



UroneelTM
Aluminium Panel Sheet

TECHNICAL



www.uroneelindia.com

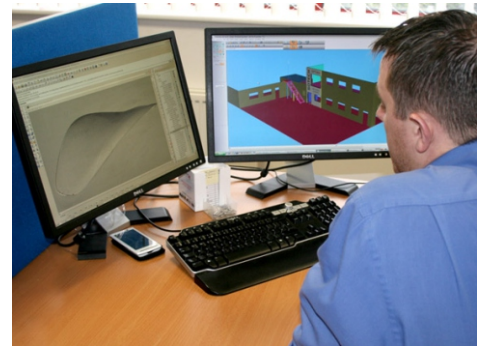
Uroneel Aluminium Panel Sheet

Uroneel Industries Aluminum Panel Sheet is a revolution and it precedes with galore and prudence for quality, durability, aesthetics and elegance.

URONEEL' Aluminum Panel Sheet - The Alumni of the aluminium cult for strength, durability and esthetical elegance.

The product that's invincibly and unprecedentedly a highlight in the product range that's enormously used all across the country. Apparently being solicitously demanded by all the segments and spectra. In other URONEEL Aluminum Panel Sheet has emerged with the trust and objective to erase off the clichés and embellish the appearances of the structures all over with its indigenous and indelible gorgeous looks.

A unique replacement for an aesthetic and gorgeous look for the external layer of edifices unanimously preferred product all across the country. The collection lives up to the expectation of taste for authentic and enigmatic decor finish. The bonded filaments of Uroneel Industries replicates the virtue of mettle and the growth of traditions.



URONEELAPS PVDF coating contains at least 70% of Kynar 500 resin . This resin is well known for its exceptional quality and durability. The coating on panel is applied with a coil coating technique using a continuous stove lacquering process.

The coating quality is controlled throughout the process and its finishes is tested according to the European Coil Coating Association (ECCA) regulations. The ECCA regulations ensure a top quality finishing on the surface of the aluminium skin.

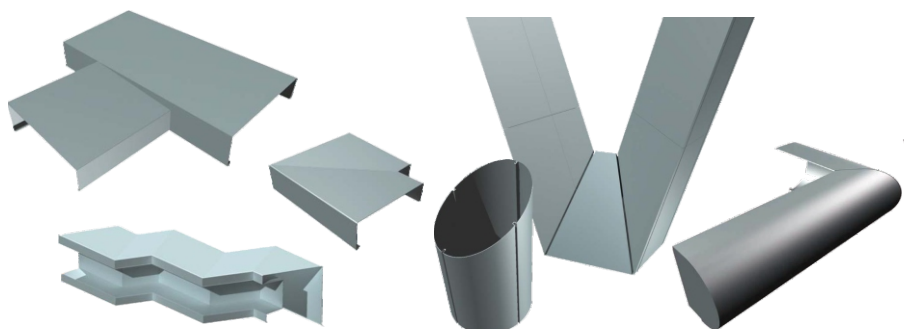
Applications

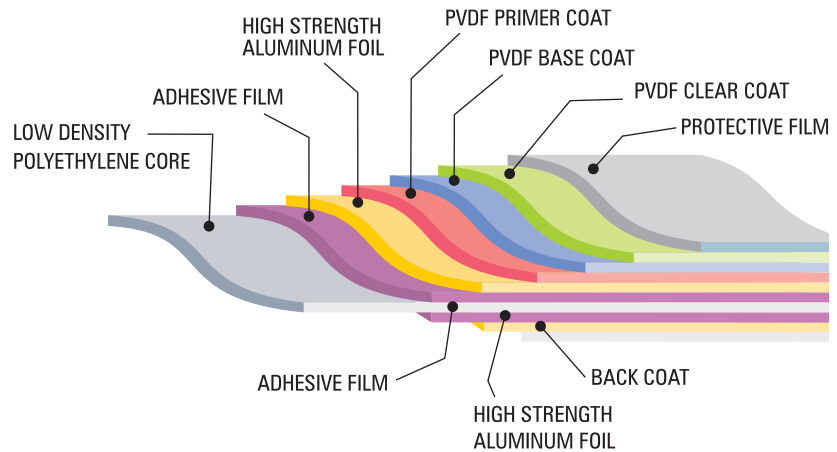
Exterior Cladding for building
Signages and Displays
Interiors
Retrofitting
Canopies
Commercial Vehicles/Ship/Rail Interiors
Furniture
Elevators
Ceiling
Awnings
Columns and many more...

Uroneel APS thus has an excellent surface properties and formability as PVDF coating is well known for their resistance against aggressive factors such as:

- color and gloss degradation
- solar radiation/UV
- pollution
- salt spray
- dirt
- humidity

Its specular colour gloss generally is in a range of 25%-80% measured at 60 degree [Gardner]





Input Inspection

Input Inspection Stage

Surface protection film of 3 layer of 70 -100µm
PVDF coating 30µm (1coat primer + 2coat colour)
Top Aluminum skin of 0.5mm/0.25mm/0.15mm
Dupont Adhesive Film of 3 layer of 70µm /50µm/30µm
Polyethylene core of 3mm / (2.5mm or 3.5mm)
Dupont Adhesive Film of 3 layer of 70µm/50µm/30µm
Bottom Aluminum skin of 0.50mm/0.25mm/0.15mm
PE Washcoat of 5 - 10µm

Final Inspection
Online Inspection

MFG.PROCESS

Periodic Product performance tests
Continuous visual checks
Hourly Peel strength graphical analysis by Universal Testing Machine (UTI)
Online Peel strength checking by Push Pull Gauge
Periodic checking of thickness, length manually

Standard Dimensions

Thickness : 1mm, 2mm, 3mm, 4mm and 6mm. * Special thickness & lengths available on request.
Std Size : 1220mm X 2440mm, 1220mm X 3050mm, 1220mm X 3660mm. Larger width of 1550mm.

Aluminum Skin

All **URONEEL** panel sheets were manufactured with superior alloys of aluminum which suites to the all the stages of its use & processing during its life cycle. The common alloys used in **Uroneel** panel sheets AA 1100 7 AA 3003.

Properties of Aluminum skin

Properties	Standard	Alloys	
Alloy	ASTM B209M	Aa1xxx	AA 3xxx
Temper	ASTM B209M	H18/H16	H18/H16
Tensile Strength	ASTM E8	R _m 140 N/mm ²	R _m 150 N/mm ²
0.2% Proof Stress	ASTM E8	R _{p0.2} 110 N/mm ²	R _{p0.2} 120 N/mm ²
Elongation	ASTM E8	A ₅₀ 6%	A ₅₀ 8%
Modulus of Elasticity	ASTM E8	70,000 N/mm ²	70,000 N/mm ²

Coatings

All **URONEEL** panel sheets of exterior grade are coated with PVDF or FEVE of Kynar 500(70%) or Lumiflon or equivalent branded coatings. These coatings are time proven for their excellent weather resistance, including resistance of UV radiation, pollution, natural acid rain, smoke and dust. The coating is also popular for their highest gloss retention, colour retention, easy wash-ability or maintainability, best chalk resistant and superior life. Whereas interior grade is coated with high durable Polyester (PE) or anodized for their excellent looks and having all the qualities in indoor atmosphere.

Properties of PVDF coatings

Coating Properties	Standard	Uroneel Specification
Lacquering	Chemical	PVDF
Coating thickness	ASTM D 7091	$\geq 3 \mu\text{m}$
Gloss at 60° angle	ASTM D 523	$\geq 30 \%$ or GU
Formability (T - Bend)	ASTM D 4145	No Crack T / No Pick off OT
Reverse Impact energy	ASTM D 2794	$\geq 0.0067 \text{ Nm} / \mu\text{m}$
Cross Hatch	ASTM D 3359	$\geq 3A$
Hardness - Pencil	ASTM D 3363	HB-F
Abrasion Resistance(Falling sand)	ASTM D 968	$\geq 40 \text{ Liters/mil}$
Immersion Test: 10%HCl;	AAMA 2605	No Damage
Immersion Test: 10%H ₂ SO ₄	AAMA 2605	No Damage
Immersion Test: 10%NaOH	AAMA 2605	No Damage
Immersion Test: c. Detergent	AAMA 2605	No Damage

Uroneel Panel Sheets

All **URONEEL** panel sheets were manufactured with superior mix of LDPE and other materials mostly of food grade PE with recycled content of 30% so as to make the panels LEED or GREEN compliant. The mix is unique and superior to attain most uniform surface and high flexural strength to the panel and is added with naturally UV stabilized for longer life of the panels.

ACP 4mm (0.5mm skins and PE core)	Standard	Uroneel Specification
Panel Thickness		4.0 mm
Weight		5.5 Kg/M ²
Polyethylene Core Density	ASTM D 1505	0.92 Gms/cm ³
Bond Integrity(Peeling strength)	ASTM D 1781	$\geq 140 \text{ Nmm/mm}$
Peel strength	ASTM D 1876	$\geq 150 \text{ N/25mm}$
Tensile Strength	ASTM E 8	$\geq 4.5 \text{ Kg/mm}^2$
Yield strength	ASTM E 8	$\geq 4.0 \text{ Kg/mm}^2$
Elongation	ASTM E 8	$\geq 5\%$
Flexural strength	ASTM D 790	$\geq 12 \text{ Kg/mm}^2$
Heat transition coefficient (U-value)	ASTM C 1363	$\leq 5.6 \text{ W/m}^2\text{K}$
Water Absorption	ASTM D570	$\leq 0.02\%$
Deflection Temp(under 1.8Mpa)	ASTM D 648	$\geq 121^\circ\text{C}$
Thermal Expansion	ASTM D 696	$\leq 0.024 \text{ mm/M/}^\circ\text{C}$
Sound Transmission loss(STC)	ASTM E 90	$\geq 26 \text{ db}$



Fully Tested by modern testing equipments

Uroneel Panel Sheet Various Tests

Uroneel™

Panel Sheet resistance Tests



Abrasion Resistance Test



Adhesive Strength Test



Boiling Water Resistance Test



Cupping Test



Solvent Resistance Test



Salt Resistance Test



High Temperature Test



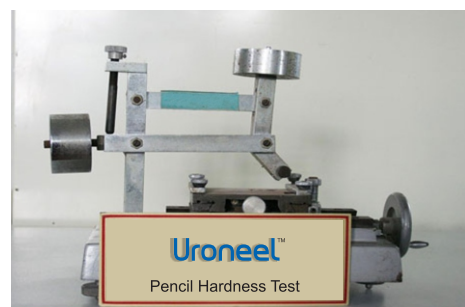
Low Temperature Test



Peeling Strength Test



Impact Resistance Test



Pencil Hardness Test

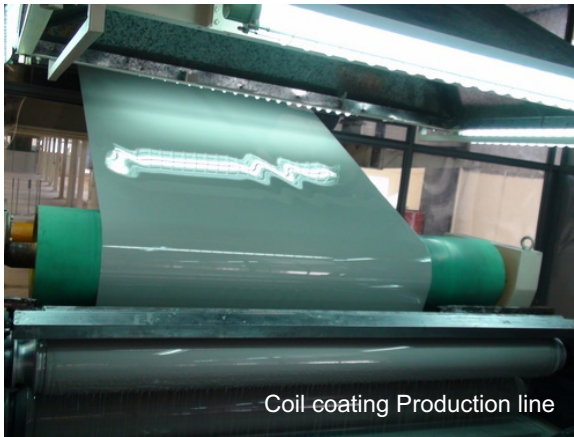
Production line machinery



Composite Panel Sheet Production line



Composite Sheet Production line



Coil-coating Production line



PVC Coating Production line



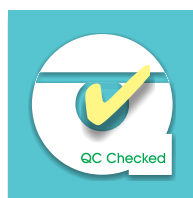
Coil Treatment Production line



Backing Film



Storage line

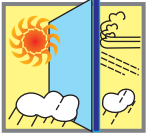


Composite Panel Production line

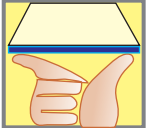


Composite panel sheet or aluminium composite pane is a widely used term describing flat panels that consist of a non-aluminium core bonded between two aluminium sheets.

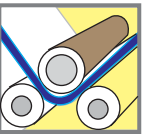
There are some main features as following :-



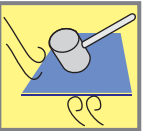
Weather Proofing : Composite panel is not effected by severe weather conditions on building such as in the tropical areas, coastal areas with high humidity.



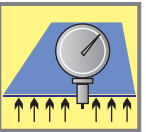
Flat Surface : One of the most admirable physical property of composite panel is flat, smooth, not distorted when using.



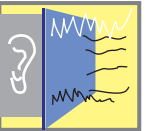
Flexibility : Composite panel is able to be curved, cut or drilled for holes. It is easy to make various shapes with simple tools.



Durance, Shock resistance : Plastic characteristic helps composite panels to shock resistance such as windstorm, earthquake, avoiding various types of impacts.



Reducing dead-load : Weight of composite panel is lighter than other building materials such as glass, aluminium, steel, wood etc of same size or means higher strength to weight ratio. Therefor, composite panels is quite safe from catastrophic cyclones, earthquakes.



Insulating and sound proofing : Composite panel maximize the effect of insulating and sound proofing. Polyethylene does not allow heat and sound to penetrate into inside of building due to its plastic core.



Fire-resistance : Polyethylene is not easy to flame due to its composite structure in between two Aluminium skins.



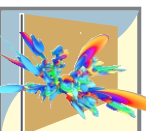
Water penetration, non-erosion: As aluminium is non rusting metal and stable in external conditions and the composite structure provides higher strength to remain stable.



Maintenance : Composite panel is absolutely easy for maintenance with general cleaning methods.

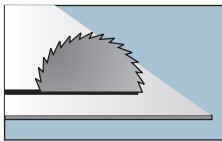
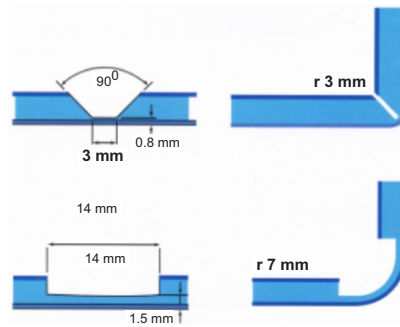
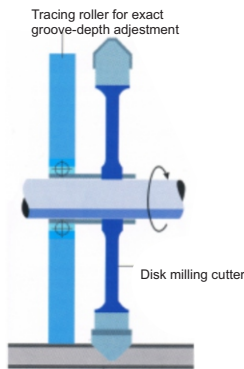


Friendly-environmentally : Composite panel is safe and recyclable. It can replace for wooden ply in many applications.



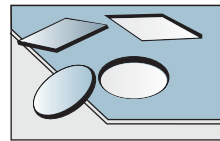
Decorative and colorful : As the skin color comes with factory finish colors with many distinctive and customized colors of modern finishes so easy to have own choice of brand image.

Routing & Folding Techniques



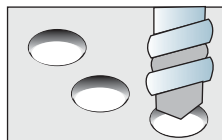
Cutting Method

URONEEL APS can be cut with a circular, band or jig saw.



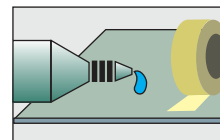
Punching Method

URONEEL APS panels can be punched with a conventional punching machine. For clean cuts, use evenly ground tools and the narrowest possible cutting gap.



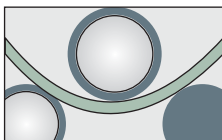
Drilling Method

URONEEL APS can be drilled with twist drills commonly used for drilling aluminium and plastics..



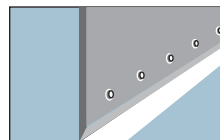
Glueing Method

Use the conventional metal adhesive for glueing of panels. Note that there is no adhesion on the plastic core. For indoor use of panels, use double-sided tapes.



Roll Bending Method

URONEEL APS can be bent with a roll bending machine. Do use ground rolls which are in perfect conditions..



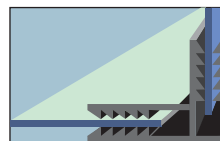
Riveting Method

Riveting is possible with the use of the conventional equipment and rivets. For outdoor use of panels, do take into consideration of panel expansion.



Contour Cutting Method

URONEEL APS can be cut to size with water jet, profile milling machine, contour saws and jig saws.



Welding Method

URONEEL APS can be joined by hot-air welding method. The plastic core and plastic welding rod are heated and then welded with electric hot-air welding sets. Soft, black 1800-h-type polyethylene welding rods are



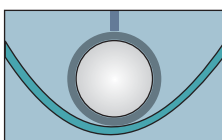
Shearing Method

Use a guillotine for shearing. Make sure the blanking tools are padded as shearing can cause indentation on the panel cover sheet



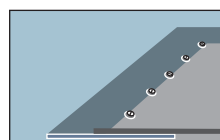
Clamping Method

Use serrated corner-joint and butt joint sections for all URONEEL APS panels of 3mm, 4mm and 6mm thickness.



Bending Method

URONEEL APS can be bent using a folding table or a brake press. Inside bending radius is approximately ten times the thickness of the panel.

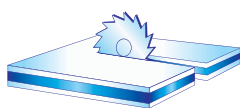


Screwing Method

Panels can be screwed together with conventional stainless steel & sheet metal screws. For panels to be used outdoor, do take into consideration of panel expansion.

Processing Method

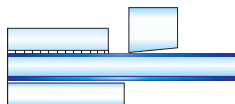
Ordinary Aluminium processing and wood working machines as well as tools can be used for fabrication the Panels.



Saw Cutting : Usually vertical panel saws, of good quality are being used. Even portable circular saws equipped with a system of guides can be used, so as to ensure straight line cutting.



Bending with Brake Press : While bending URONEEL Panels with press brake, use of top die having the desired radius.



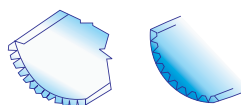
Shearing : Shear cutting can be used for sizing a large quantity of URONEEL Panels. Some shear drop may be observed at the cut edge.



Bending with 3 -Roller Bender: URONEEL Panels are bent in 3-Roller bending machine for larger bending radius.



Circular routing blades & router bits : The Main Features of URONEEL panels are can be routed through local panel routing machine to internationally designed vertical panel saw including hand panel routers with various kind of routing blades.



Bend tray panels: URONEEL Panels can be bend after routing to any shape desired with proper cuttings to the collars.



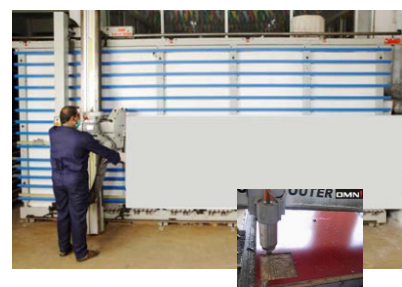
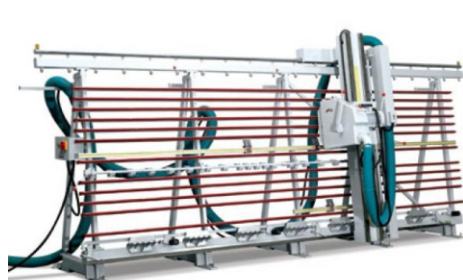
Bending : Grooved URONEEL panels can be bent with jig. press brake or plate punch.



Welding : URONEEL panels edges can be joined by welding the core with the help of HOT JET GUN.

URONEEL panels can be shaped using a very simple fabrication method. The technique, called the routing and folding method, enables a fabricator to produce shapes of various kinds and sizes. A V - shaped or rectangular groove is routed on the reverse side of the URONEEL panels using a disk or end milling cutter. Then folded carefully to desired shape of different sizes with clean folding lines.

URONEEL Panels are recommended to rout to below details of correct routing depth for different bending applications. The routing tools recommended are Vertical panel saws or CNC routing stations. If fabrication is done on site then hand routing machines can be considered with a carbide tip cutting tools. In any routing method a thin layer of the core material should be left at the base of the groove, i.e. on the inside of the outer cover sheet. The untouched outer cover sheet can now be bent manually, giving an exact and clean folding line which follows the routed groove. It is recommended to use 'BOSCH' company routing and cutting machine for fabrication.



Apart from the routed tray panel system, other techniques can also be used various tapes and sealant adhesives, which should be followed strictly in accordance with the respective tape or sealant manufacture's recommended fabrication method.

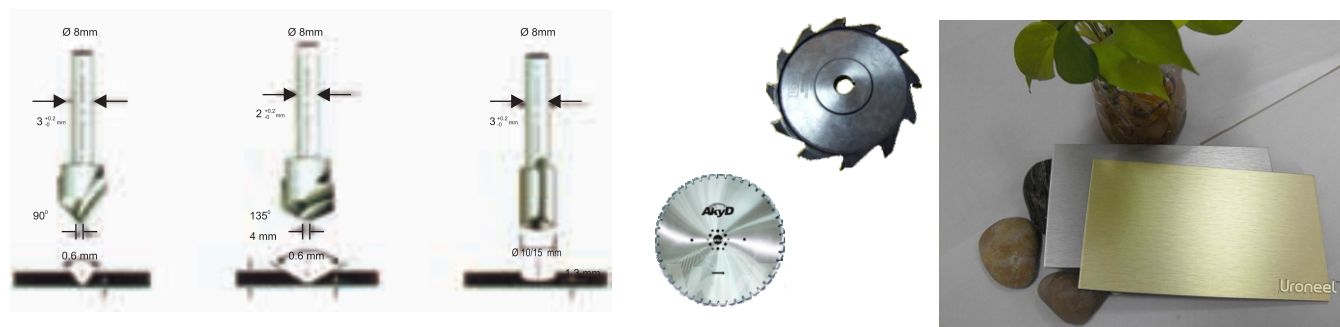
Note :

The cutting / routing tools should not generate heat (happens in non carbide tip tools /multiple attempt of routing) while routing / cutting. Care should be taken to replace cutting or routing tool to prevent damages to the panel.

Installation

URONEEL APS ROUTING DEPTH

Details of various types of circular blades and router are shown in following figures



General Precautions:

A. Linear Thermal Expansion/Contraction(LTE or LTC)

Linear thermal expansion coefficient of URONEEL panels is the same as aluminum metal. Therefore, movement will not occur between aluminum and URONEEL panels. However, a certain extent of movement is anticipated between URONEEL panels and structural materials such as steel and concrete.

This movement is normally very small (0.5mm/m or 0.02"/3') in case of indoor applications, but it must be relieved with a suitable method such as spacing between panels. In outdoor applications, the temperature change will be nearly twice of the above.

B. Prevention from Edge corrosion

URONEEL panels have a corrosion resistant primer behind aluminum skins to prevent the edge from corrosion, and this panel is a non-permeable material. But we still recommend a careful panel detail in which cut edge is not exposed to corrosive or outdoor atmosphere for long time. When URONEEL panels are used in a humid area such as in bathroom, it is important to drain the moisture to keep the edges dry or insulated with sealant.

C. Installation direction for coatings

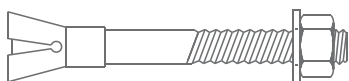
In Metallic Colors, slight color difference will be noticeable between the panels installed in different directions (like Panel A and B). Install panels in the same direction as marked on the protective tape and behind the panel. The same note holds true in Marvel and Wood panels. In Solid Colors, the color difference due to coating direction is negligible.

D. Reinforcement

Reinforcement behind panels are decided on basis of size of panel, installation height, local wind pressure, width of panel etc.

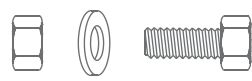
Fixing Accessories :

1



M8x65mm LONG ANCHOR BOLT

2



M8x25mm LONG NUT & BOLT

3



25mm LONG SCREW

4



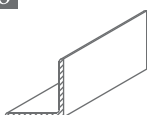
SEALANT WITH BACKING ROD

5



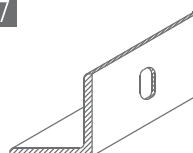
ALUMINIUM POP RIVET

6



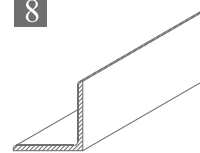
20x20x2mm THK. ALUMINIUM ANGLE

7



40x40x4mm THK. x 100mm LONG ALUMINIUM BRACKET

8

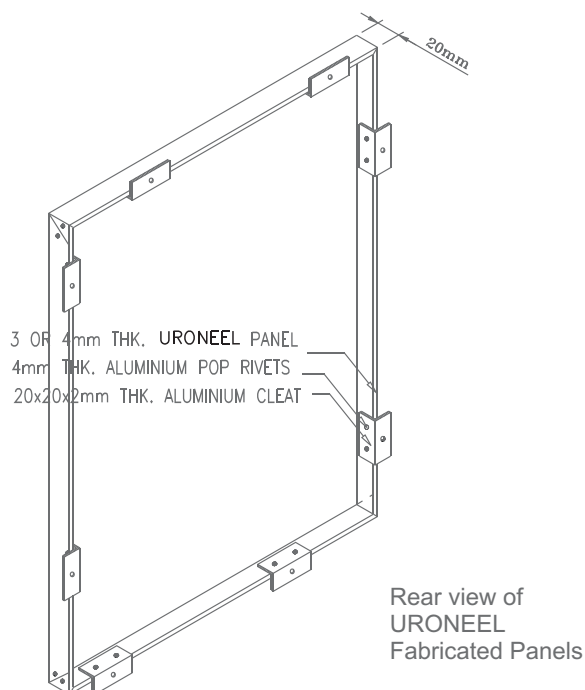
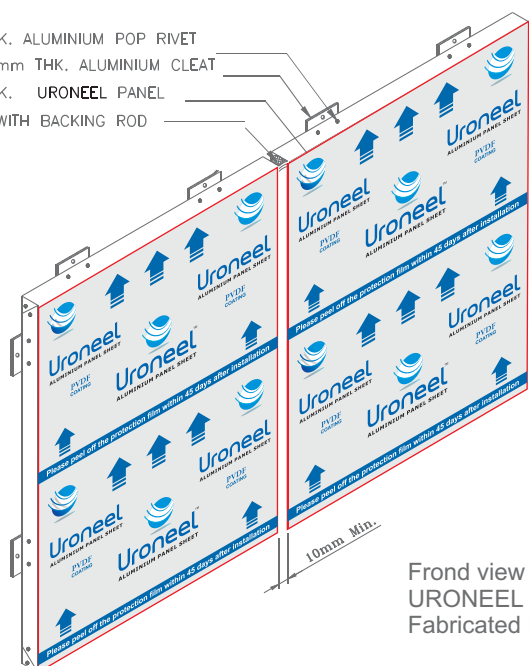


40x40x4mm THK. ALUMINIUM CONTINUOUS ANGLE

Installation Details

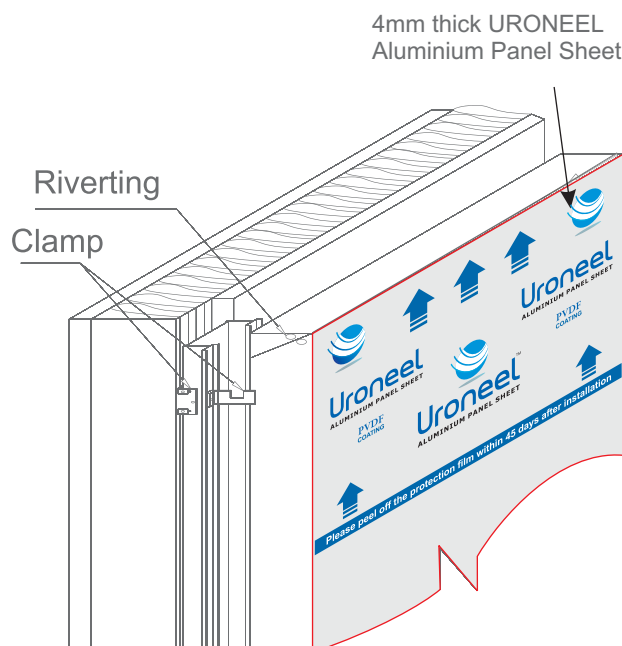
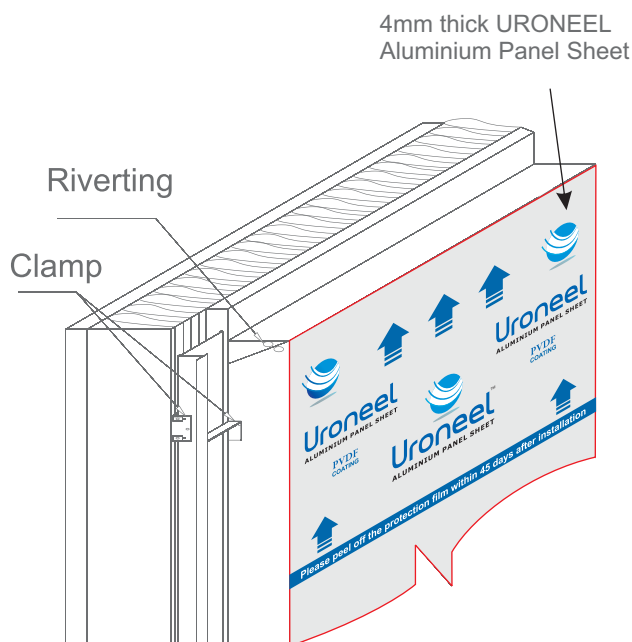
Method 1:

- 4mm THK. ALUMINIUM POP RIVET
- 20x20x2mm THK. ALUMINIUM CLEAT
- 4mm THK. URONEEL PANEL
- SILICON WITH BACKING ROD



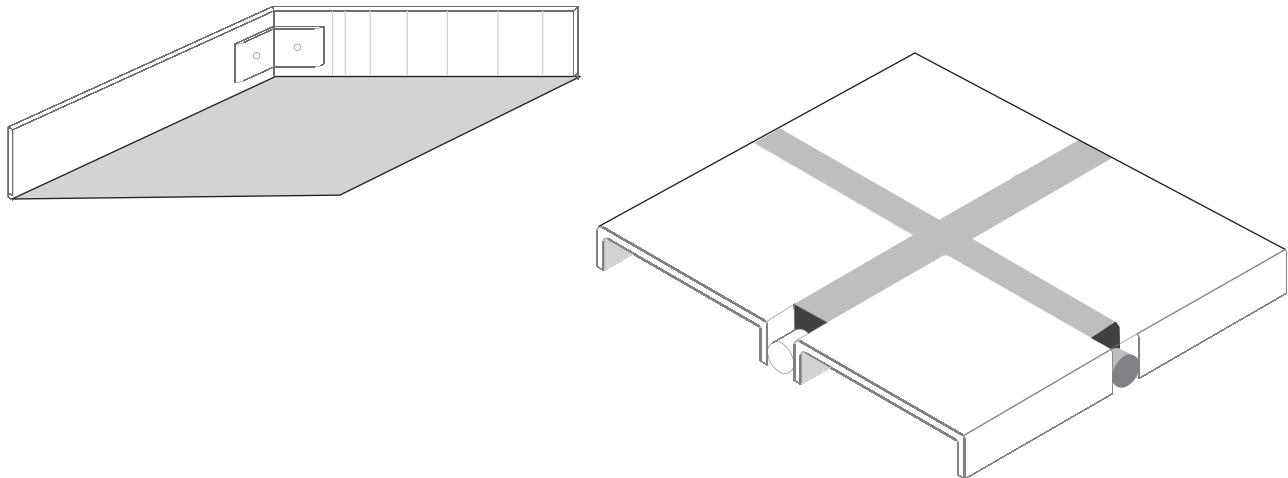
Method 2 & Method 3:

Cassette fixing for Uroneel Aluminium Panel Sheets, Improved wind and damp proof properties. Convenient mobile fasteners



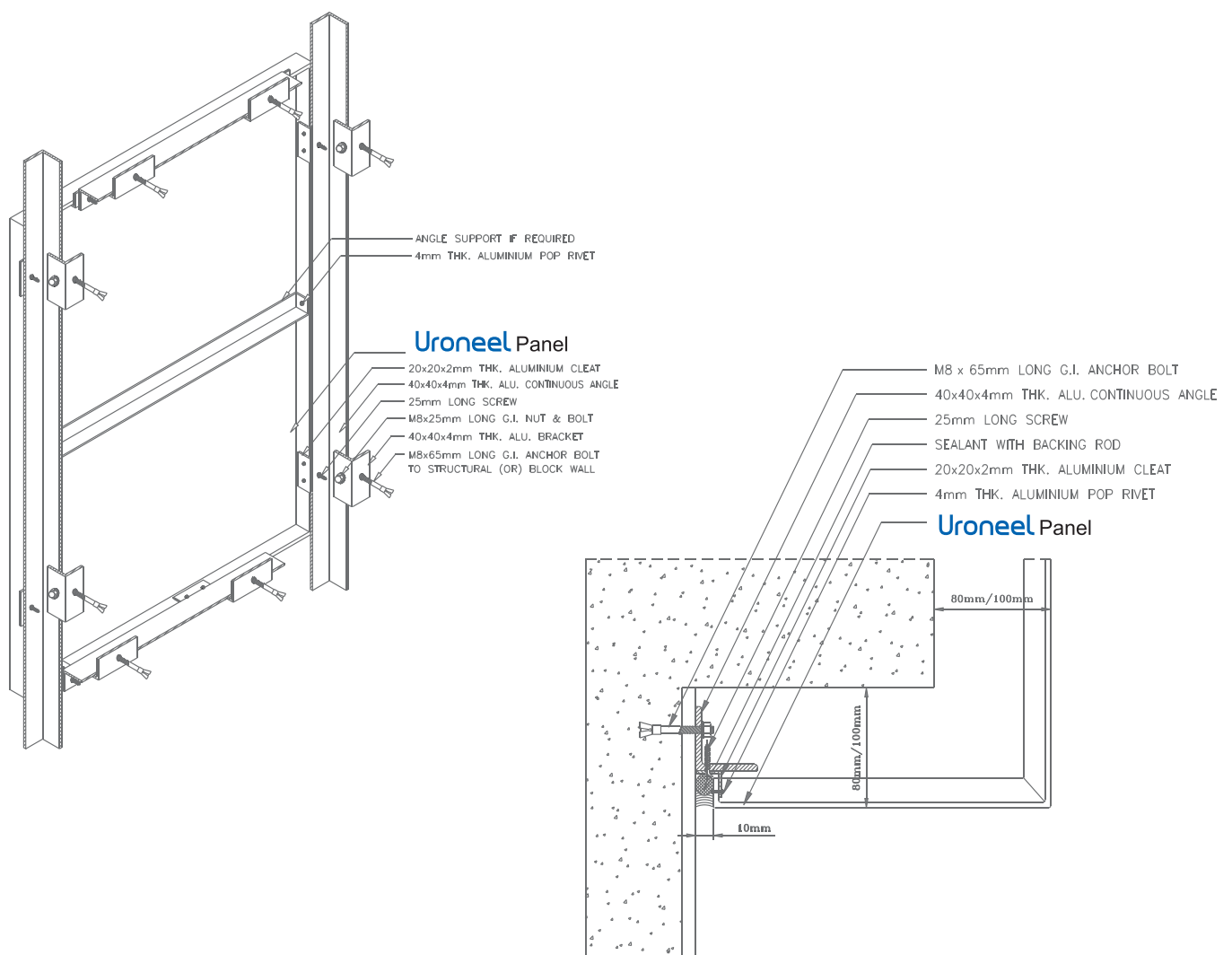
Routing & return folding of URONEEL APS is to be done by V-groove cutting with panel saw or hand panel saw with a standard depth of routing by keeping margin from edge of the panel to the center of the dept of the groove, within 15-25 mm uniformly around the edges and folded inside so that the outer skin exposes outside and made a tray is called a tray panel.

Rout and Returns (R&R) Formed Panel



Rout and Return Joint Intersection

Rout and Return are then caulked and sealed to prevent moisture penetration.



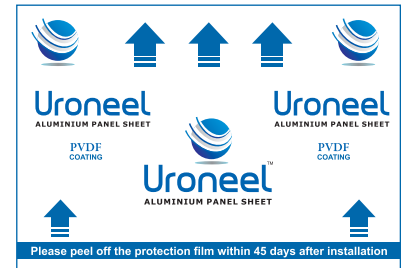
Installation Pre-requisites

Install the panel vertically, with an approved set of shop drawings. Wherever aluminium comes in contact with dissimilar metals, it should

be properly insulated else use of caulking tape is advised to avoid electrolytic corrosion.

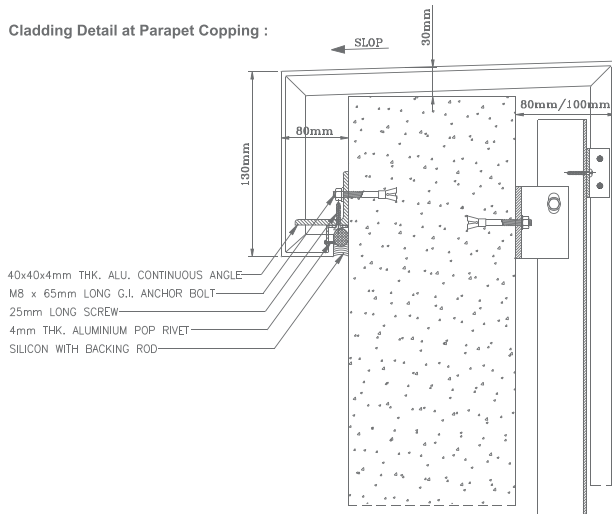
Panel joints shall not be caulked before protective film is removed.

Ensure weep holes and drainage channels are unobstructed and free of debris, dirt and sealant.

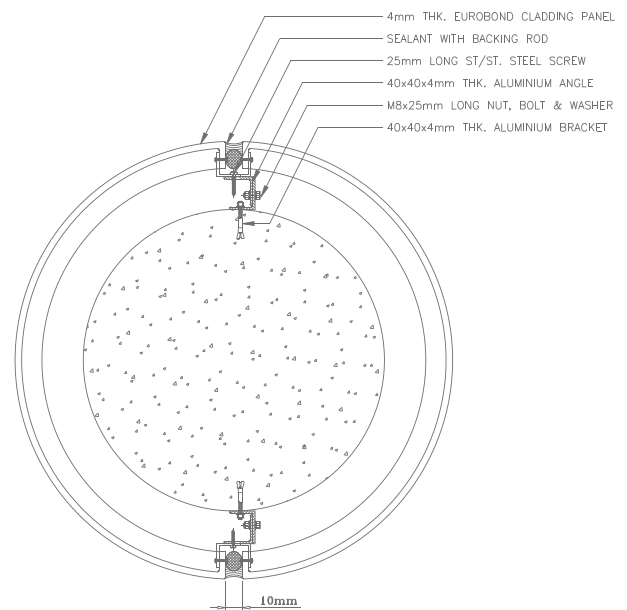


Cladding To Structural Wall Interface (Soffit) :

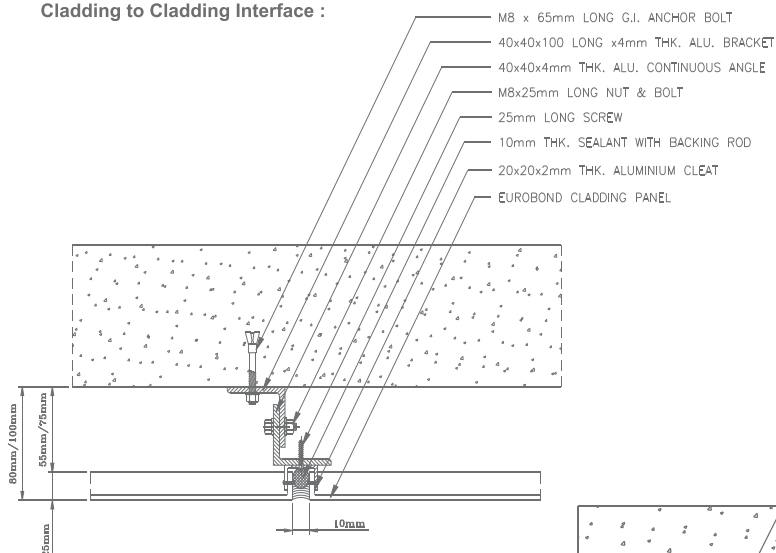
Cladding Detail at Parapet Copping :



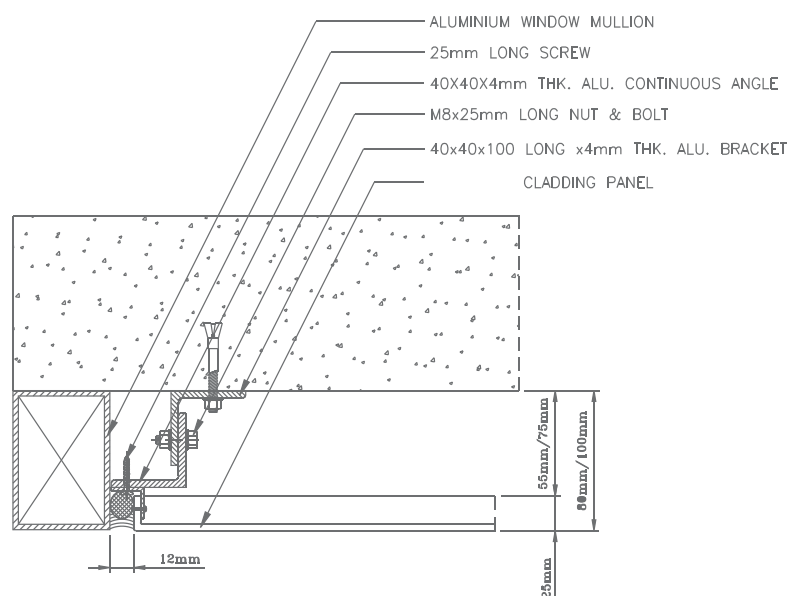
Cladding Detail of Circular Coloum :

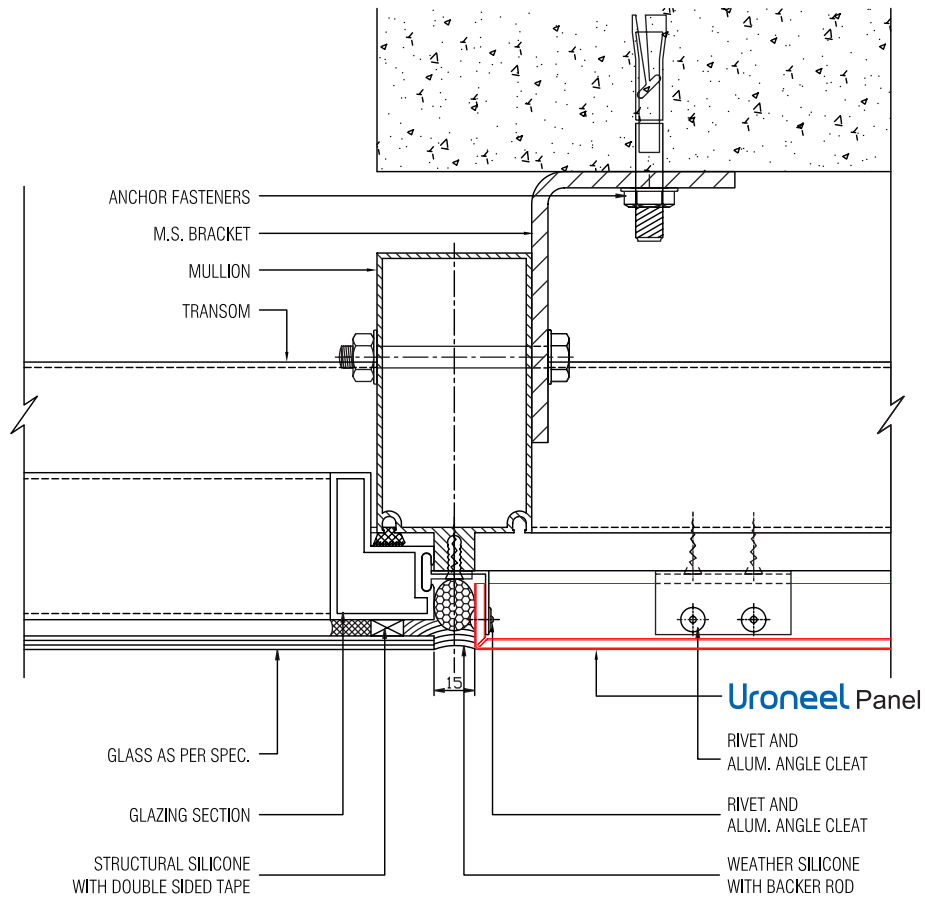


Cladding to Cladding Interface :

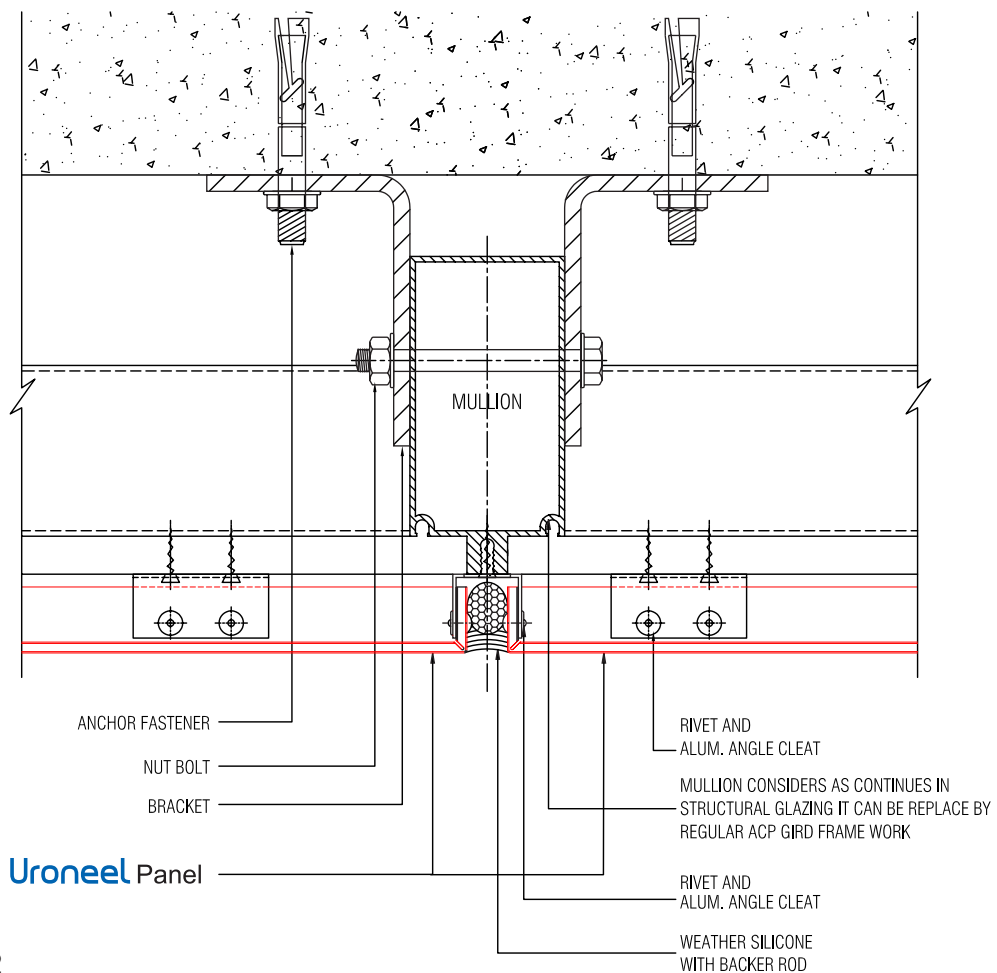


Cladding to Curtain Wall Interface :

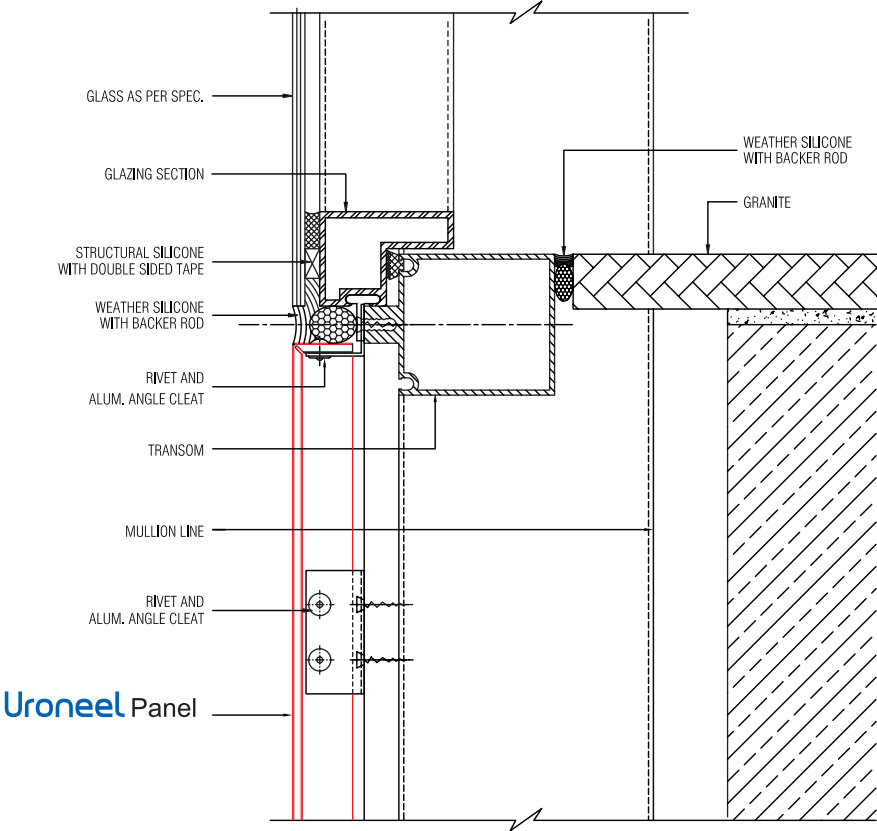




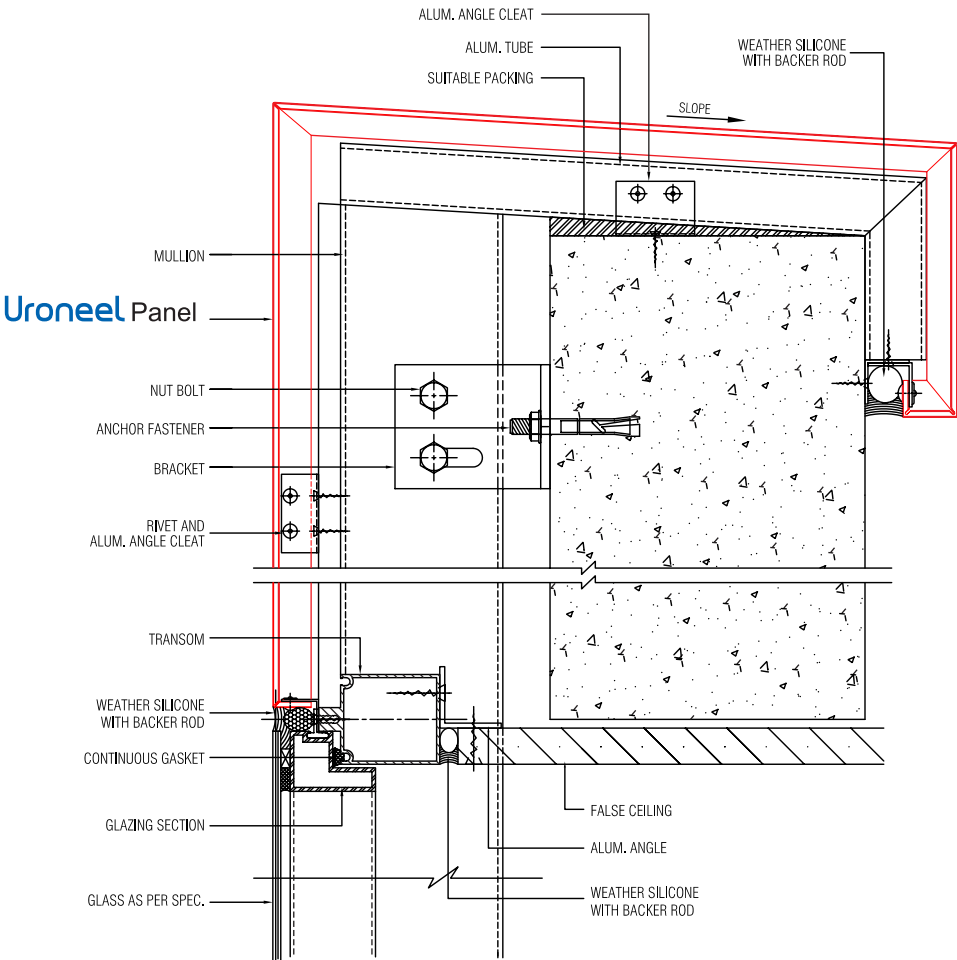
Detail 1



Detail 2



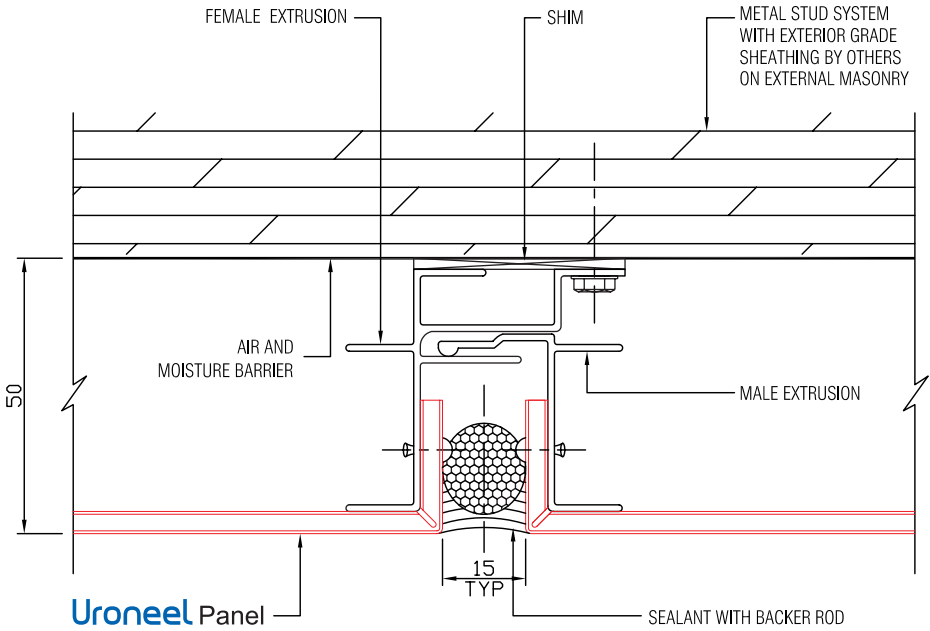
Detail 3



Detail 4

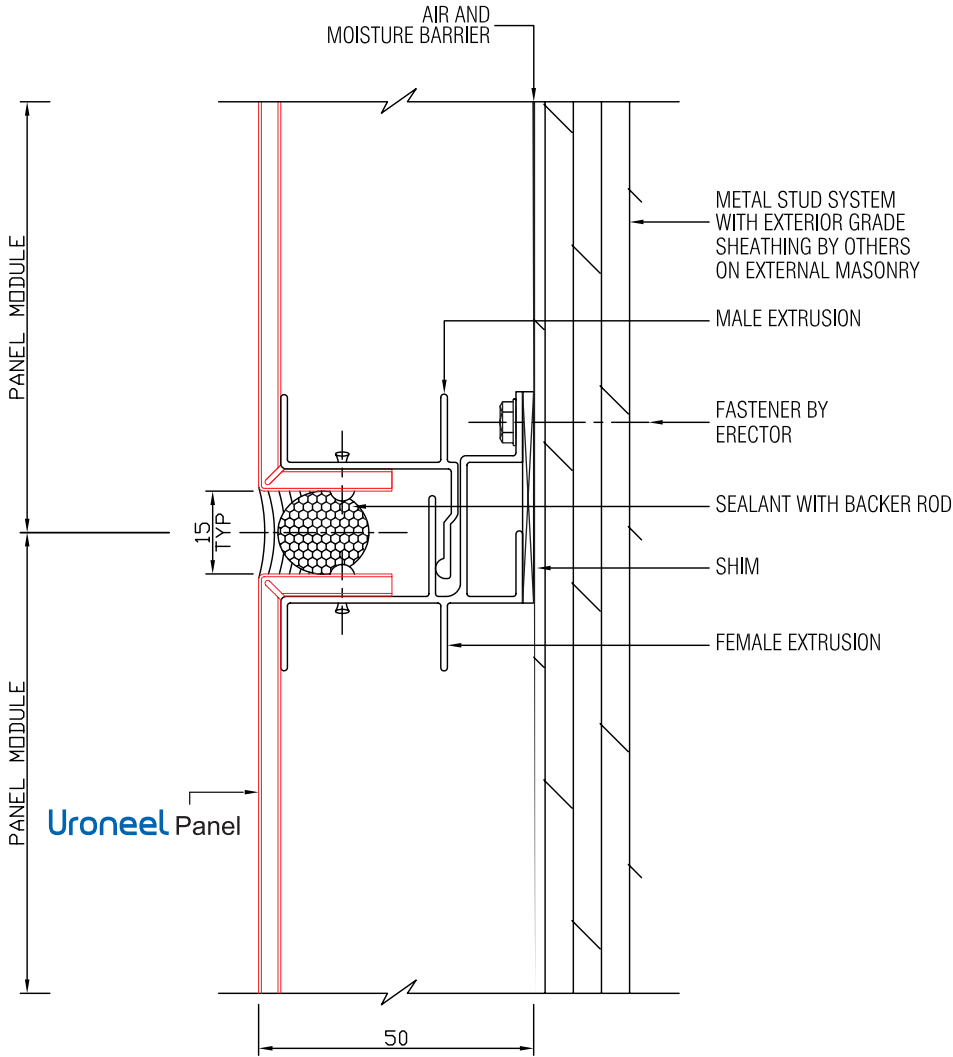
Fabrication

Horizontal Joint Detail



Detail 5

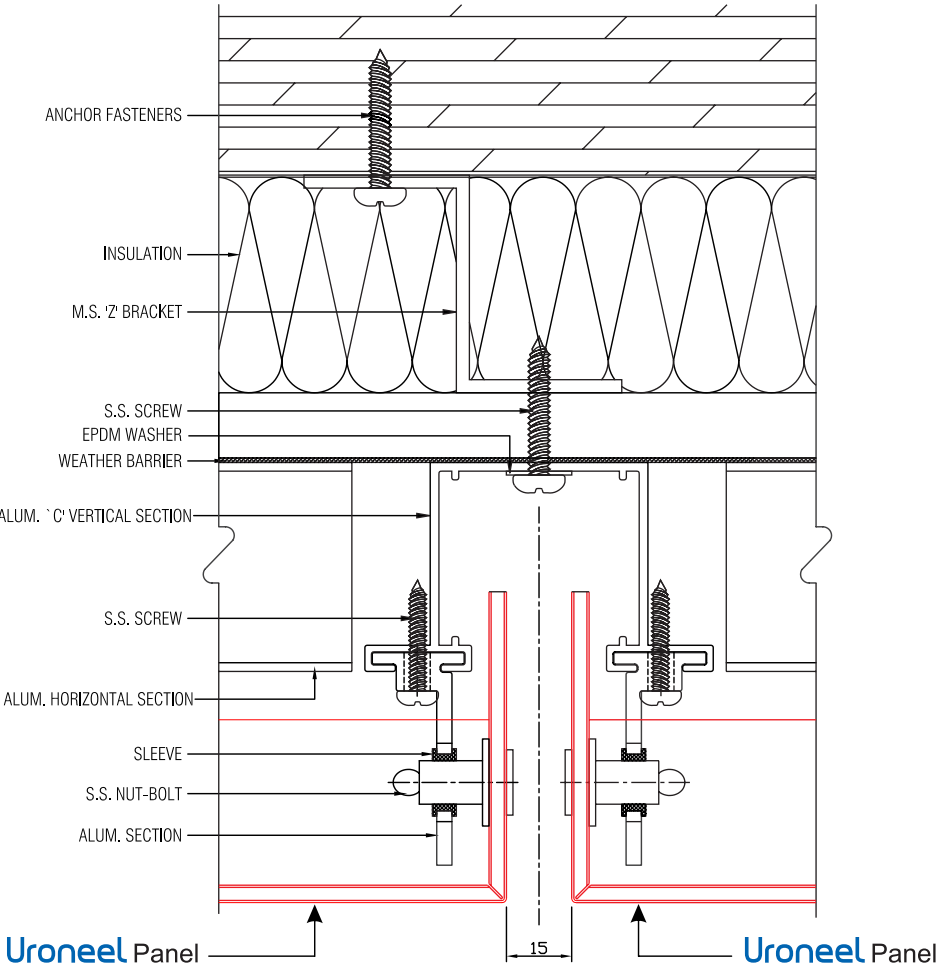
Vertical Joint Detail



Detail 6

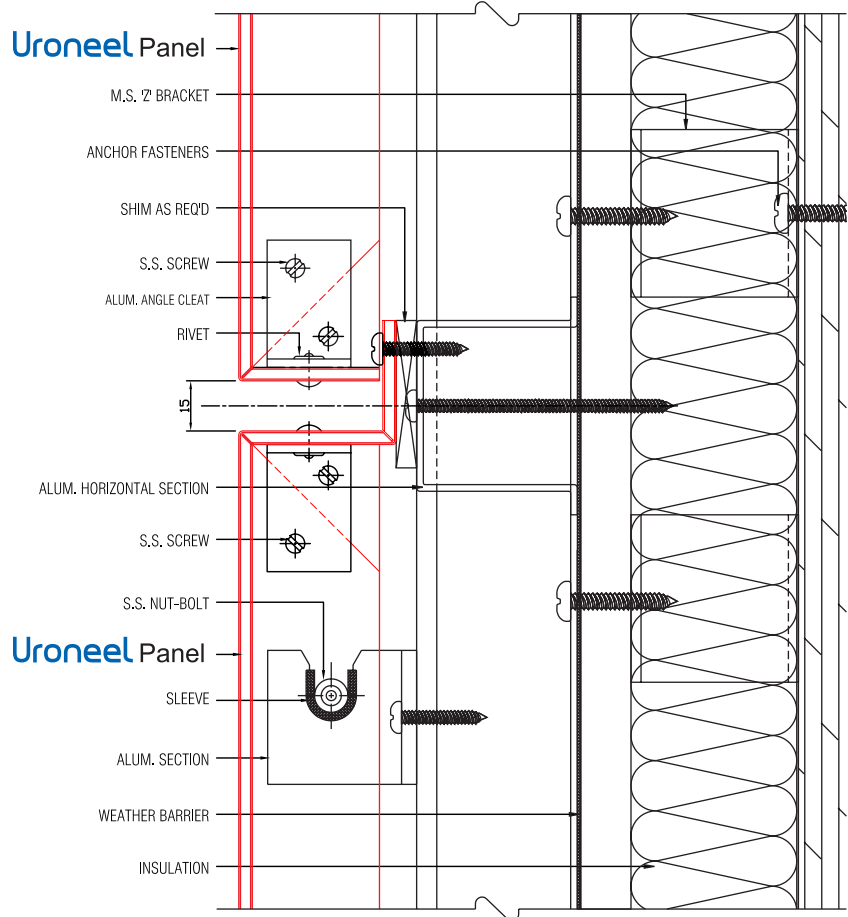
Horizontal Joint Detail

Detail 7



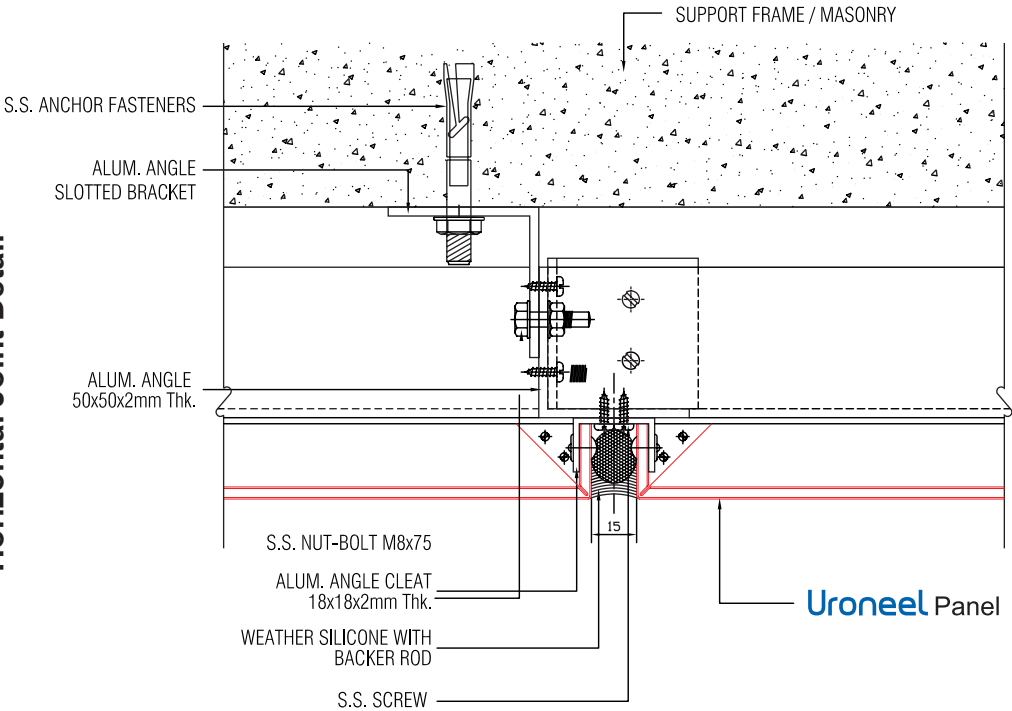
Vertical Joint Detail

Detail 8



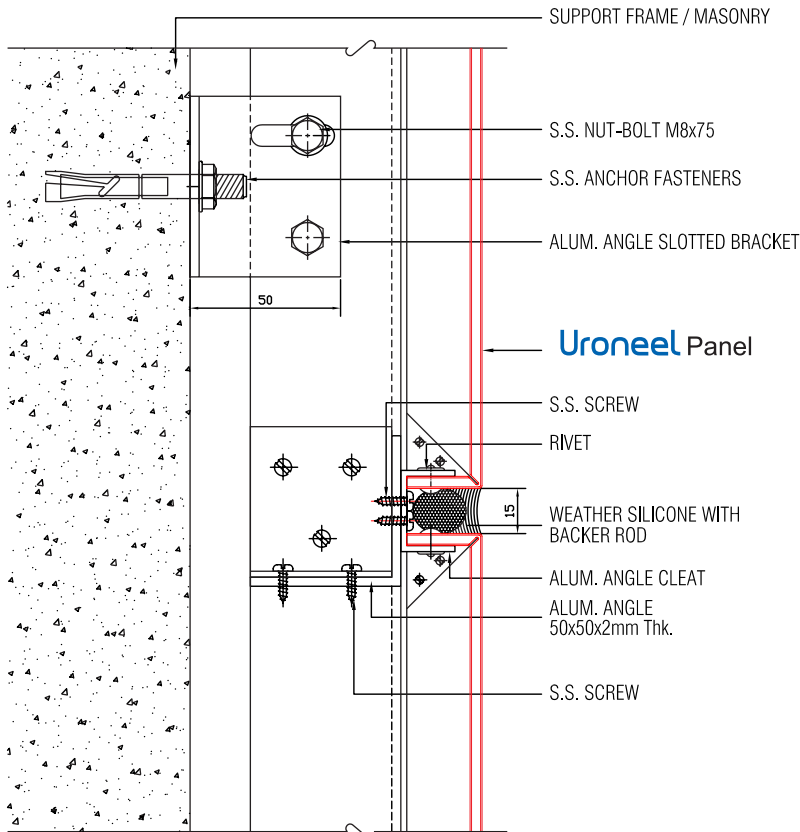
Horizontal Joint Detail

Detail 9



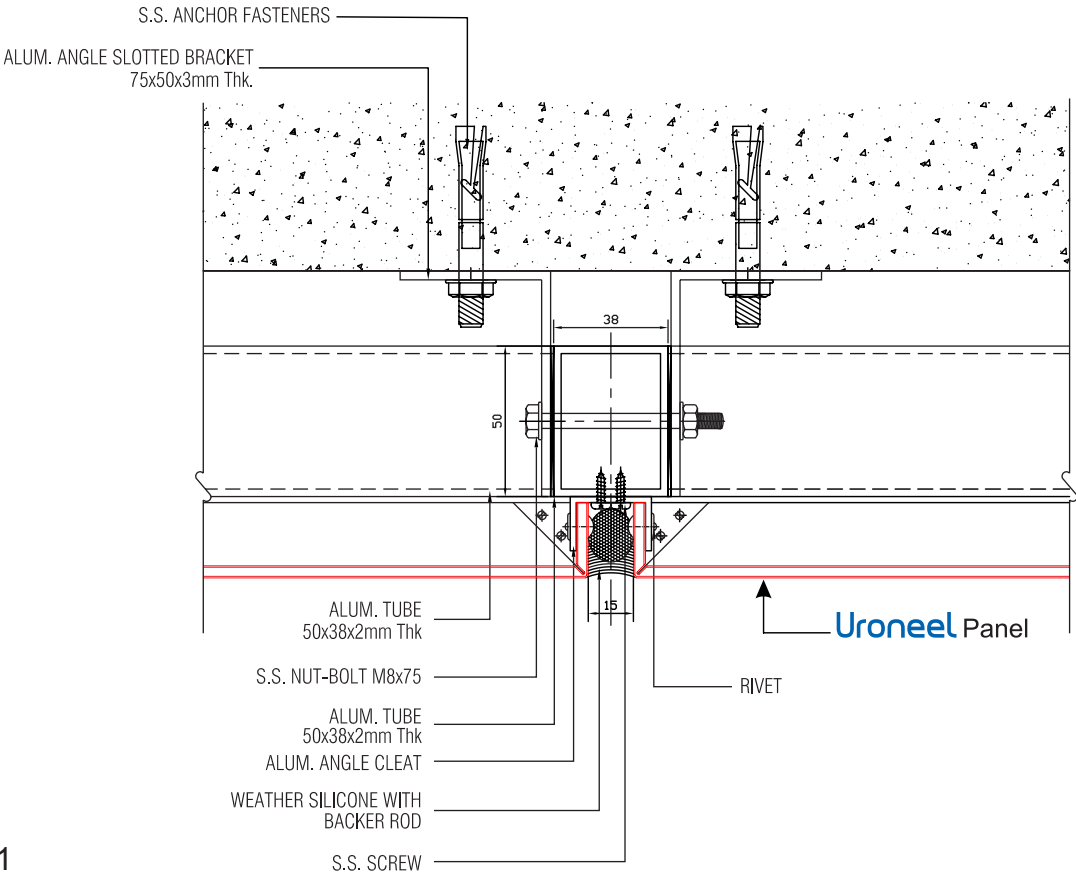
Vertical Joint Detail

Detail 10



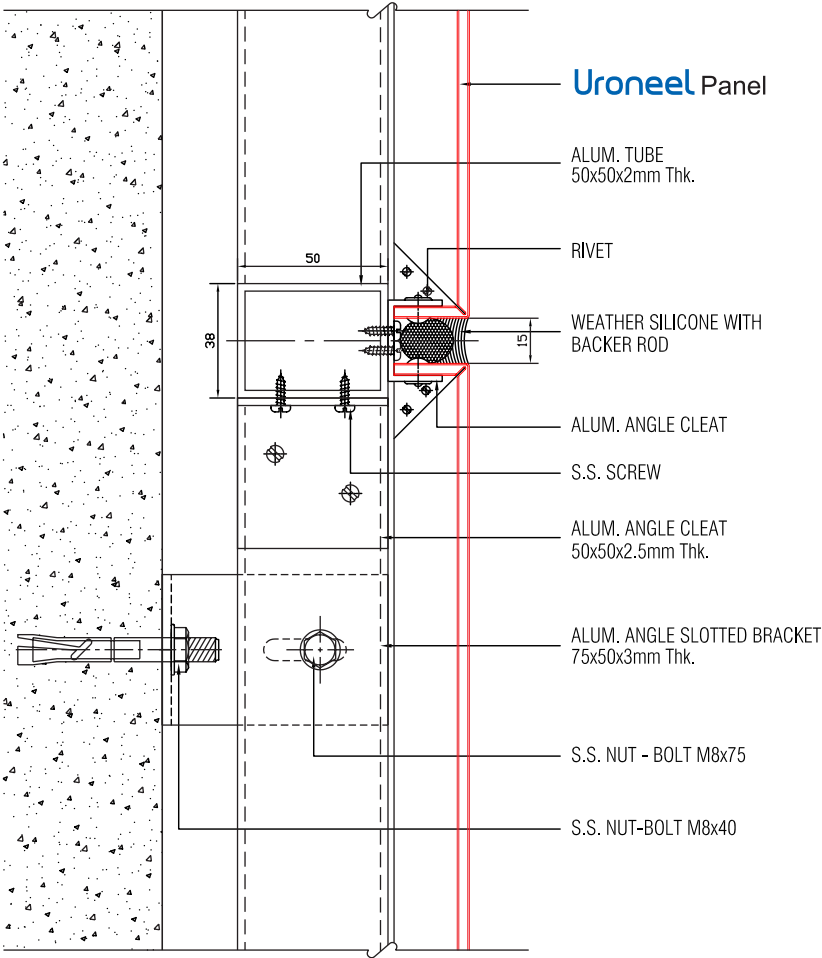
Horizontal Joint Detail

Detail 11



Vertical Joint Detail

Detail 12



Cleaning Method

PVDF paint coated on the surface of aluminium composite panel sheet needs to be cleaned and maintained professionally. This not only helps maintain the clean surface of building wall, but also removes the smear which may corrode the paint. Therefore, PVDF paint can maintain its quality for a long time. The cleaning cycle depends on the environment condition and degree of contamination. We suggest that outer wall should be cleaned at least once a year. The inner wall can be cleaned according to the degree of contamination.

Wall cleaning should be conducted manually or by some suitable cleaning equipment, from top to bottom. Please don't use any corrosive materials to rub the surface.

1. First, you should use a large amount of clear water to wash the surface of panel;
2. Use soft cloth to rub the surface of panel. Soft cloth should be soaked with water-detergent solution;
3. Wash away the dirt on the panel;
4. Check the surface of the panel. To those places still unclear, you can use detergent to clean it again.
5. Wash the panel until no detergent is left on the surface.

Notice !

Don't wash the panel when the temperature is higher than 40 °C. If the water is volatilized too quickly, it is harmful to PVDF paint of ACP sheet.

Please pay special attention that you should choose Neutral Detergent to clean the panel. Please don't use strong alkali detergent, such as potassium hydroxide, sodium hydroxide or sodium carbonate; strong acid detergent, abrasive detergent or paint resolvable detergent.

Before you wash large-area surface, you had better do a test on a small piece to make sure it is safe.

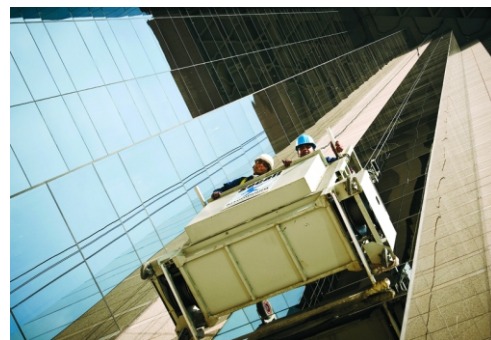
Cleaning Frequency

Cleaning will be required more often in the following areas in general:

- Areas of low rainfall
- Heavily industrialized areas.
- The areas where construction works are being carried out.
- Foggy coastal regions with frequent cycles of condensation.

Machine Cleaning

Once automatic wall cleaning machine is considered to be used, a pre-test should be done in the early stage of equipment design to confirm that there is no detrimental effect on the coating as well as to clarify the cleaning effect and frequency.



Very often, rainfall is effective remove dirt and kept the external cladding clean, In areas of low rainfall, this effect may not be expected and accordingly the cleaning frequency might be increased. Even in the same building, the portions which are in direct sight and areas at lower level might be cleaned more frequently and less obvious portions might be cleaned at some instance and in these area detrimental components might be deposited on the coated surface. These factors would determine the cleaning schedule. In planning the actual cleaning schedule of external cladding, the schedule might be clubbed with cleaning operations for glass and painted aluminium components.



General Notes

Not only Fluorocarbon coating but also pre-colored, Polyester Acrylic resin or normal organic coatings onto Aluminium will not show an appreciate amount of dirt collection; however, the dirt and soil depends largely on the local atmospheric conditions where the building exists.

In heavily industrialized areas, coastal areas and the areas where construction works are being carried out, it might be necessary to increase the cleaning frequency, not only for the sake of appearance but also for the purpose of removing the dirt and soil.

After project completion, construction soils including concrete or mortar etc should be removed quickly. In most cases the following frequency would be required to keep coated surface clean as good as it can remain.

Building Location	Wash Frequency
Rural area	1-2 / year
Urban area	2-3 / year
Low rainfall and/or coastal area	3-4 / year
Heavily industrialized area	3-4 / year



Pre-Cleaning

In order to remove the light soil, it is recommended to do some tests to determine the degree of cleaning actually necessary to accomplish the task. Prior to any cleaning application, a forceful water rinse from the top to down is recommended as an initial step of tests. The low water volume with moderate pressure is much better than the considerable water volume with little pressure. When cleaner is applied, physical rubbing with soft sponges or soft rags fully dipped into the liquid solution is also helpful.

Soil Removal

The simplest procedure would be, water rinse with moderate pressure to remove the soil. If this does not remove the soil, then a concurrent water spray with sponge should be tested. If the soil is still adhering after drying, then a mild detergent or 5-10% IPA (Isopropyl Alcohol) solution will be necessary.

The simplest procedure would be, water rinse with moderate pressure to remove the soil. If this does not remove the soil, then a concurrent water spray with sponge should be tested. If the soil is still adhering after drying, then a mild detergent or 5-10% IPA (Isopropyl Alcohol) solution will be necessary.

Clean Detergents / Solutions

When a mild detergent or 5-10% IPA solution is used for removing soil, it should be used with soft sponges and /or soft rags. The washing should be done with uniform pressure and normally the operation is done with horizontal motion first and then with a vertical motion. After washing, the surface should be thoroughly rinsed with clean water, and the rinsed surface is air-dried or wiped with squeegee or lint-free cloth.

Operation Sequence

Dripping of cleaner to the lower portions of the building should be minimized. When some sundown is unavoidable, the areas should be rinsed as soon as possible to eliminate streaking. Generally the cleaning and rinsing operation moves from top to bottom of the building. Avoid drips and splashes during cleaning. Remove dripping as quickly as possible.

Note : In case of one storey or low elevation buildings, it is recommended to CLEAN FROM BOTTOM – UP and RINSE FROM TOP-DOWN.

Coating Protection

Always be aware that it is very difficult to remove sealant and machine oils after it is hardened.

During construction, the protective film should be retained to a maximum of 45 days from the date of installation to protect the coated surface from stains caused by sealant and machine oils. If adhered, these stains should be removed as early as possible before hardening, with suitable detergents.

Scratch Prevention

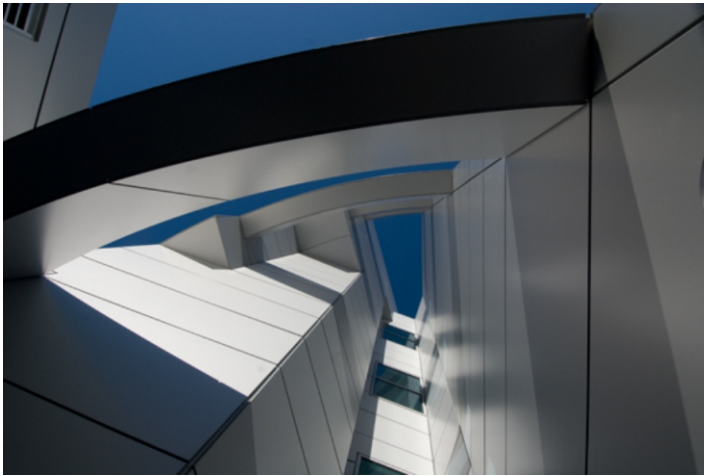
Make sure that cleaning sponges or rags are grit free, to prevent the coated surface from scratch. Avoid over cleaning or excessive rubbing.

- Use much clear water to wash the panel's surface.
- Use soft cloth with dilute detergent to wipe the panel's surface softly.
- Use much clear water again to wash the stains off.
- Check the panel's surface and special cleaning with detergent is needed if some parts are still not clean.
- Use clear water to wash the panels' surface till all stains have been washed out.



Projects



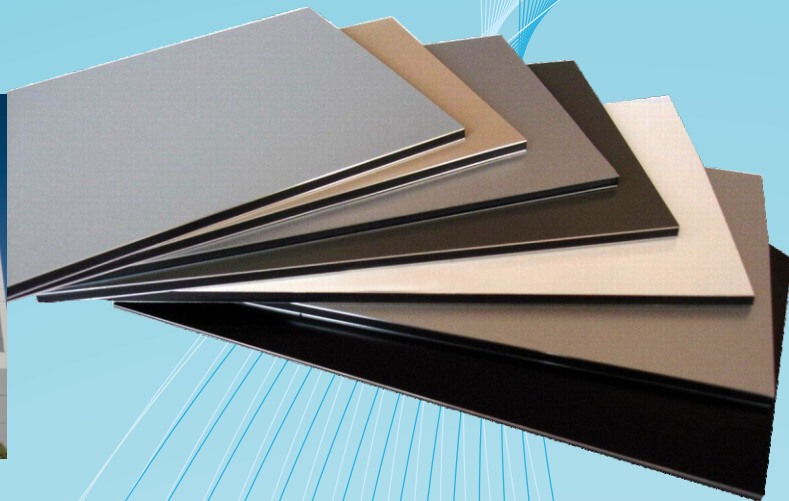


- * Exteriors of Multi Storey Apartment
- * Curtain Wall
- * Industrial & Commercial Constructions
- * Wall cladding
- * Hospitals
- * Fascias / Soffits
- * Star Hotels
- * Column / Beam Cover
- * High-Tech Shopping Mall
- * Parapet Walls / Coping
- * Institutes, Banks, Call Centers
- * Furniture
- * Shops, Showrooms
- * Partitions
- * Convention Centers
- * Beam Wraps
- * Canopies
- * Elevators
- * Signboards
- * Kitchen Units
- * Display Unit
- * Spandex Panels
- * Shop fronts
- * Exhibition Stalls

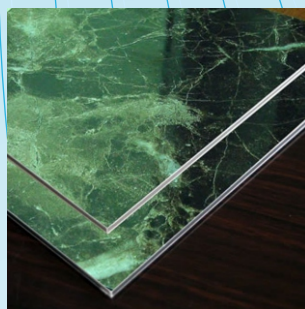
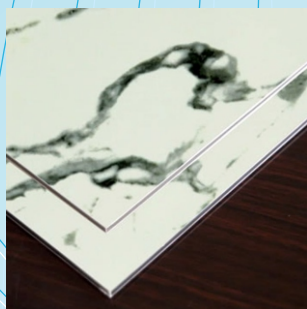
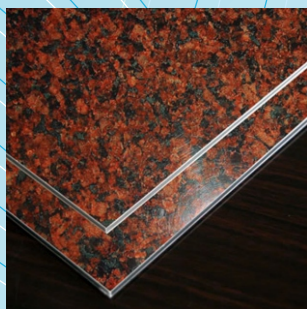
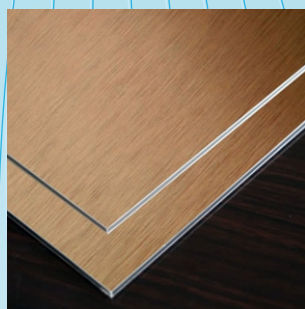
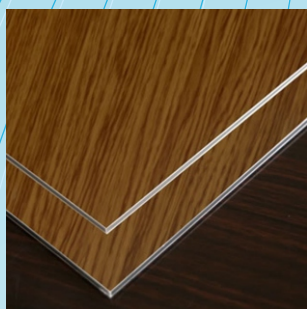
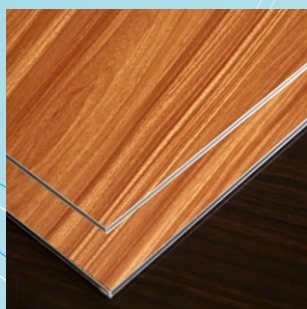




UroneelTM
Aluminium Panel Sheet



New Arrival



Uroneel India Pvt. Ltd.

Shop No.1 Bhagirathi Apts. 321 Shukrawar Peth
Chinchechi Talim Road, Pune 411 002 (Mah.) India
Tel. +91 020 24492090, 24471554 Fax 24482373
www.urneelindia.com / urneelaps@gmail.com