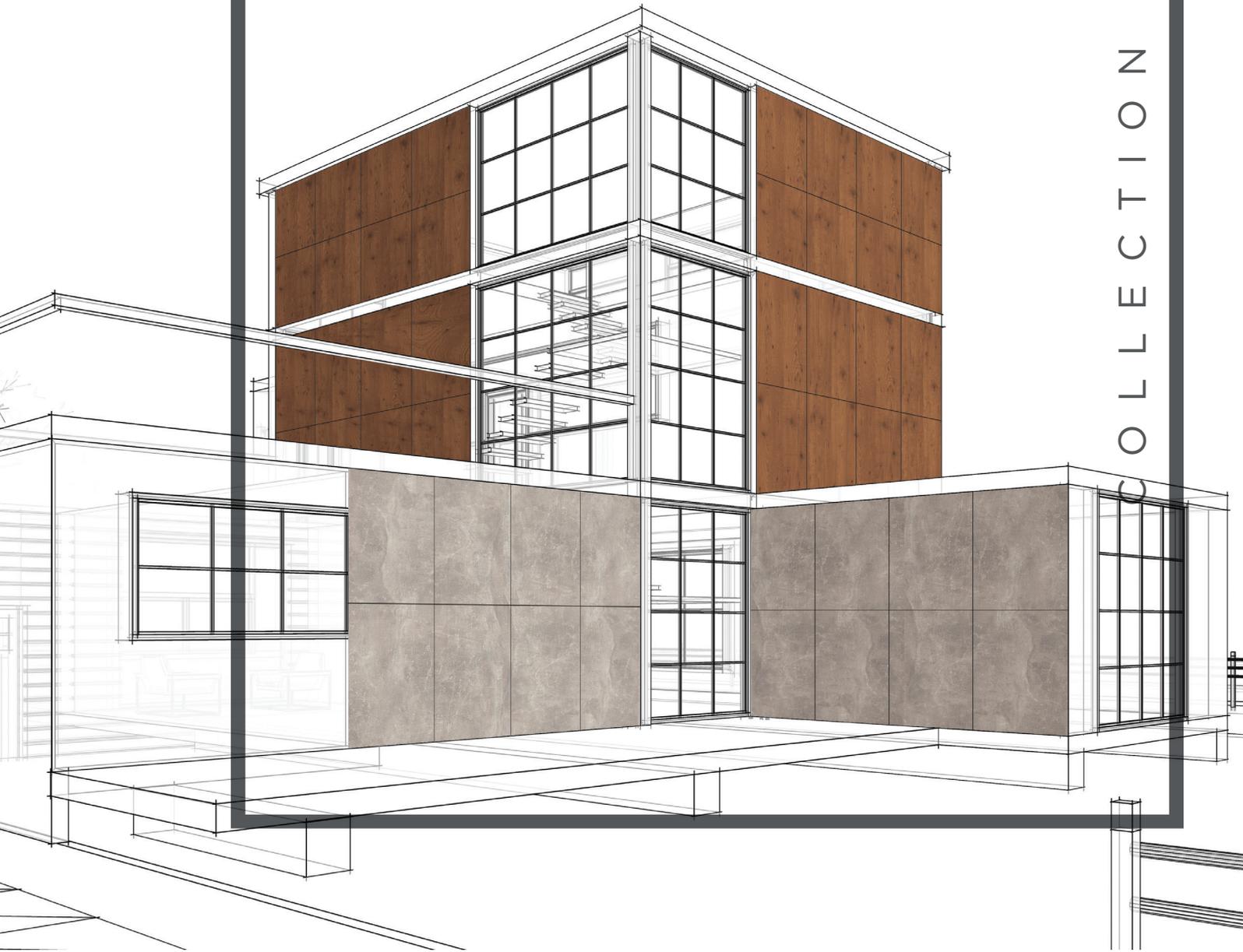
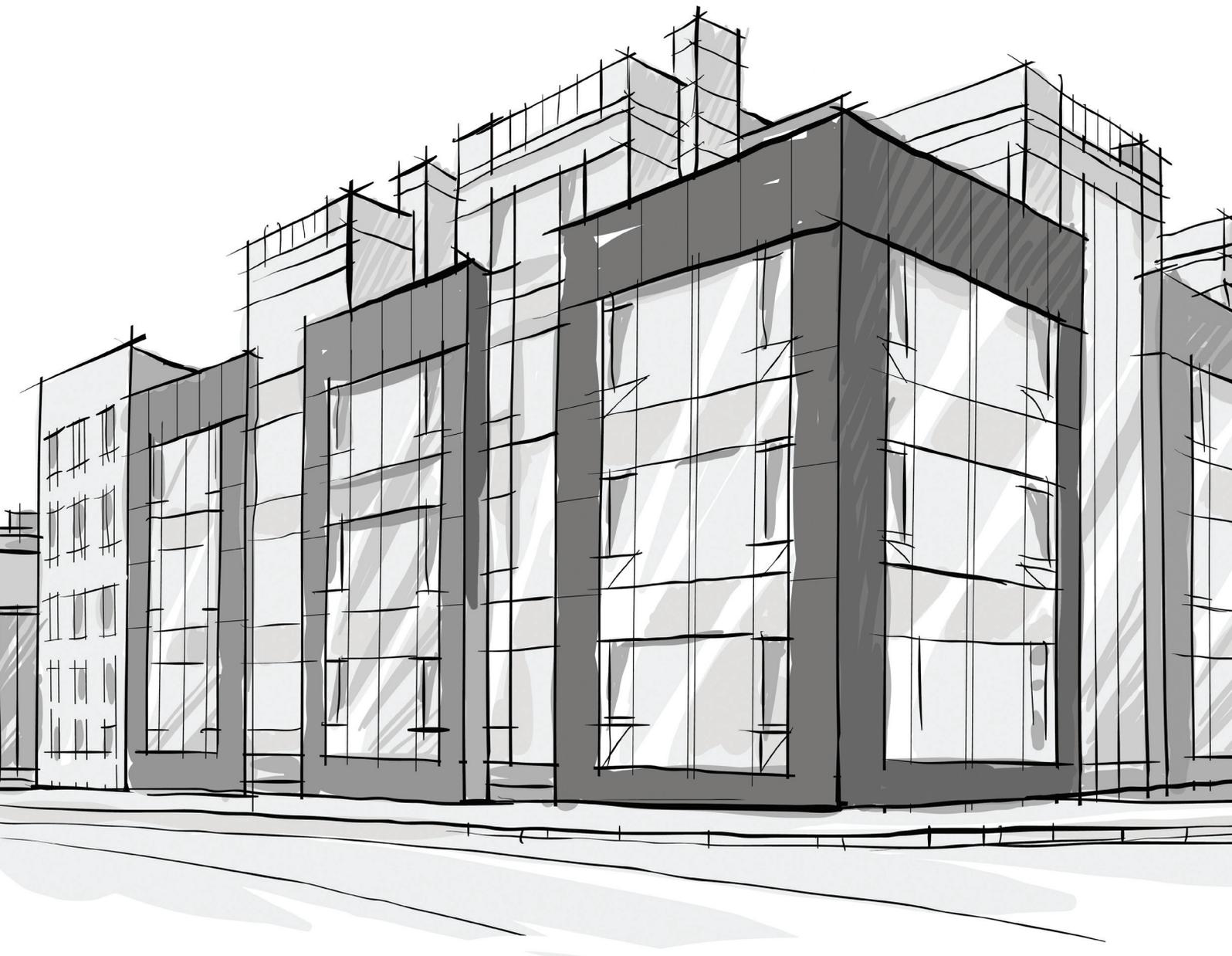
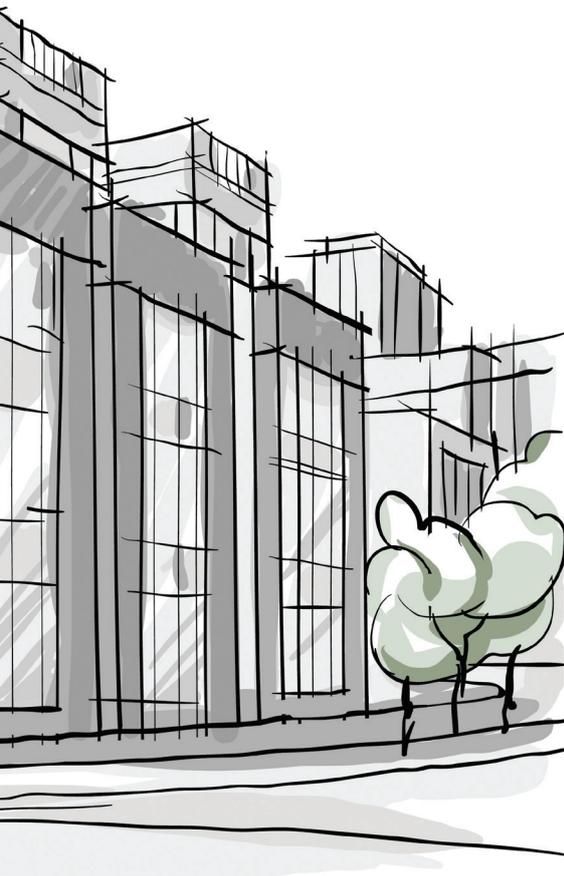


ASD EXTERIOR

COLLECTION







ASD EXTERIOR

ASD EXTERIOR is made for all outdoor applications. Aside from its use as a facade cladding material, it can also be used for any other outdoor-application such as balconies, exterior furniture, sunblinds, fascias, soffits, canopies, parapets, signages, porches, balustrades, railing-fillers, decorative fences, shutters and for a wide array of other exterior applications.



COMPANY

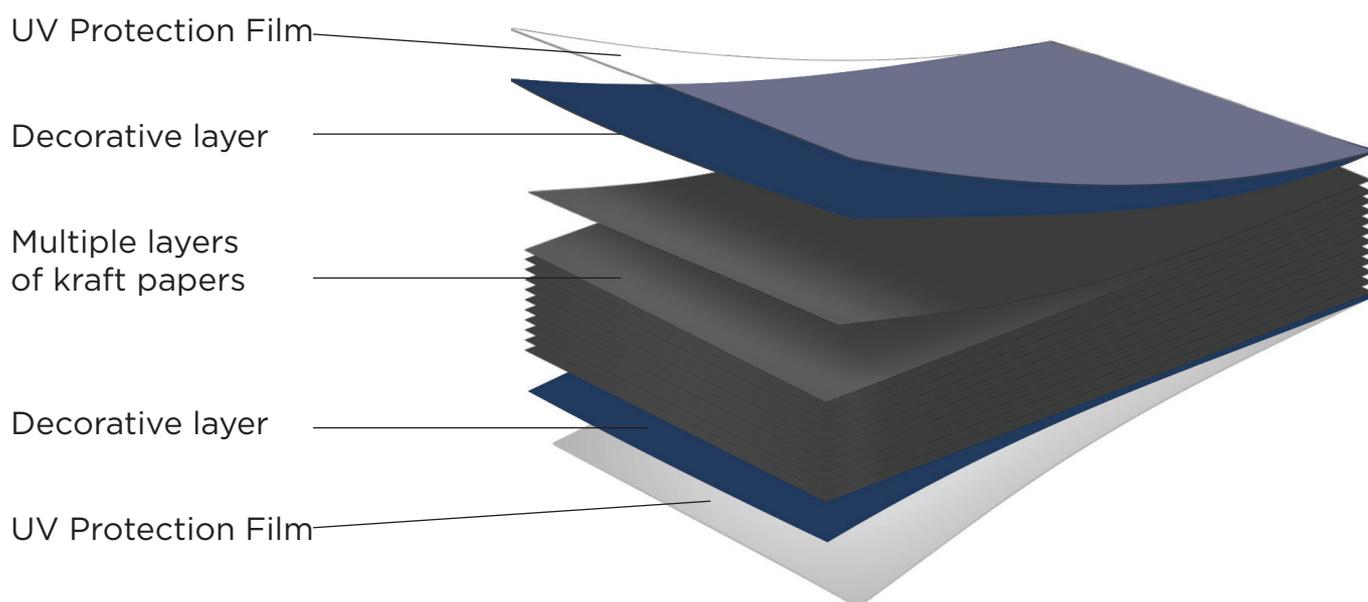
ASD LAMINAT's heritage dates back to 1955 when we first started our ventures under the name Alpay Forestry Products within the forestry market. In the approaching years, the company name was changed to ASD LAMINAT once we introduced a laminate production line into our scope.

At the present time, our production line consists of 5 impregnation, 5 High Pressure Laminate, 3 Continuous High Pressure Laminate lines, and a Resin Reactor all in all with an annual production capacity of 35.000.000m² (377.000.000ft²) of laminate that can be comprised of 400+ designs and 30+ surfaces.

Here, we value the needs and demands of every one of our business partners within the 64 countries that we are operational in.

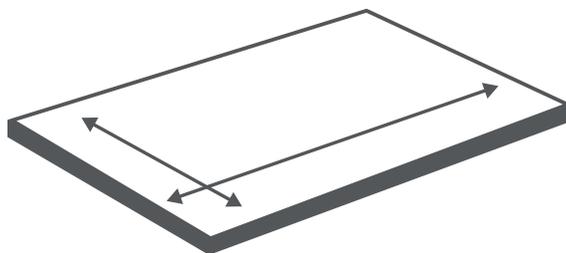
Product Description

ASD EXTERIOR is an extremely weather resistant, self-supporting, robust, solid and composite material manufactured in high temperature at 150 degrees Celsius (302 degrees Fahrenheit) and with great pressure at 9 Megapascals (90 Bars) with the use of High Pressure Laminate (HPL) machines in compliance with EN 438-2 Part 6 and EN 438-2, Part 7. The core part of the material is comprised of phenolic resin impregnated wood-based saturated virgin fiber kraft paper layers. Whereas, its decorative surfaces are made of thermosetting resin impregnated decorative wood-based cellulose paper layers reinforced with UV resistant films. ASD EXTERIOR panels are available in standard quality (ASD EXTERIOR) and flame and fire-retardant quality (ASD EXTERIOR-FR).



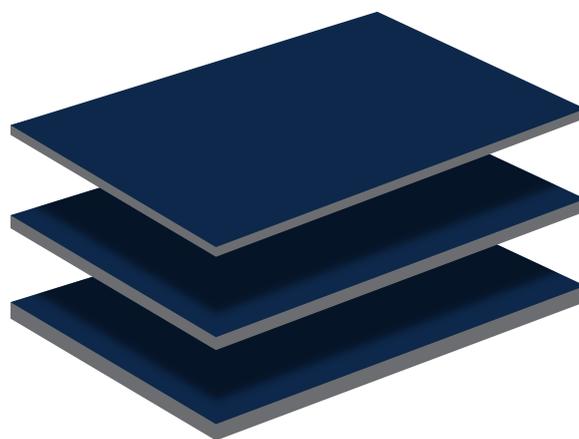
Standard Format

3050 mm x 1300 mm (10' x 4'26)



Standard Thicknesses

6 mm = 0.236" ~ 8.9 kg (19.62 lbs)
8 mm = 0.314" ~ 11.9 kg (26.23 lbs)
10 mm = 0.394" ~ 14.9 kg (32.84 lbs)



Core

ASD EXTERIOR can be comprised of either black or brown core while, ASD EXTERIOR-FR is solely comprised of brown core.

Tolerances

Dimensional tolerances	EN 438-2.5	Thickness tolerance (t: nominal thickness)	mm	$2,0 \leq t < 3,0$: +/-0,20 $3,0 \leq t < 5,0$: +/-0,30 $5,0 \leq t < 8,0$: +/-0,40 $8,0 \leq t < 12,0$: +/-0,50 $12,0 \leq t < 16,0$: +/-0,60 $16,0 \leq t < 20,0$: +/-0,70 $20,0 \leq t < 25,0$: +/-0,80
	EN 438-2.6	Length and width	mm	-10/-0
	EN 438-2.7	Straightness of edges	mm/m	$\leq 1,5$
	EN 438-2.8	Squareness	mm/m	$\leq 1,5$
	EN 438-2.9	Flatness	mm/m	$2,0 \leq t < 6,0$: $\leq 8,0$
mm/m			$6,0 \leq t < 10$: $\leq 5,0$	
mm/m			$10,0 \leq t$: $\leq 3,0$	

Types

Double design

(Same design on both sides of the panel.)

Duo design

(Different designs on the front and the reverse side of the panel.)



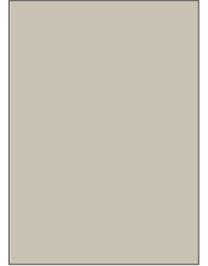
Designs & Finishes

ASD EXTERIOR can be ordered in 80+ standard designs, Quartz surface being the standard finish. For further information concerning the compatibility of the rest of our 400+ designs and 30+ finishes with ASD EXTERIOR, please contact us.

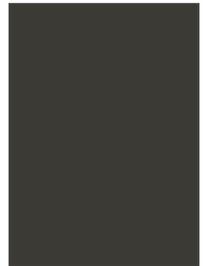
Please note:

The colors in this document are printed. Hence, they may slightly vary from original ASD EXTERIOR panel colors relating to gloss and color shades. Please contact us for requesting original samples.

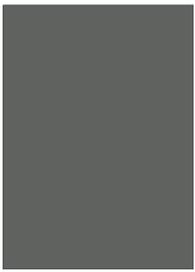




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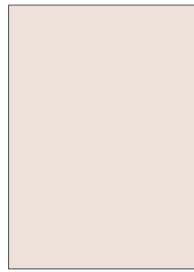
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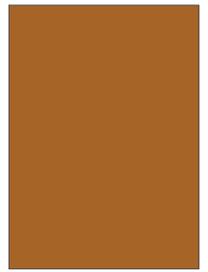
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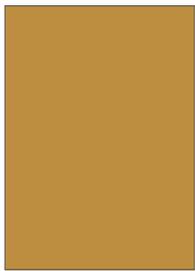
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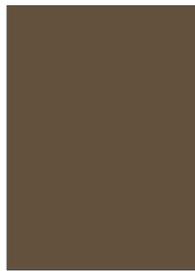
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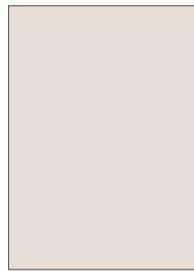
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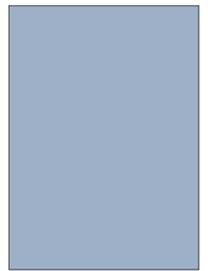
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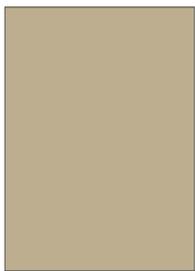
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3089



3095



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5133



5142



5146



5147

Material Properties

Physical Properties	Unit	Value	Standard
Density	kg/m ³	≥1,35	ISO 1183
Dimension Stability	mm/m	≤2,5	EN 438-2
Resistance to Wet Condition In water of 65 °C after 48 hours			EN 438-2
Mass Increase	%	≤4	
Apperance	Rating	≥5	
Optical Properties	Unit	Value	Standard
Resistance to UV light	Grey Scale and Rating	4-5 (After 1500 Hours Exposure)	EN 438-2
Mechanical Properties	Unit	Value	Standard
Modulus of Elasticiy	N/mm ²	≥9000	EN ISO 178
Tensile Strenght	N/mm ²	≥70	EN ISO 527-2
Flexural Strenght	N/mm ²	≥120	EN ISO 178
Resistance to impact by large diameter ball			EN 438-2
Drop height	mm	1800	
Diameter of Indentation	mm	≤10	
Region	Fire Clasifacation	Standarx	
European Union	Type FR B S1 d0	EN 13501-1	
	Type Standart D S2 d0	EN 13501-1	

Product features and benefits

- Durable, solid, sturdy and long lasting
- Extremely weather resistant
- Energy efficient and eco-friendly (when used as facade cladding material)
- UV-resistance and color stability
- Hypoallergenic properties
- Heat and frost resistant
- Water resistant
- Being of homogeneous construction, dimensionally stable and mechanically strong
- Great pull-out strength
- Easy to modify
- Demountable
- Radiation resistant
- No painting required
- Moisture and thermal control (when used as facade cladding material)
- Enhanced indoor environmental quality (IEQ) (when used as facade cladding material)
- Improved acoustics by 14dB (when used as facade cladding material)
- Superior impact resistance
- Not corrodible
- Light-weight
- Non-splintering
- Inherently antibacterial
- Easily machinable and workable
- Easy and quick to install
- Suitable for all exterior applications
- Self-supporting (when used as facade cladding material)

- Easy to clean and low maintenance
- Low static electricity does not attract dust
- Limits heat loss in winter and the transmission of heat in the summertime (when used as facade cladding material)
- New panels in the original color can be ordered for the most part, even after years
- Termite resistant
- Not susceptible to mold, mildew, decay, and rot
- Optimum fire behavior, does not melt, drip or explode
- Adds to the value appreciation of the property
- Safe in use
- Available in a wide array of designs



Overcladding

ASD EXTERIOR is excellent for overcladding and renovating older buildings, adding an extra insulation layer and contributing value and aesthetic appreciation with minimal impact on the construction or substructure of the building which is a great budget friendly method of recycling existing structures.

Weather resistance

ASD EXTERIOR panels are made to endure the permanent exposure of sunlight and weather conditions such as rain, hail, wind and salt air all combined. ASD EXTERIOR has scored the highest test result of 4-5 classification on the international Gray Scale (ISO 105 A 02) with respect to both UV resistance and color stability. The effects of exhaust gas or acid rain on ASD EXTERIOR are insignificant. The decorative layers do not delaminate or flake. ASD EXTERIOR is resistant to extreme weather fluctuations and maintains its' physical and mechanical properties. Immense or rapid weather fluctuations such as from -20°C (-4°F) to +80°C (176°F) and from extreme aridity to a relative extreme humidity of 80% have no effect on the appearance and properties of the panels.



Fire Behaviour

The fire behavior of the panel material is excellent. It does not melt, drip or explode and maintains its stability for a long time.

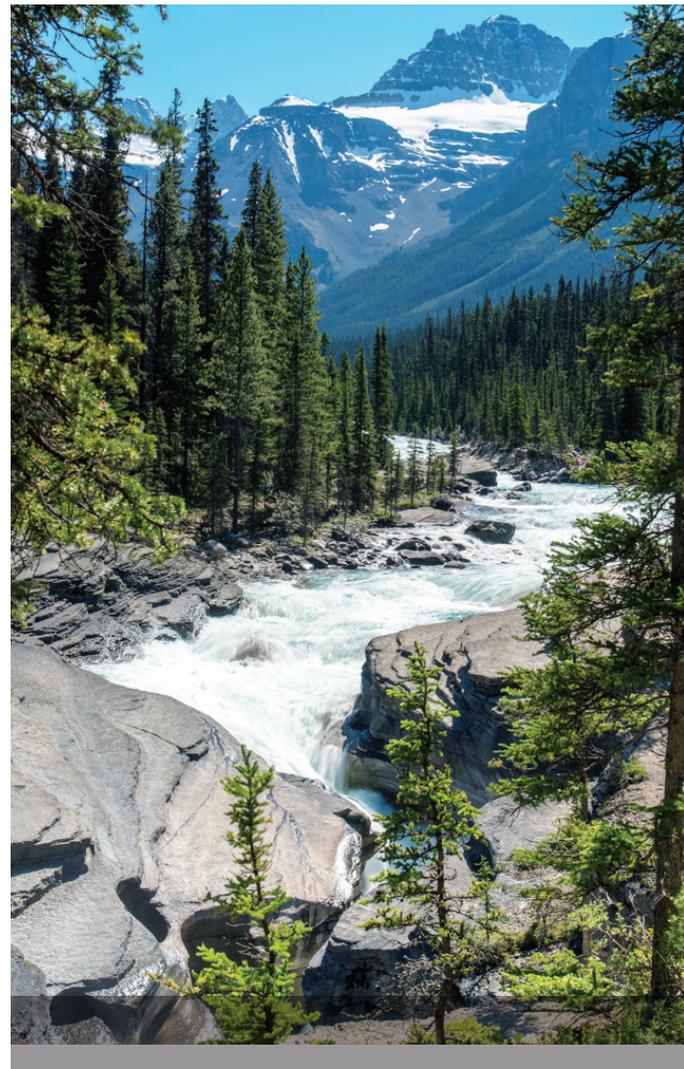


Environment

We believe in being the change ourselves that we would like to see in the world. Therefore, we believe in living in harmony with our planet, not off of it. Over the many years, sustainability has become a part of who we are, we strive to take good care of our planet. For our respect and love for the planet earth and its preservation, we believe in absolute minimum waste and complete, controlled and, sustainable protection of our beautiful nature. ASD EXTERIOR panels do not contain, biocides, heavy metals, organic halogen, chlorine, fluorine, bromine, asbestos, wood protection agents such as fungicides, pesticides and are free of sulfur, mercury, and cadmium. Neither do ASD EXTERIOR panels release any gases, vapors, solvents or fluids.

Roughly 70% of ASD EXTERIOR consists of natural wood that is a by-product of sawn lumber production of sawmills. We source raw materials from FSC certified establishments. The FSC standards ensure that the wood is produced in compliance with internationally applicable regulations for sustainable forestry.

When ASD EXTERIOR panels are used as exterior facade cladding material, their overall contribution to a building's thermal efficiency, energy performance and therefore sustainability is significant. Therefore minimizing the overall carbon dioxide emission of the building which is one of the greatest causes of environmental pollution.



Warranty

ASD EXTERIOR panels have a manufacturers guarantee for a period of 10 years. Please contact us for further information.



Certifications

CE marking

ASD EXTERIOR fully complies with the requirements of the EU and has been accepted for the European Economic Area (EEA) mandatory CE mark according to the EN 438-7

CE certification

Fire Classifications 5. 3 for 6mm and thicker ASD EXTERIOR type CGF Certificate number: 1023-CPR-0556 P

ASD EXTERIOR panels in thicknesses of 6mm and thicker are EUROCLASS B-s2, d0 in accordance with EN 13501-1.

ISO 9001 certification

FSC certification



The mark of
responsible forestry



Original and more comprehensive documentation of tests, methods, and permits on ASD EXTERIOR panels can be found in the downloads section of our website at asdlaminat.com

Cleaning & Maintenance

The closed and non-porous surface of ASD EXTERIOR virtually withstands dirt accumulation, keeping the product smooth and easy to clean. The surface of ASD EXTERIOR does not require a special procedure in terms of cleaning. Any dirt left behind from sawing or assembly and regular air pollution deposits can be removed simply with the use of ordinary, non-abrasive organic solvent free, household cleaning items being applied with a paper towel, sponge or a soft cloth. We recommend the panels to be thoroughly rinsed off of any detergent remaining and then the panels must be dried properly for avoiding any marks. Please avoid excessive rubbing or pressure or using aids that can cause abrasion marks or scratches. Please make sure to remove any foreign substances that might soil the surface of the panels during storage and installation such as drilling and machine oils, greases and, adhesive residues. These types of foreign substances must be removed immediately without leaving any residue on the panels. Acid or alkaline-based cleaners and/or compounds such as drain cleaners, coffeepot cleaners, ceramic cooktop cleaners, chlorine bleach, some countertop cleaners, limescale removers, some disinfectants, rust removers, metal cleaners, tub and tile cleaners, oven cleaners, bowl cleaners and furniture polishes may mar, etch, stain, and permanently discolor the decorative surface of the panels. Any spillage or splashes of these cleaners must be washed off the laminate surface immediately. ASD EXTERIOR can be washed with a pressure-washer either with warm or cold water as long as the temperature of the water don't exceed 80°C (176°F). In addition, if washed with a pressure-washer, the minimum distance between the nozzle and the panel must be 20cm (7.8740”).

Please note:

Chlorine can be harmful for the decorative surfaces of ASD EXTERIOR and therefore thought should be given to this fact when the panels are to be installed near swimming pools.



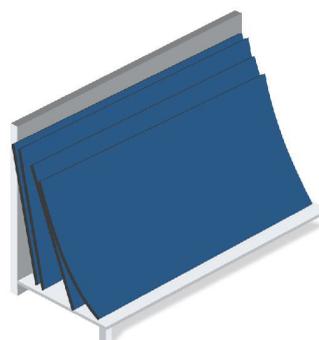
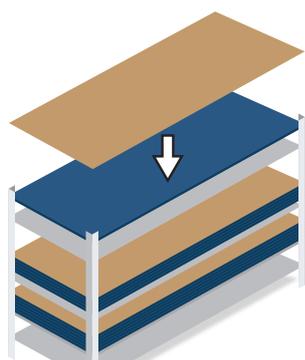
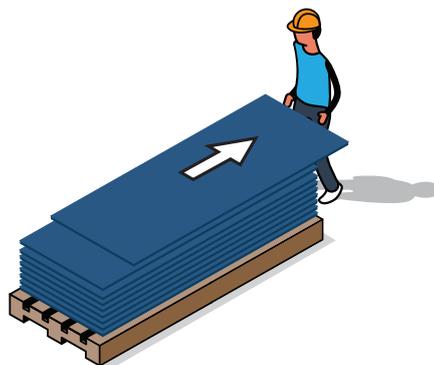
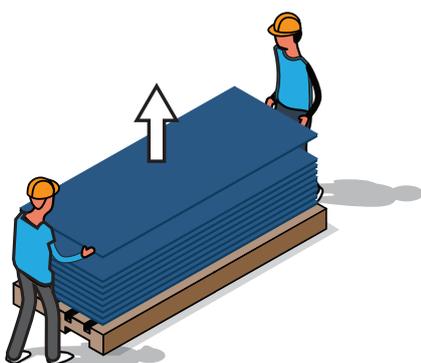
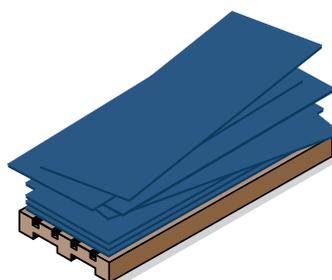
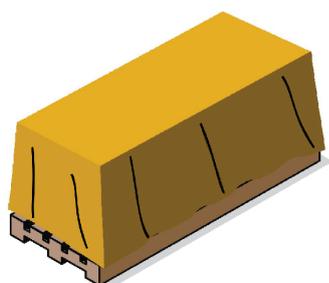
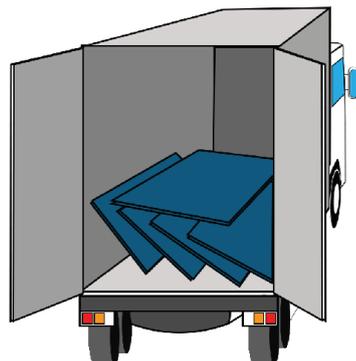
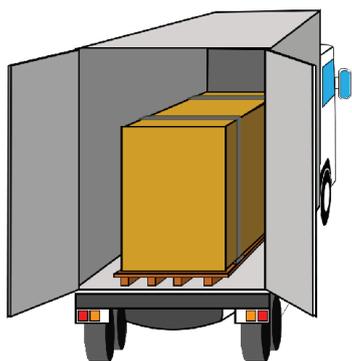
Removing Graffiti

ASD EXTERIOR's chemical resistant nature do not allow spray paints, various inks, emulsion paints, lipstick or pastel paints to penetrate the decorative layer. Therefore ASD EXTERIOR do not require any anti-graffiti treatment. If the surfaces of the panels are coated with graffiti and/or for further information on removing graffiti from the panels, please contact us.



Transportation, Handling and Storage

ASD EXTERIOR panels should be handled with caution in order not to damage their edges and decorative surfaces. Any form of dirt or dust between the panels must be avoided as the stack weight of the panels itself can be a possible cause of damage albeit the excellent surface hardness and the transportation protection films. During transportation, it is substantial to use pallets of appropriate size to support the whole of the panel area. Pallets must be strong and stable enough to support their load without bending. When transporting stacks of panels with mechanical handling vehicles, pallets of proper size and rigidity should be used. Abrasion between the decorative faces should be avoided at any given time. Stacked panels should be secured to the pallet using steel or nylon straps in order to prevent slippage. When loading and unloading thought should be given not to let the panels slide over each other to avoid any damage. The panels should be lifted by hand or using a lifting system with suction cups. Baseboards should be placed between the pallets and the bottom panels. The baseboards of the stacks must be dry and, they should be covered with a material impervious to water to act as a moisture barrier. The top panel of each stack should be covered with a weighted down cover board with sufficient weight to keep the panels flat. This cover board should be in contact with the whole surface area of the top panel. The cover board on top also should be covered with a material impervious to water to act as a moisture barrier. The panels should be stacked on top of each other on a completely flat surface. The same principles apply to cut-panel stacks as well. If stored incorrectly, panels may be permanently deformed. ASD EXTERIOR panels should be stored in enclosed conditions in temperatures about 18-25°C (65-75°F) and 50-60% relative humidity. Temperature and climate differences on the surfaces of the panels should be avoided. In addition, the transportation protection films must be kept away from heat and direct sunshine. When the transportation protection films are to be removed, they must be removed from both sides simultaneously in order to secure the dimensional stability of the panels.



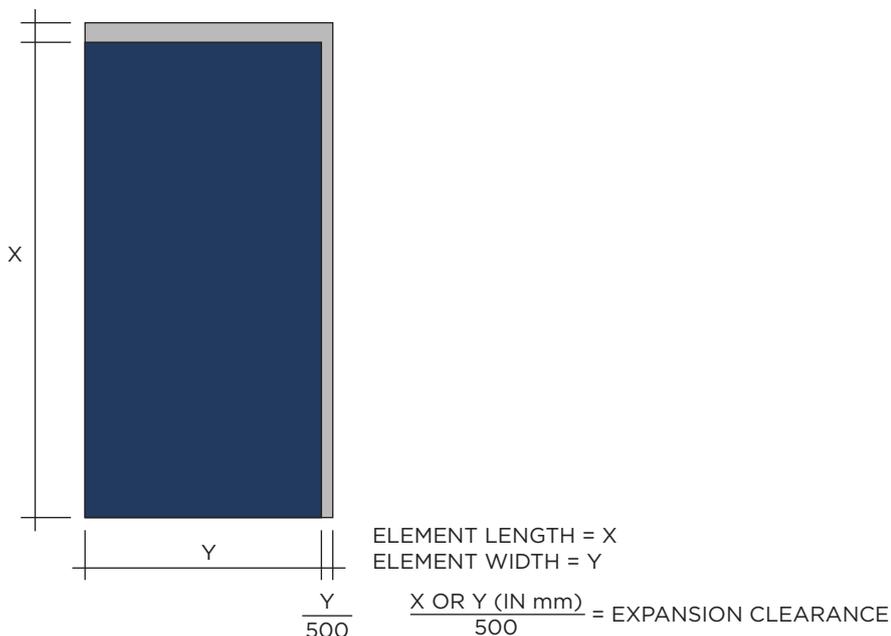
Dimensional Stability

As ASD EXTERIOR panels are robust and nonreactive, and of homogeneous, excellently dense, highly tensile nature, their pull-out strength is absolutely fantastic for fixings and fasteners. Cut edges, drilled holes and engraving the surface of the panels do not require any special treatment afterwards and the panels can be applied as they are.

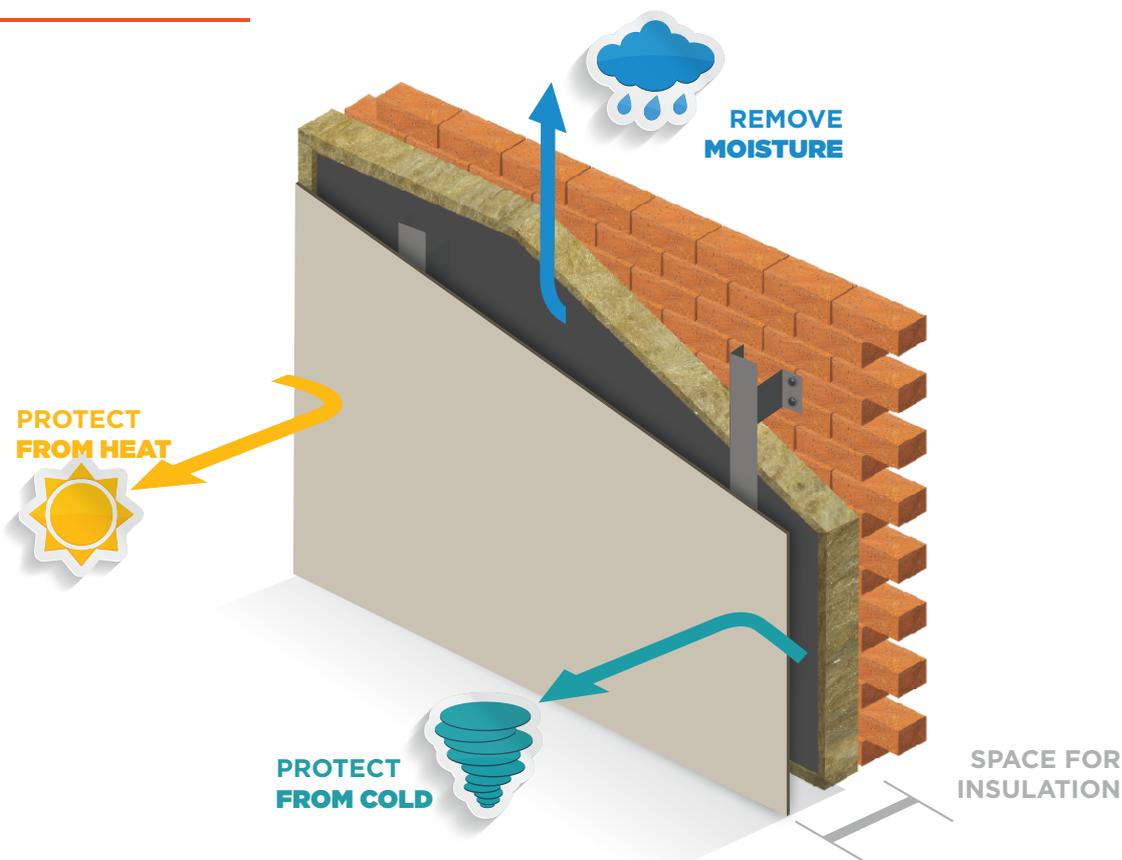
ASD EXTERIOR panels may shrink at low humidity levels as they lose moisture and expand at high humidity levels as they absorb moisture. Hence, allowing the panels to acclimatize at their final destination both before their fabrication and installation is recommended. Before processing and installing, we recommend the panels to be left in a well-supported, ventilated position for a period of 1 day per mm (per 0.0393") of thickness, consequently, allowing the panels to acclimatize for avoiding any deformation.

Please note:

Thought must be given to this potential dimension change, at the design and installation stage.



Non-bearing, rear-ventilated facade system



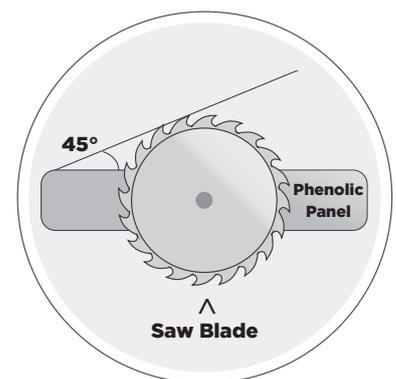
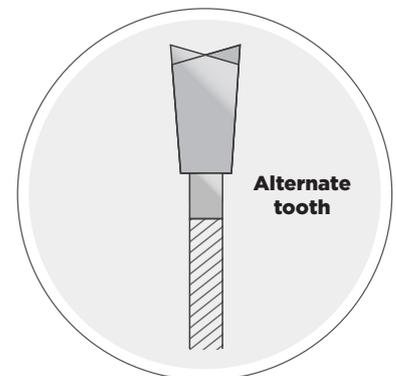
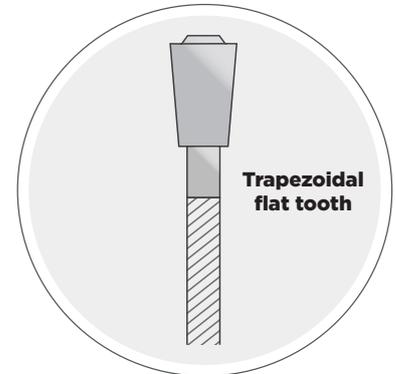
The non-bearing, rear-ventilated facade (VHF) system is a highly energy efficient system. Any required thickness of insulation material can be used and therefore allowing the system to be utilized for different energy needs and requirements. VHF limits heat loss in winter and the transmission of heat in the summertime. By creating energy efficient buildings, the non-bearing, rear-ventilated facade system contributes to the minimalization of the overall carbon dioxide emission which is one of the greatest causes of environmental pollution. The moisture that builds up overtime in between the building and ASD EXTERIOR is removed through the rear-ventilated space, therefore, ensuring of the lasting effectiveness of the insulation and significantly contributing to the enhanced indoor environmental quality (IEQ). In addition, VHF can improve acoustics by 14dB depending on the thickness of the insulation material.

Fabrication

Cutting, Sawing and Machining

Due to the high density of ASD EXTERIOR panels, processing them is similar to the processing of hardwood panels. Tools that are designed to process hard materials should be used to process ASD EXTERIOR panels. Worn out, improper and poorly maintained tools can result in chipping and/or localized heating and therefore in poor cuts. For a sound result we recommend the use of either a tungsten carbide tipping (TCT) or PCD (Polycrystalline Diamond) tooling. It is of great importance to avoid any vibration during processing and to keep the panels completely flat and stable.

The feed speed must be optimized properly for smooth cuts. The larger the saw blades yield, smoother the cuts will be. We recommend the use of circular bench saw with blade diameter of 300-400 mm (11.811"-15.748") and at least 96 teeth. For deburring the edges, a handheld router or a high-grade sand paper can be used. The decorative surface of the panel is where the tool should engage (this rule is applicable to all types of machining tools). The higher the saw blade the better the top cut and the worse the bottom cut will be and vice versa. Breakout on the underside of the panels can be reduced by using a base-board of plywood or hardboard beneath the ASD EXTERIOR panels. We recommend the use of either Trapezoidal flat tooth or Alternate tooth for a smooth cut. In addition, a saw entry angle of 45° is optimal and recommended.



Please note:

When processing ASD EXTERIOR panels with a CNC machine, it is a must to remove the transportation protection films beforehand as the transportation protection films may decrease the suction power of the CNC bed which can affect the stability of the panels.

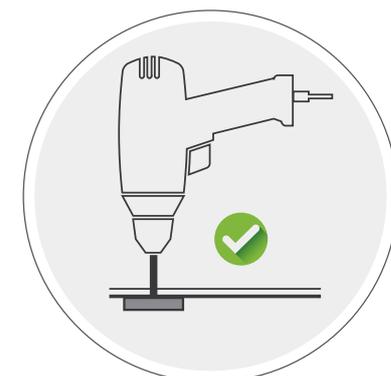
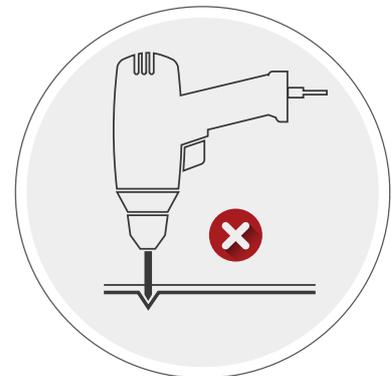
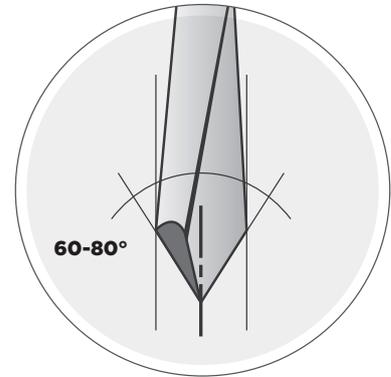
Drilling

For drilling ASD EXTERIOR panels, we recommend the use of drills for plastics. The drills must have a point angle of 60°- 80° instead of the normal 120° that is used for drilling metals .

The feed speed of the drilling head and the pressure being applied must be gently lowered when approaching the point of breakthrough in order to prevent a breakout on the reverse side of the panel. In addition, for preventing breakouts, we recommend the use of a completely flat and stable underlay panel to be used such as plywood or chipboard.

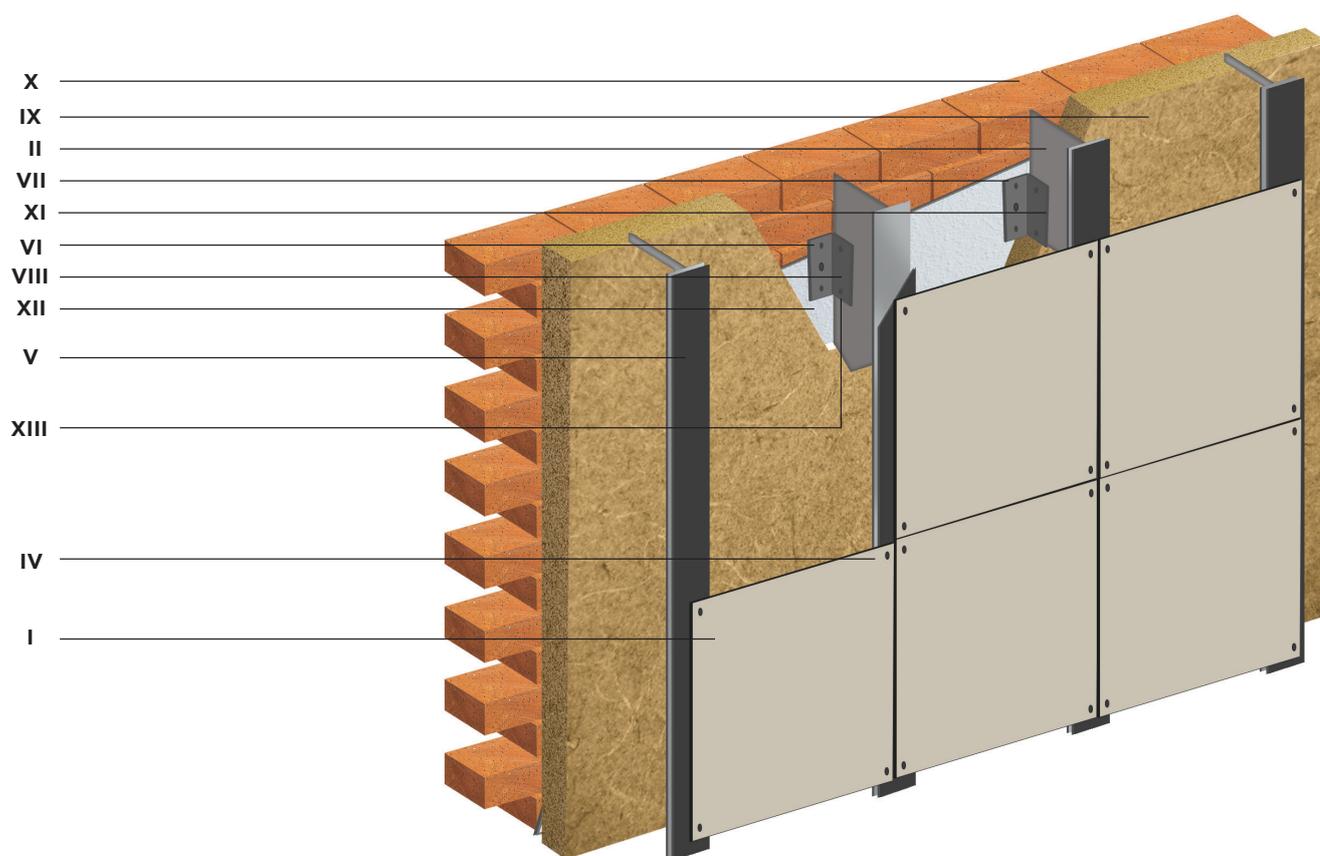
When blind boring, thought must be given to ensure that 1.5 mm (0.0590”) of material remains between the hole and the reverse side of the panel. We do not recommend panels less than 8 mm (0.314”) for concealed fixing. When edge drilling, we recommend at least 3 mm (0.118”) of material to remain on either side of the hole.

Moreover, a high drilling speed is to be used to avoid any chipping. Screws must be positioned no closer than 20 mm (0.787”) to an edge in order to avoid splintering and breakouts. Screws into the edges are to be avoided in general. If a screw is to be positioned near an edge, we recommend that they are placed no closer to an edge than 75 mm (2.952”).



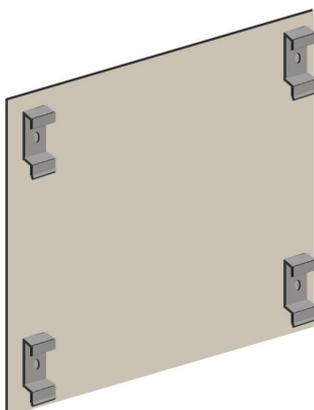
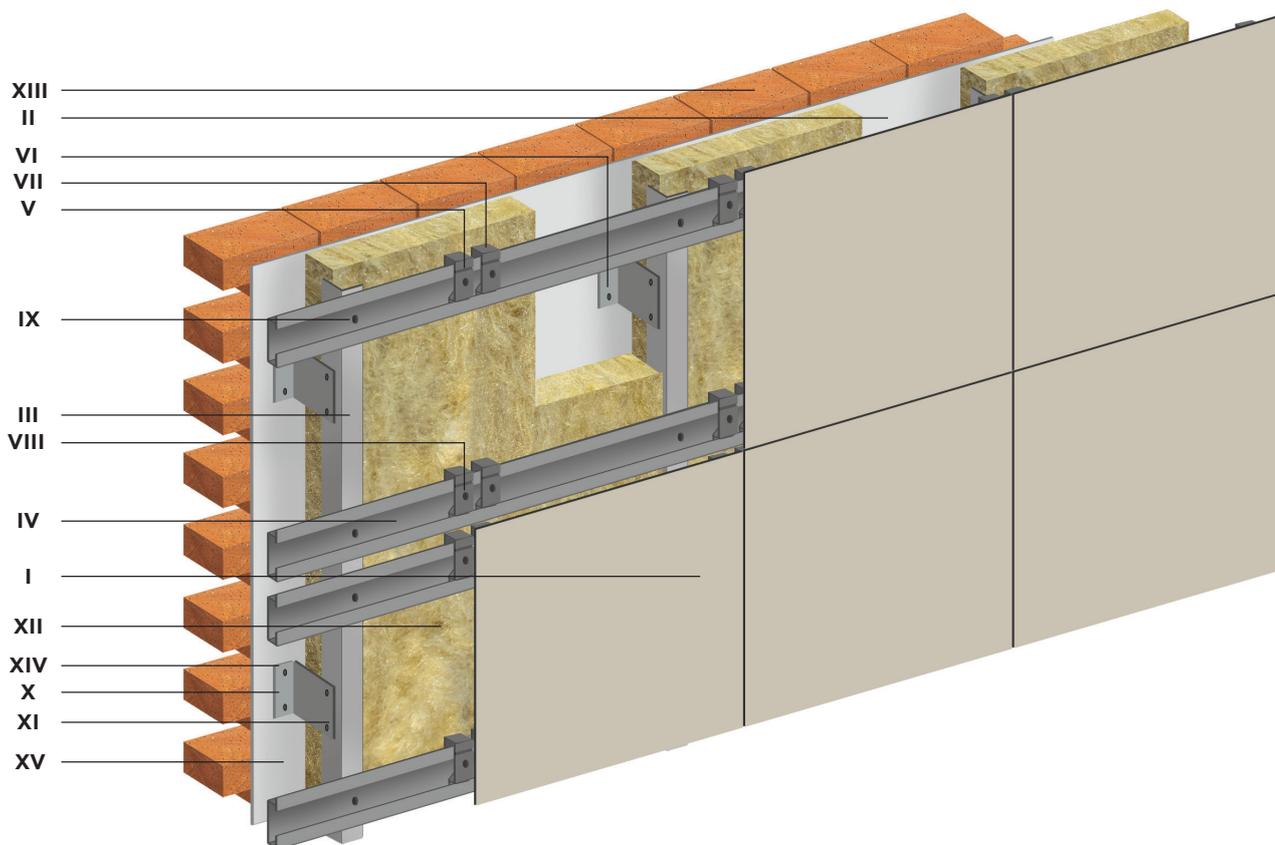
Standard Facade Installations

RAINSCREEN SYSTEM IN DETAIL WITH VISIBLE ATTACHMENTS



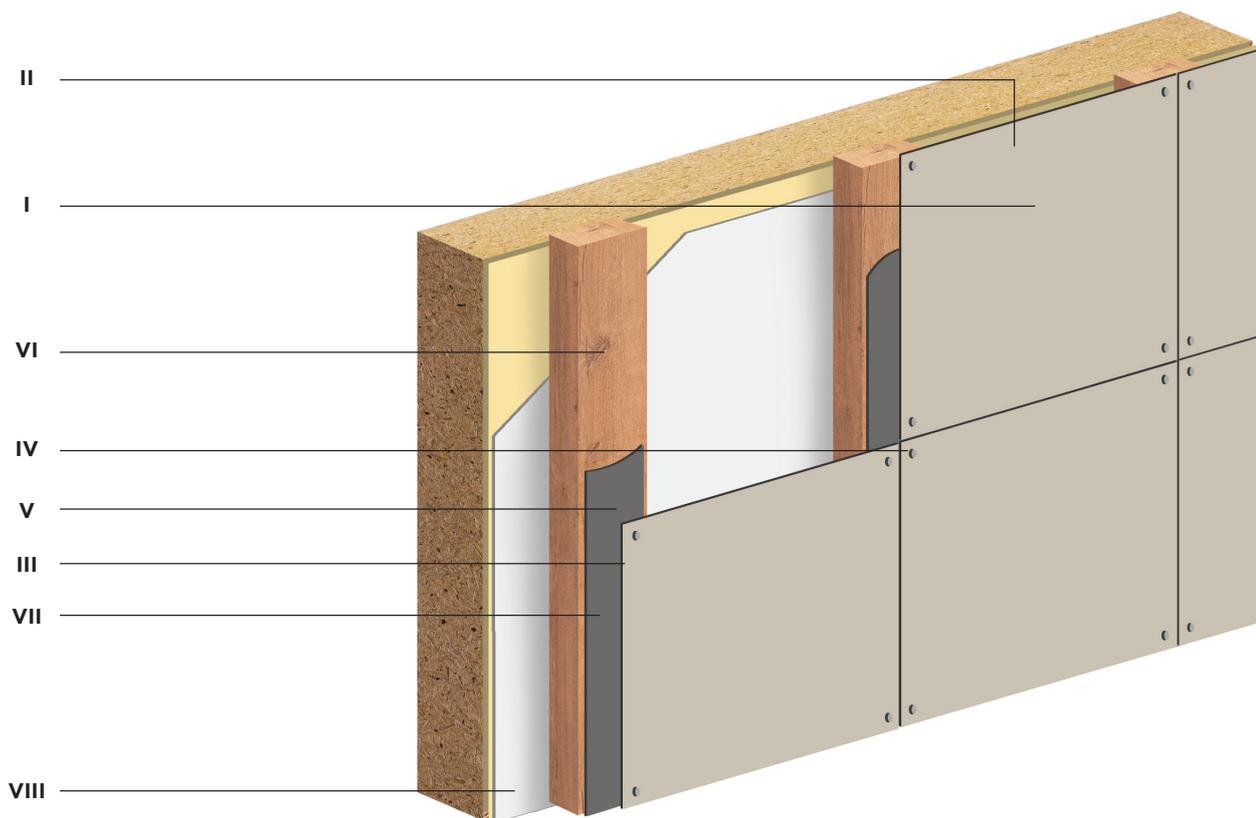
- I** ASD EXTERIOR panel thickness: 6, 8 or 10 mm
- II** Air cavity: 20 mm (min.)
- III** Hole diameter: 1.5 x screw / rivert diameter
- IV** Rivet
- V** EPDM rubber strip
- VI** Vertical fixing bracket
- VII** Stainless steel screw
- VIII** Fixing bracket
- IX** Thermal insulation
- X** Load bearing wall
- XI** Bridge bearing rubber pads
- XII** Weather resistive barrier
- XIII** Anchor bolt / screw

RAINSCREEN SYSTEM IN DETAIL WITH CONCEALED ATTACHMENTS



- I** ASD EXTERIOR panel thickness: 6, 8 or 10 mm
- II** Air cavity: 20 mm (min.)
- III** Primary profile
- IV** Secondary profile
- V** Hook
- VI** Supporting bracket
- VII** Regulation screw
- VIII** Fixing screw
- IX** Self-drilling screw
- X** Anchor bolt
- XI** Fixing rivet
- XII** Thermal insulation
- XIII** Load bearing wall
- XIV** Bridge bearing rubber pads
- XV** Weather resistive barrier

RAINSCREEN SYSTEM IN DETAIL WITH VISIBLE ATTACHMENTS ON WOODEN SUBSTRUCTURE



- I** ASD EXTERIOR panel thickness: 6, 8 or 10 mm
- II** Air cavity: 20 mm (min.)
- III** Hole diameter: 1.5 x screw / rivet diameter
- IV** Stainless screw
- V** EPDM rubber strip
- VI** Vertical timber batten
- VII** Load bearing wall
- VIII** Weather resistive barrier

Please note:

The wind load and national building regulations must be taken into account.

If you have any questions
that are not answered in this brochure,
please contact us.

We are happy to help!

Disclaimer

ASD LAMINAT strongly urges the project owner and/or architect to seek independent, expert advice from a construction professional relating to fabrication, application and installation. Though this brochure is put together with care, please note that this brochure provides overall information solely and ASD LAMINAT will not accept any liability in relation to the use of this document.

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