

uPVC WINDOWS & DOORS

YOUR PERFECT CHOICE

Energy efficient window & doors with aluplast-technology

www.ecowindows.nz



ECO WINDOWS AND DOORS

For sustainable window and door systems.

Eco Windows Group is a trusted name across the North Island, specializing in the sale, installation, and support of high-quality UPVC windows and doors. Founded in 2010 by Ross McKitterick as Eco Doors and Windows, the company has grown to serve customers across the North Island, building a strong reputation for expertise, exceptional service, and premium UPVC solutions.

From the very beginning, we have partnered with aluplast, a global leader in UPVC technology engineered in Germany, ensuring our customers receive products that offer superior performance, durability, and energy efficiency.

At Eco Windows Group, we take pride in our highly skilled and motivated installation teams, who are committed to delivering outstanding craftsmanship and customer satisfaction. Whether you're looking for windows or doors, we provide innovative and reliable solutions tailored to your needs.

INTERESTING FACTS ABOUT UPVC WINDOWS

uPVC is the most suitable window material and its importance is constantly growing all over the world. It is not only used for construction but also for everyday commodities such as clothes, car parts, drink bottles and medical applications.



The unparalleled material uPVC offers a whole range of outstanding product properties to create a window that remains unbeaten by any other raw material. Purchase costs of uPVC windows are far more economical than a comparable product made of wood or aluminium. There are a great many aspects that play a significant role when choosing new windows. For this reason, we would like to present you with some interesting facts about uPVC windows that will help you with your decision-making:

1. ENERGY EFFICIENCY OF UPVC WINDOWS

- use of lead-free uPVC raw material
- easy to recycle
- energy saving (in both production and thermal insulation)

2. QUALITY OF UPVC WINDOWS

- uPVC is completely harmless to humans
- excellent sound insulation, especially in the growing urban regions
- perfect thermal insulation
- durability and resistance (fire resistance, UV stability, wind resistance)
- the value of your home can be increased by integration of aluplast windows and doors
- very durable (uPVC windows have a life cycle of 30 years or more)

PLEASE NOTE
Windows are no minor matter: They let light into our homes and illuminate our lives.

3. PERFORMANCE CHARACTERISTICS OF UPVC WINDOWS

- resistant to dirt and environmental conditions
- can be easily cleaned by using a mild detergent or simply soapy water
- resistant against termites and will never rot, rust or corrode
- cannot be deformed by moisture and temperature differences
- prevent development of mould and bacteria
- efficient for many years (without constant effort of conservation by painting or special maintenance measures)
- excellent burglary resistance

4. VARIETY OF DESIGNS

- appealing visual appearance with various types
- different shapes, e. g. semi-circular windows
- available in countless colour variations, laminated outside or on both sides
- suited for both new buildings and renovation of old buildings
- customised for individual requirements

Inside view of a uPVC

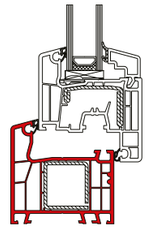




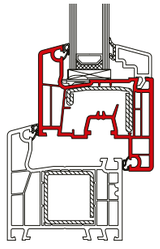
IDEAL 4000®
3-dimensional section of a uPVC window

How is the uPVC window constructed?

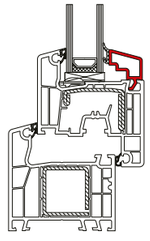
The detailed section of single components of a uPVC window



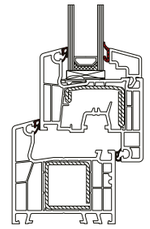
WINDOW FRAME
holds the window sash and serves to fasten the window to the building structure.



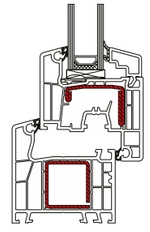
WINDOW SASH
is the movable element which allows you to open and close the window.



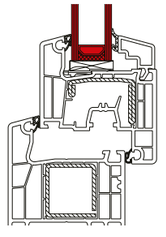
GLAZING BEADS
are inserted into the window sash and serve to fix the glass pane.



GASKETS
co-extruded gaskets ensure improved heat and sound insulation.



STEEL REINFORCEMENTS
are integrated into the window frame and sash to ensure maximum load bearing capacity.



GLAZING
protects you from external influences while still allowing the view to outside.

WINDOW TYPES

Window and door types are distinguished by their way of installation and opening



FIXED GLAZING

The glazing is inserted directly into the frame – there is no sash that could be opened.



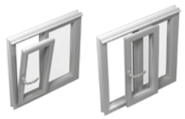
CASEMENT – OUTWARD OPENING

The sash is to be opened outwards.



VARIO-SLIDE

The sash can be slid to the side to open the window. Multiple sashs can be used to stack



TILT-AND-SLIDE

The sash can be tilted and slid to one side to open the window.



SLIDE AND FOLD

The sashes can be folded, each running along a runner rail.



TILT-AND-TURN FUNCTION

The window can be opened to the inside like a casement and it can be tilted.



AWNING – OPENING OUTWARD

The sash is to be opened outwards.



SMART-SLIDE

The sash is shifted off the gasket horizontally and slides, providing superior tightness against weather and noise. Multiple sashs can be used to stack



LIFT-SLIDE

The sash is lifted vertically off the gasket and can slide the largest panels with ease.



Many combinations available.



uPVC WINDOWS ARE NOT NECESSARILY WHITE

Despite our tropical and crème profiles being extremely popular, aluplast uses a special manufacturing technique to apply a lamination foil on our uPVC profiles. This technique guarantees an even structure, a uniform colour, and maximum weather resistance while meeting the highest requirements regarding climatic influences.

PRODUCT RANGE

Windows are a long-lasting investment. For this reason you should select a product suitable for your requirements.



IDEAL 2000®

IDEAL 2000® is the most substantial 3 to 4-chamber window system with two levels of sealing and a 60 mm construction depth. The window offers the best possible price-performance ratio and perfect economic efficiency. It is the right window solution for fixed, tilt-and-turn and casement openings. Many possible variations allow for the use of the system in the domain of commercial buildings as well as private homes.



IDEAL 4000®

With 5 chambers as a standard combination, sound insulation up to 45 dB and a construction depth of 70 mm, the IDEAL 4000® windows offer excellent thermal insulation properties – delivering a range of windows today, that satisfy the standards of tomorrow. It is the best suitable window for large doors for balconies and terraces.



SLIDING SYSTEMS

The aluplast sliding window series with its slender design will meet your individual requirements. From economical window solutions to huge balcony doors, many options are possible.



LIFT-SLIDE

With its smooth-running lifting mechanism, even huge sliding elements – with a width of up to 3m, a construction depth of 85mm and with large reinforcements for the highest degree of stability – can be moved very easily. The wide opening provides a harmonious transition from living to outdoor areas without disturbing steps while maintaining the best sealing values.



LEAVES NOTHING TO BE DESIRED

Get into the new generation of sliding doors with smart-slide.

smart-slide

- simple to operate
- recessed threshold solution
- WERS U_w rating as low as 1.1 W/m²K
- glazing and panel thickness up to 41 mm possible double and triple glazed)
- modern classic-line design
- concealed hardware technology
- scheme A (single door) and scheme C (bi-parting doors)
- available in numerous decor designs
- optional bonding inside (adhesive technology)
- Profile depth of 140 mm

May be subject to change



GREAT STABILITY = LESS MAINTENANCE

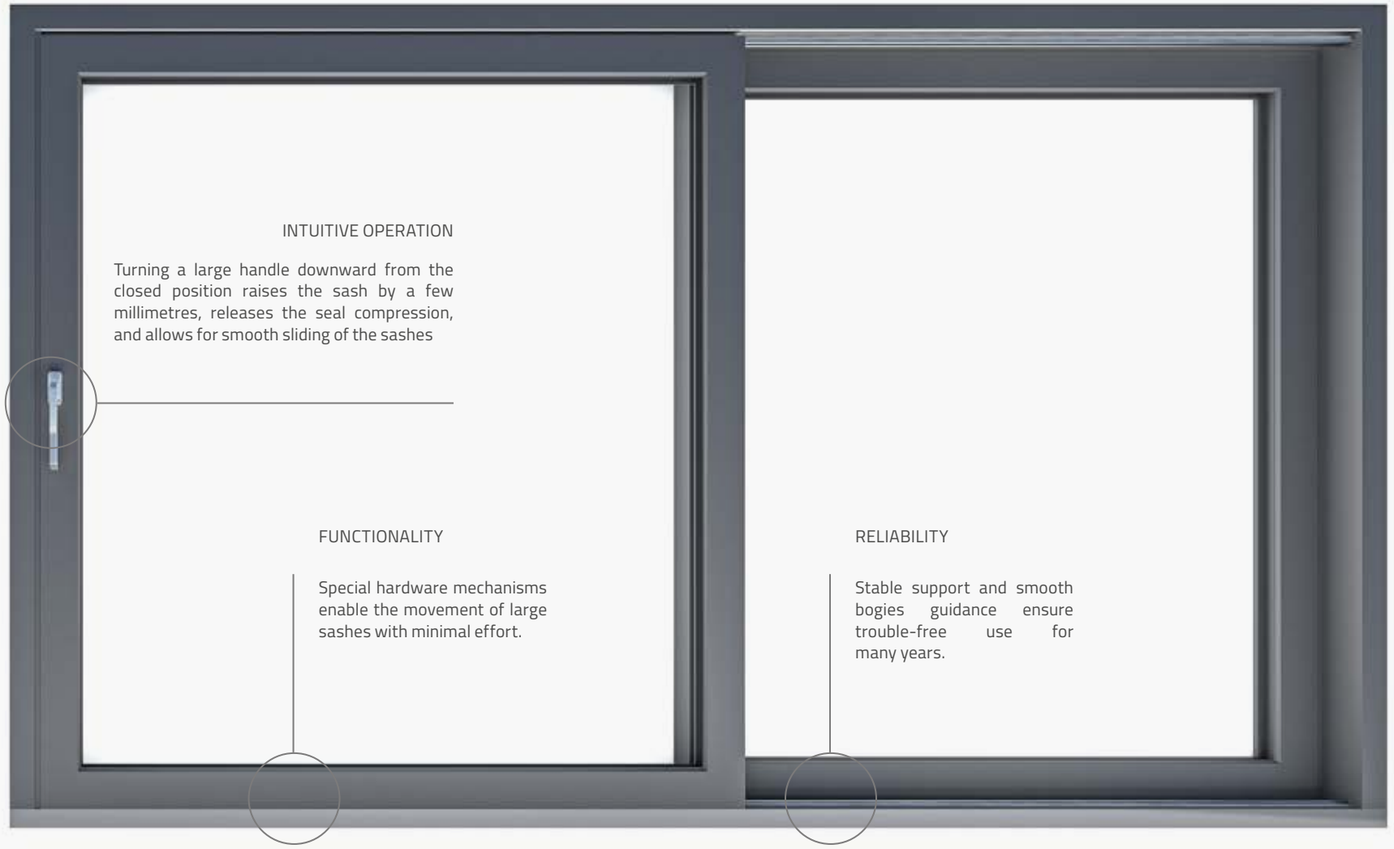
Why compromise? The new smart-slide door makes use of very stable hardware resulting from outstanding innovation. The sophisticated mechanism of the new aluplast sliding door simplifies the hardware technology used, resulting in superior sliding performance for years to come.

OUTSTANDING SEALING

smart-slide scores highly for sealing owing to the innovative locking mechanism and the high-quality sealing surfaces with no brushes. Additional locking points offer outstanding sealing and even more security. The interplay between the various technical features ensures the smart-slide achieves extremely good sealing performance against air, wind, sound and driving rain.

LET'S GET TO THE POINT!

This new generation slider brings a new standard and economy to premium sliding doors. With acoustic performance, airtightness, ease of use, low threshold possibilities and thermal performance exceeding all else at this price point, this slider is the superior choice for your project.



lift-slide

PERFECT CONNECTION OF INTERIOR AND TERRACE

lift-slide sliding doors are door structures that allow for large-scale glazing, providing excellent ease of use. Sliding lift-slide doors blur the boundary between the home and the garden. This provides excellent natural light for interior spaces and visually adds spaciousness.

Choose aluplast lift-slide: enjoy a panoramic view

One of the undeniable advantages of this type of terrace door is the range of possible dimensions. The width of the sash can be between 800 mm and 3200 mm and the height can be up to 3000 mm, which allows the creation of more than six meters of glazing.



BARRIER-FREE HOME

The low door threshold with a height of 48 mm, can be recessed in its entire height. This meets the requirements for architectural barrier-free construction.



PANORAMIC VIEWS

lift-slide doors allow for the creation of impressive, sliding glass walls that seamlessly integrate the interior of your home with the surroundings.



BRIGHTENED INTERIOR

lift-slide also means more natural light entering the rooms and efficient use of solar thermal energy.



woodec

inspired by nature

All the advantages of a uPVC window with the natural beauty of wood. This impressive surface is available across the aluplast range of window and door systems.

the base colours

The aluplast base colourways have undergone rigorous testing and proven their resilience in demanding UV environments for a span of more than two decades.

This remarkable track record renders them an ideal foundation for your design endeavors.

Tropical

Similar to RAL 9016

Creme

Similar to RAL 9001



Sheffield Oak Concrete

Similar to RAL 7012
ap Number 21



Turner Oak Malt

Similar to RAL 1001
ap Number 19



Turner Oak Toffee

Similar to RAL 8028
ap Number 22



Turner Oak Walnut

Similar to RAL 8003
ap Number 35



aludec

inspired by style

The aludec surface combines a modern, high-quality textured matte-aluminium finish with long-term durability. Choose aludec for a simple, sustainable product that looks fantastic and always performs at its best.



aludec Jet Black

Similar to RAL 9011
ap Number 04



aludec Anthracite Grey

Similar to RAL 7016
ap Number 03



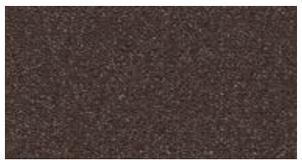
aludec DB703

Similar to RAL DB703
ap Number 07



aludec Basalt Grey

Similar to RAL 7012
ap Number 08



aludec Umbra Grey

Similar to RAL 7022
ap Number 12



aludec Window Grey

Similar to RAL 7040
ap Number 37

aludec Traffic White

Similar to RAL 9016
ap Number 36

aludec Surfmist®

Similar to RAL 2002
ap Number 92

Surfmist® is a registered trademark of Bluescope Steel Limited and is being used to show a match to COLOURBOND®'s steel colour.

HARDWARE

essential background

Hardware has a wide range of functions. It connects the window frame with the sash and allows the operation of windows and doors. For this reason, we would like to present some interesting facts about the Hardware in uPVC windows that will help you with your decision making.



SASH LIFTER

Tilt-and-turn hardware lifts the sash into the correct position with minimal effort and guarantees a long service life.



LOCKABLE HANDLE

When it comes to security multiple options are available. This includes a lockable handle which can increase the window or door security by restricting



TURNING HANDLE

The essential operating control of a window fitting is the turning handle. A simple turn of the handle can open, close, tilt or fold the window or door.



MULTIPOINT LOCKING

Increased security thanks to a multipoint locking system. The system guarantees basic security.

Based on the great variety of windows, there are hardware systems for all window types. The hardware is a significant component of the window, especially for handling and security. The hardware for the most common European tilt and turn systems offers the best safety, security and comfort for your home. However, good hardware for casement and sliding systems is also available.



Glazing – a visible part of the window

The importance of window glass has also been integrated into your window choice. Many solutions are available:

PLEASE NOTE

The solar heat gain coefficient should be as low as possible while the light admission should be as

DOUBLE GLAZING

Double or even triple glazed units are separated by an air or other gas space like Argon, to reduce heat transfer and/or sound transmittance across a part of the building envelope. In modern insulated glass units, the space between the glass panes is kept dry by the use of desiccant and the edges are sealed to eliminate possible condensation and provide superior insulating properties.

LOW E-GLASS

Low Emissivity (“Low-E”) glass has a special invisible coating bonded to the glass inside the double glazing unit. This coating reduces heat loss from the home, by essentially acting like a “heat mirror” that reflects heat back into your home. Low E can also reduce solar heat gain that can overheat your house, while also insulating your house from the temperature outside. Low-E glass greatly enhances the insulating performance by as much as an additional 60% compared to standard double glazing.

TOUGHENED GLASS

A type of safety glass processed by controlled thermal or chemical treatments to increase its strength compared with normal glass. Fully toughened glass is approximately 4 to 5 times stronger than heat-treated glass of the same thickness when exposed to uniform static pressure loads.

LAMINATED GLASS

Two or more panes of glass are permanently bonded together with one or more interlayers. Laminated glass offers good acoustic insulation and a high protection factor against burglary.

VISIBLE LIGHT TRANSMISSION

VLT is the percentage of visible light passing through the glass. The higher the VLT, the more light is transmitted.



NOISE REDUCTION

feel the silence & the comfort

Open Window ~ 80 dB
(heavy traffic)

Old Window ~ 60 dB
(single glazed)

Standard Window ~ 48 dB
(double glazed)

uPVC Window ~ 35 dB
(Ideal 4000)

INFLUENCING FACTORS

1. Frame
2. Glazing
3. Glass Packers

PLEASE NOTE
Reduction of 10 dB (decibel)
will reduce noise by 50 %

NOISE PROTECTION

Being exposed to permanent, or even only to a short-term but intensive, noise, can lead to a harmful impact on human health. Thus, noise protection is an imperative. We can provide you with the best possible protection against unwanted negative noise effects.

SOUND INSULATION

for a better quality of life

dB (decibel) is commonly used in acoustics to quantify sound levels perceived by the human ear. Noise has an immense impact on our quality of life. The results are sleep loss and continuous stress that can cause permanent damage to our health. uPVC windows are an effective protection from noise and create a permanently pleasant atmosphere.

Health Impacts			
	140 dB	Starting aircraft	
	130 dB		
	120 dB		
Hearing impairment caused by short impact	110 dB	Jackhammer	
	100 dB		
	90 dB	Highway traffic	
	80 dB	Open window	
Hearing impairment caused by continuing noise	70 dB		
	60 dB	Single glazed	
	50 dB	Insulation glass	
Concentration distrurbances	40 dB	Normal conversation	
	30 dB	uPVC window	
	20 dB		
	10 dB	Bedroom	
Threshold of hearing	0 dB		



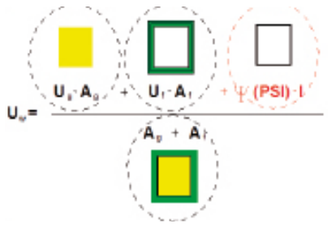
ENERGY EFFICIENCY

living comfort & environmental protection

Innovative high-quality uPVC windows cut energy losses to a minimum. With uPVC windows, you can contribute to the conservation of increasingly scarce resources and the reduction of pollutant emissions. Combine environmental protection and living comfort by insulating with uPVC windows.

The U-value determines the heat transfer coefficient of the material. The w in this term stands for the entire window.

The calculation of this is based on the U-values and the size of each single material of all components. This means the glass, the frame material as well as the psi-value, which describes the heat flow generated through the insulated glass edge with the distance piece.



U-VALUE (U_w)
= U-value glazing (U_g) * Area glazing (A_g)
+ U-value frame (U_f) * Area frame (A_f)
+ Psi-value ( ) * length of the edge bond (l)
/ Area glazing (A_g) + Area frame (A_f)

PLEASE NOTE
The lower the U-value, the better!



TROPICAL COMPOUND

for regions with high UV radiation

aluplast can look back on more than 25 years of experience in providing tropical uPVC formulations to regions with very high levels of UV radiation.

To make sure that uPVC windows remain stable and robust even under harsh environmental conditions, aluplast developed a special uPVC compound called Tropical Mix. This "tropical" formulation and the profiles have been tested and certified by AAMA (American Architectural Manufacturers Association).

AAMA tests the profiles at accredited laboratories under natural weathering conditions. The profiles are tested in three different weathering stations in Ohio, Florida and Arizona for two years where they have to prove their stability against UV light, wind load and humidity.

In artificial and natural weathering tests, aluplast proved the profiles' outstanding durability, weather resistance, and quality, and was finally awarded with the AAMA certification. All tests, for example, the Charpy impact test, were passed with ease and without any restrictions, even after two years of weathering.

Environmentally friendly calcium-zinc (CaZn) stabilizers ensure that you will enjoy your eco-friendly, high-quality windows and doors for many years to come. aluplast has excellent verified references in the Middle East, Asia, Africa and Australia regarding the successful use of our tropical formulation.

aluplast has also achieved uPVC Profile accreditation under the Australian Industry Code of Practice and is one of the first system suppliers to do so. To achieve accreditation under the ICP, aluplast had their profiles independently tested at Australia's only natural outdoor weather resistance testing laboratory at a high irradiation site near Townsville, Queensland. Stringent maximum colour change parameters must be met by exposed profiles as well as impact strength tests. The new ICP for uPVC window and door profiles indicates that accredited profiles have been tested to withstand Australia's higher UV conditions. Stay ahead of the times with innovative technologies developed by aluplast.

ECO FRIENDLY SOLUTIONS

reduce CO2 polution thanks to intergrated recycling

Old plastic windows, shutters, and doors contain valuable materials, particularly PVC, which can be recycled up to seven times without losing its performance qualities. This ensures consistent quality, stability, and weather resistance, adding significant value to recyclable PVC. By recycling plastic windows, we conserve resources and reduce environmental impact, cutting down on both energy consumption and CO2 emissions. The recyclability of modern plastic windows, combined with their numerous product benefits, makes them an increasingly appealing and sustainable choice for the future.

ap·cycle Plastic window recycling cycle



RECYCLED IN MELBOURNE

thanks to intergrated recycling

One of the most important properties of uPVC window profiles is their recyclability. With an average lifespan globally of 40 years, aluplast systems are 100% recyclable and profiles can be recycled up to 7 times without losing any of their performance characteristics.

aluplast is the first and only uPVC system provider in Australia to provide an in-house recycling programme to our network, where crates are collected from our customers every week and returned to our modern Dandenong South facility to begin the recycling process.

Step 1 – Collection

Step 2 – Shredding

Step 3 – Granulation

Step 4 – Compounding

Ensuring offcuts from the manufacturing process are diverted from landfills is of the utmost importance to aluplast and starting this programme in Australia means uPVC is not wasted and remains in the material cycle, which protects the environment.

The excellent recyclability, the low embodied carbon and the combined reduction in energy use over the life cycle of the product make uPVC one of the most sustainable materials for windows.





BAL40 RATED SYSTEMS

Many Australian homes are located in areas prone to bushfire attack. Changes to the BCA in 2011 and the revision of AS3959-2018, have increased the stringency around the selection of windows and doors for new build or renovation projects in bushfire-prone areas. These changes are intended to reduce the risk of loss of life or damage to property in bushfire areas.

aluplast systems are designed to withstand the harshest conditions. Our BAL40 windows and doors use the latest technology in German hardware and incorporate the latest in soft coat low-e technology. Not only does this create a safer barrier for your home, but it dramatically improves your everyday comfort by increasing the insulating properties of the Double Glazing. This keeps you cooler in summer and warmer in winter. What's more, the need for expensive fire screens and shutters on entrance and sliding doors is eliminated.

aluplast BAL40 rated systems include:



IDEAL 4000®

smart-slide

aluplast BAL40 certified window and door products are identifiable with the above logo. This logo confirms that the system has been developed, engineered, tested and manufactured as suitable for use in a BAL40 zone.

UNIQUE PROPERTIES

QUALITY – MADE IN GERMANY

Experience and constant development play a crucial role in the production of uPVC windows. With close and cooperative partnerships with reliable and renowned suppliers, we focus on environmental protection, sustainability and guarantee the highest level of quality and performance.

The extruded aluplast uPVC window profiles are tested according to local standards and are subject to constant quality control.

RESPONSIBILITY – FOR THE ENVIRONMENT

uPVC windows do not only present long-lasting durability but they can also be recycled which is another environmental advantage.

Plastics are up to 100% recyclable without loss of quality. Due to the fact that PVC windows are produced environmentally friendly, the PVC windows can be made out of recyclable material and can be re-used in the future to extend the lifecycles.

Up to 40% of a homes energy loss can come from the window and door area, these parts of the building envelope are the focus of the efforts to save valuable energy and reduce the costs for heating and/or cooling.

The uPVC windows of aluplast profiles are suitable even for the top ranked Passivhaus-Standard (Passive House Standard). This fact ensures the lowest energy consumption. Our profiles are also in compliance with the latest Environmental Product Declaration (EPD) according to the DIN ISO 14025 which reflects the suberb results of the health – and environmental aspects of the uPVC in the whole life circle.

INNOVATION – AT THE HIGHEST LEVEL

Based on our expertise, we develop innovative high-quality products that set professional standards in our field. aluplast profiles exceed today's requirements for heat and noise insulation, burglary resistance and are of elegant design. To buy our products is to buy long lasting durability, to choose the finest quality, backed by a solid company with

Save energy, reduce costs and secure the future - with aluplast.

Double Glazing
POWERED BY
uPVC Joinery



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aluplast

AGWA
AUSTRALIAN GLASS & WINDOW ASSOCIATION
MEMBER

HEATING COOLING
WINDOW ENERGY RATING

Vinyl Council Australia

uPVC Windows ALLIANCE
AN INITIATIVE OF VINYL COUNCIL OF AUSTRALIA