

Vantell®

Supplying Prefabricated Ultra-low Energy Building Envelope Solutions

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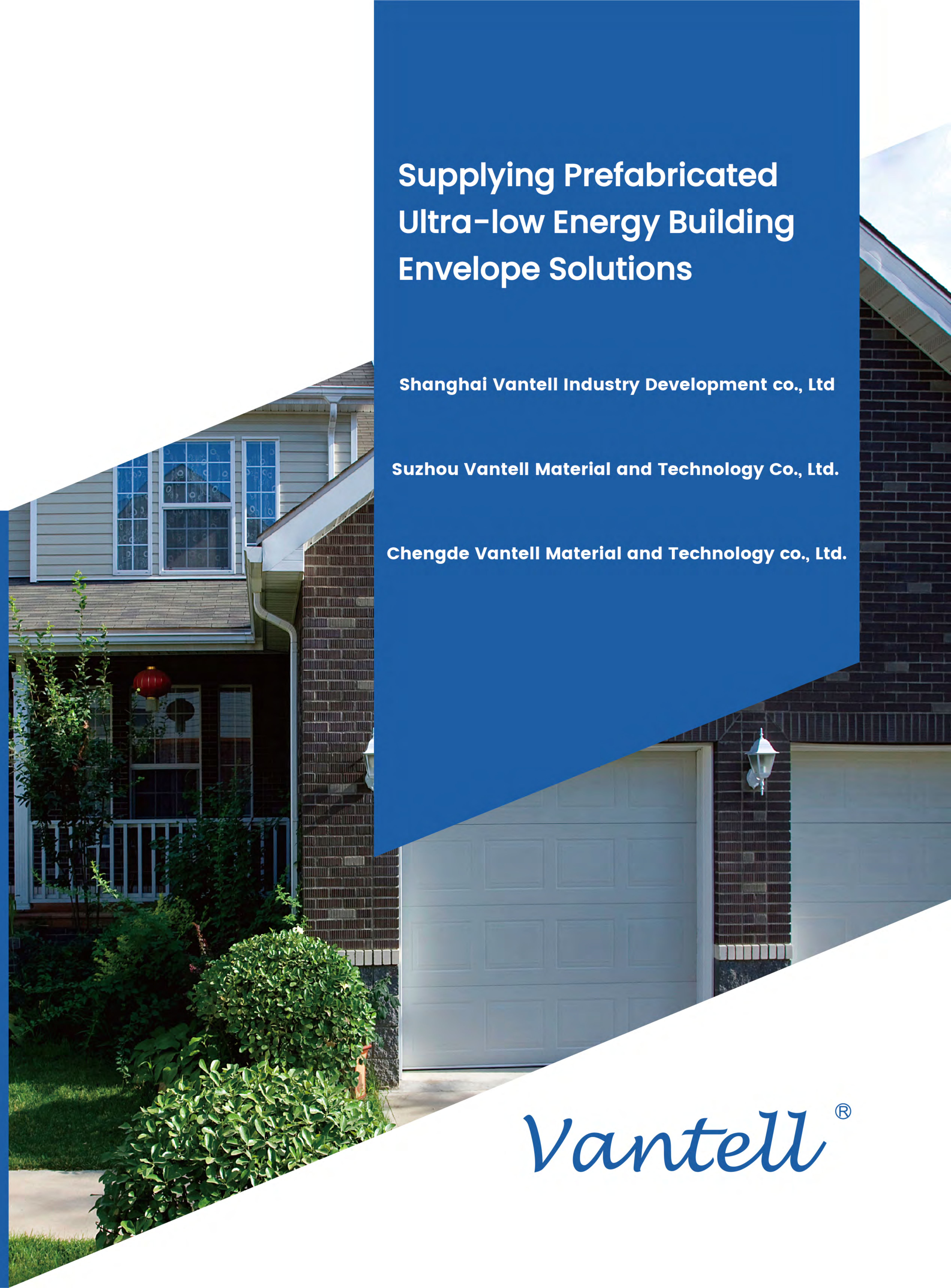
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Vantell®



Shanghai Vantell Industry Development Co.,Ltd

Shanghai Vantell Industry Development Co.,Ltd was established in 2001,owns Suzhou Vantell Material and Technology Co.,Ltd. and Chengde Vantell Material and Technology Co., Ltd. The company *Vantell*® brand has Vantell® Prefab panel, vantell enclosure moisture management system (Vantell® Bemcs), Vantell® RainScreen and HouseWrap and isopressure rainscreen and other patented technology and products. By using the above patented technology and products on the basis of the modern construction scientific theory, according to the green environmental protection concept of carbon peak and carbon neutrality, an innovative high-performance non-transparent Wall System (including doors and Windows) Vantell® Wall System are designed, developed and manufactured. The prefabricated photovoltaic integrated panel and assembled photovoltaic wall system of green moisture management system are also included.

Products in accordance with the ICC - ES AC38, ICC - ES AC148 , AAMA711-20 set manufacturing specifications, with Air cushion (vantell® Airmat) technology and more than 20 invention and utility model patents, is to have complete independent intellectual property rights of national high and new technology enterprise. Our products are exported to more than 20 countries and regions in Europe, America, South Korea, South America and so on. Our products are widely used in wood structure, steel structure and enclosure structure of passive houses to improve the service life of houses and save.

Vantell envelope moisture management system

Vantell envelope Moisture management system (Vantell® Bemcs) analyse the source of moisture, based on the different geographical location, according to the development requirements of world building technology, in accordance with the ICC - ES - AC38, ICC - ES - AC148, AAMA711-20 specification requires research and development and production of the waterproof layer, moisture, water diffusion barrier layer, ventilation structure composed of (Building Envelope Moisture Control System) System.

Vantell® Bemcs is an All-in-one envelope moisture management system solution, is a variety of technologies and products Combination, the core technology of many products with invention patents and utility model patents, is the world's first, with the overall solution of moisture management, a large number of patented vantell® products are composed of reasonable configuration: exterior wall film waterproof air tightness components, flashing components, doors, Windows, exterior wall pipe air tightness components, interior wall film air tightness components, roof waterproof air tightness components.



Vantell Precast Integrated Panel and Wall System

(Vantell® Wall System)

- Vantell wall system containing enclosure structure of moisture management system, has the optional factory prefabricated exterior insulation decoration plate with waterproof, moisture permeable, fire prevention, heat insulation, heat preservation, decorative panel, on site installation is complete the prefabricated panel which is a kind of high performance enclosure structure, according to the project of the different climatic zone to make the structure design, simulation, calculation, analysis and optimization. Customers show the water content of the whole wall in the next few years, in the occurrence of mildew, freeze-thaw, corrosion of metal components and insulation layer insulation efficiency data, the performance of the building envelope will be intuitive understanding.

- The precast wallboard in Vantell Wall System (Vantell® Wall System) is fabricated and produced at factory. The manufacturer designs and installs waterproof layer, air tight layer, wet vapor diffusion barrier layer, insulation layer, thermal insulation layer, cladding panel, decorative panel and rain proof curtain wall system according to the different climate factors. At the same time, Windows and doors can be installed according to the design needs, and make air tightness treatment.

The thermal insulation layer use aerogels with good fireproof performance and graphite polystyrene panel high efficiency insulation material, installed in double cavity double insulation structure, can achieve A level of fire prevention performance, at the same time at the wall each function layer under the protection of thermal efficiency of the continuous high efficiency, full factory prefab work, wallboard of greatly increased production efficiency, cost reduction, Quality is greatly improved over field operations and facilitates inspection and transportation.

- As the wall panels in vantell wall system (Vantell® Wall System) are high prefabrication in the factory, the connection and sealing of the wall panels and the main structure are another important factor in the performance and safety of the entire wall system. The wall panels and the main structure use reliable physical connection, due to the factory prefabricated installation size is controllable, safe and reliable. At the same time, the scaffolding equipment is exempted, the installation cost is reduced, and the construction period is greatly shortened. Water and air tight control members are considered at the joints. At the same time, considering the measures of breaking the thermal bridge, the size deformation between the thermal expansion and cold contraction of the plate, to maintain the water tightness and air tightness of the whole wall.



Vantell BiPv Wall System (Vantell® Wall System)

The photovoltaic panel is used as the decoration panel of vantell precast wall panel to form an effective active clean energy and passive ultra-low energy consumption wall panel. Vantell precast photovoltaic integrated panel, which is to integrate photovoltaic products into vantell precast wall panel, with vantell building envelope wet vapor management system. According to projects in different regions use WuFi software to simulated, calculated and analyzed the thermal and humidity unsteady state of the wall system, to designed reasonable waterproof layer, air tight layer, wet vapor diffusion layer, barrier layer, ventilation layer, insulation layer for the wall system so that the insulation efficiency of vantell prefabricated photovoltaic integrated panel is long-term and efficient, and the durability and safety of the structure are guaranteed. There are photovoltaic panels as decorative panels can use solar power, photovoltaic panels absorb solar energy into electric energy, therefore, the development of solar photovoltaic building integration, can "energy saving and emission reduction", truly zero energy consumption or even negative energy consumption. Such products are more in line with the carbon peak, carbon neutral green building design concept.

Vantell Water Management Product Introduction

Vantell Wall System



Vantell Elite Board

Composite self-adhesive materials with waterproof, moisture drainage, and vapor permeability functions with fireproof and structural performance magnesia oxide boards. When used as self-breathing cladding panels, they provide comprehensive life-cycle performance protection for the overall building envelope structure without affecting each other's performance.

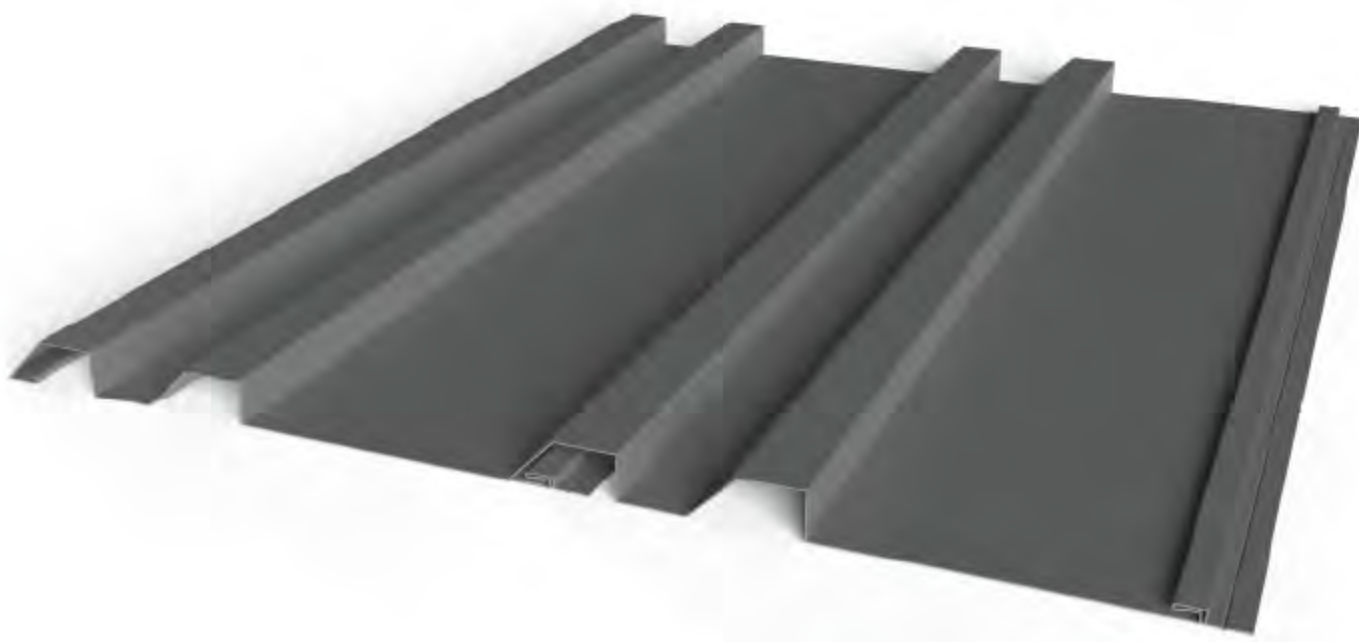


Vantell Elite Insulation Board

Composed of self-adhesive WRB, magnesium oxysulfide board and polyurethane. It has high-efficiency properties such as fire prevention, thermal insulation, waterproofing, moisture permeability and structural. It can be used as a cladding panel for new buildings and energy-saving renovations to provide the overall life-cycle performance of the building protection.

Vantell Tenjin Board

Composed of TPO, galvanized steel sheet, and polyurethane, this material possesses properties such as 80% heat reflection, waterproofing, and thermal insulation. It serves as a new type of roofing and wall insulation material, reflecting solar heat while also providing interior thermal insulation and energy savings.

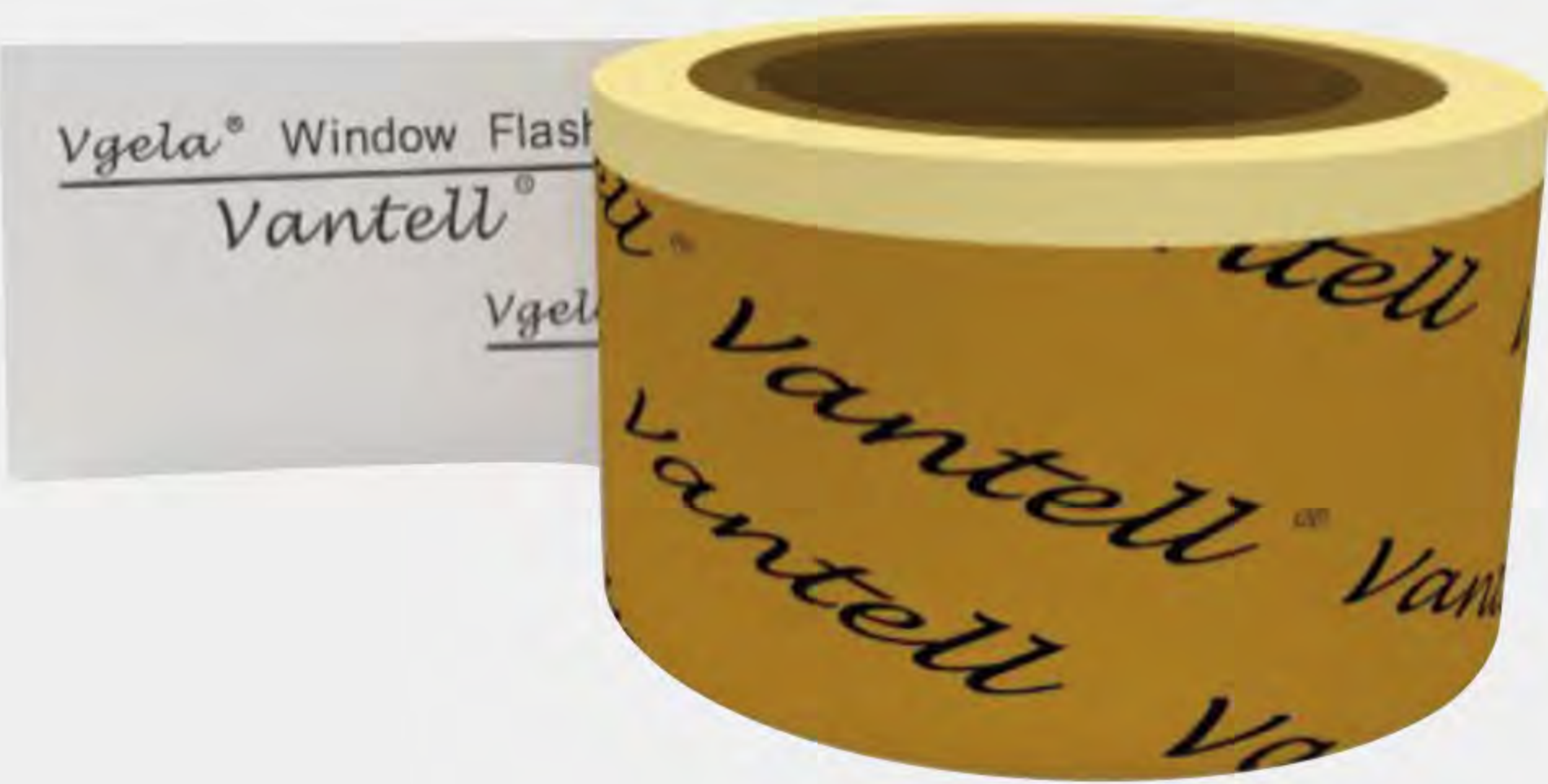


Vantell Tenjin Insulation Board

Composed of TPO, galvanized steel sheet, and polyurethane, this material is endowed with properties such as 80% heat reflection, waterproofing, and thermal insulation. Serving as a novel roofing and wall insulation material, it reflects solar heat while simultaneously providing interior thermal insulation and energy savings.

Vantell Water Management Product Introduction

Flashing

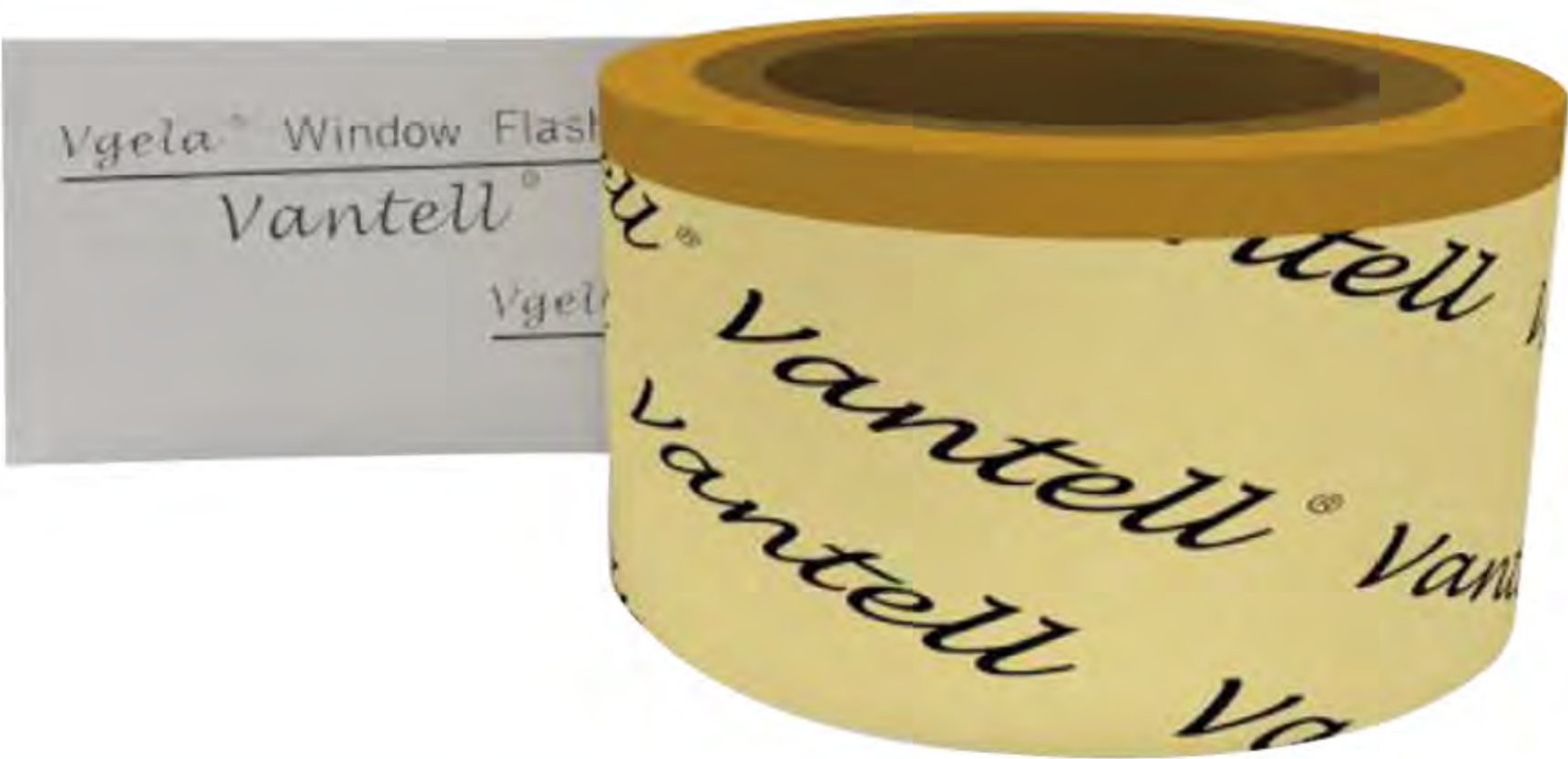


1. Vegla Window Flashing(Stucco) - Low Permeability (VWFAYP)

Model	Sizes (mm)
VWFAXP-10023	100*23m
VWFAXP-15023	150*23m
VWFAXP-20023	200*23m

As a self-adhesive waterproof vapor barrier membrane, it is mainly used in the envelope structure of ultra-low energy consumption buildings. It is used as an airtight vapor barrier material on the inside of doors and windows, and the surface can be plastered directly.

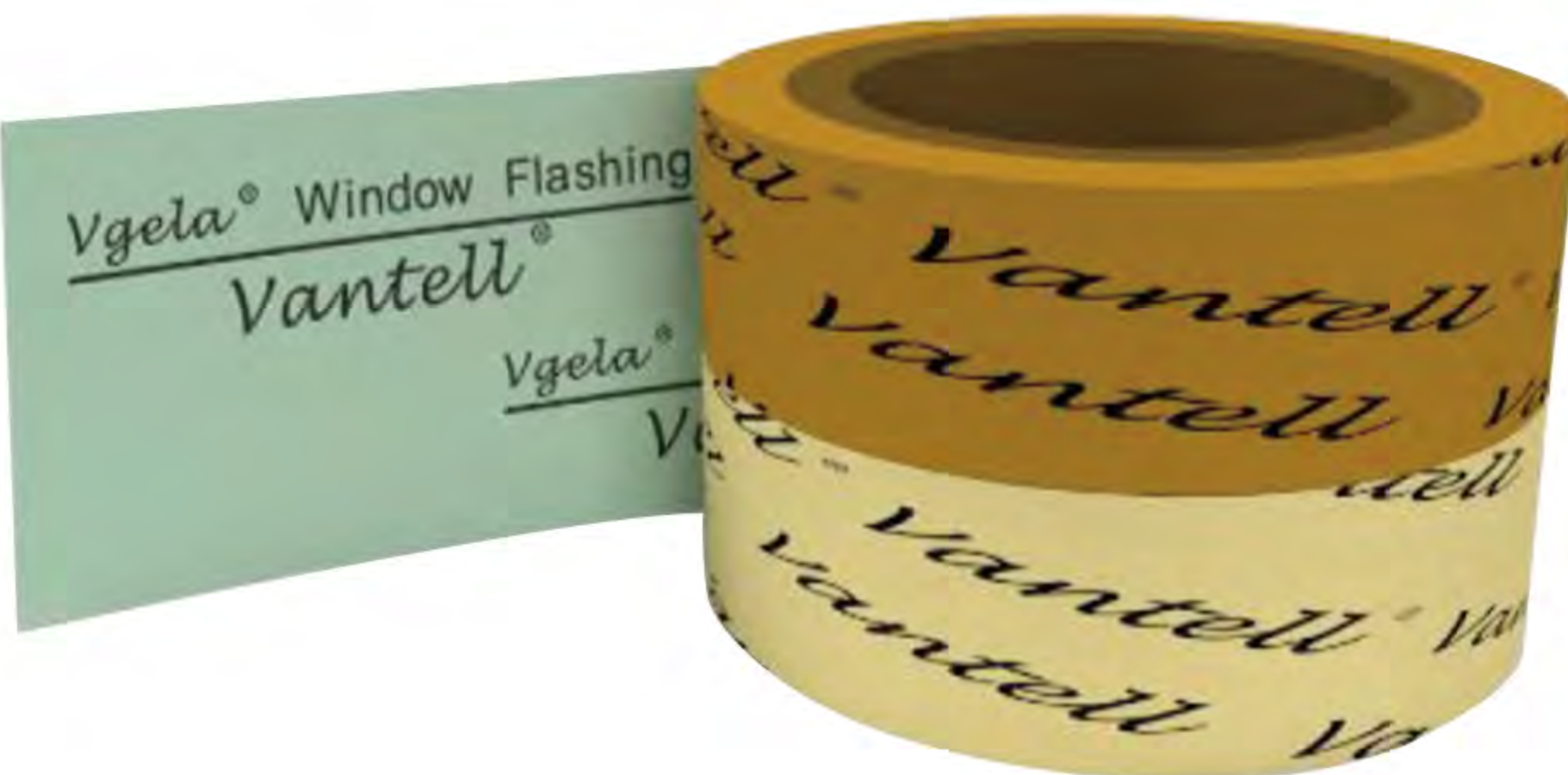
2. Vegla Window Flashing(Stucco) - High Permeability (VWFHYP)



Model	Sizes (mm)
VWFHYP-10023	100*23m
VWFHYP-15023	150*23mx
VWFHYP-20023	200*23m

As a self-adhesive waterproof and breathable membrane, it is mainly used in the envelope structure of ultra-low energy consumption buildings. It is used as an airtight breathable material on the outside of doors and windows, and the surface can be plastered directly.

3. Vegla Window Flashing (VWFAXW)



Model	Sizes (mm)
VWFAXW-10023	100*23m
VWFAXW-15023	150*23m
VWFAXW-22523	225*23m
VWFAXW-30023	300*23m

It is applied to the waterproof and airtight treatment on the outside of doors and windows in the building envelope.

4. Vgela Butyl Tape (VBT)



Model	Sizes (mm)
VBT-5023	50*23m
VBT-10023	100*23m
VBT-15023	150*23m
VBT-22523	225*23m
VBT-30023	300*23m

High-performance waterproof materials are mainly used in various scenes, joints and entire waterproof areas, and are used in roofs, walls, bathrooms, terraces, etc.



5. Double Sided Butyl Tape (VDSBT)

Model	Sizes (mm)
VDSBT-5023	50*23m
VDSBT-10023	100*23m

It is mainly used for overlapping the interfaces of various materials, and is used for overlapping indoor vapor barrier membrane walls, floors, and ceilings.



8. Vegla Flexible Tape (VFT)

Model	Sizes (mm)
VFT-7610	76*10m
VFT-10010	100*10m
VFT-15010	150*10m
VFT-22510	225*10m
VFT-30010	300*10m

Air tightness treatment for various pipes when they exit the roof and wall.



6. Double Sided Seam Tape (VDST)

Model	Sizes (mm)
VDST-5020	50*20m

It is used in the double-sided overlap of various waterproof and breathable fabrics and waterproof vapor barrier membranes.



9. Non-self-adhesive plastering window sealing breathable tape (VWPUHX)

Model	Sizes (mm)
VWPUHX-10023	100*23m
VWPUHX-15023	150*23m

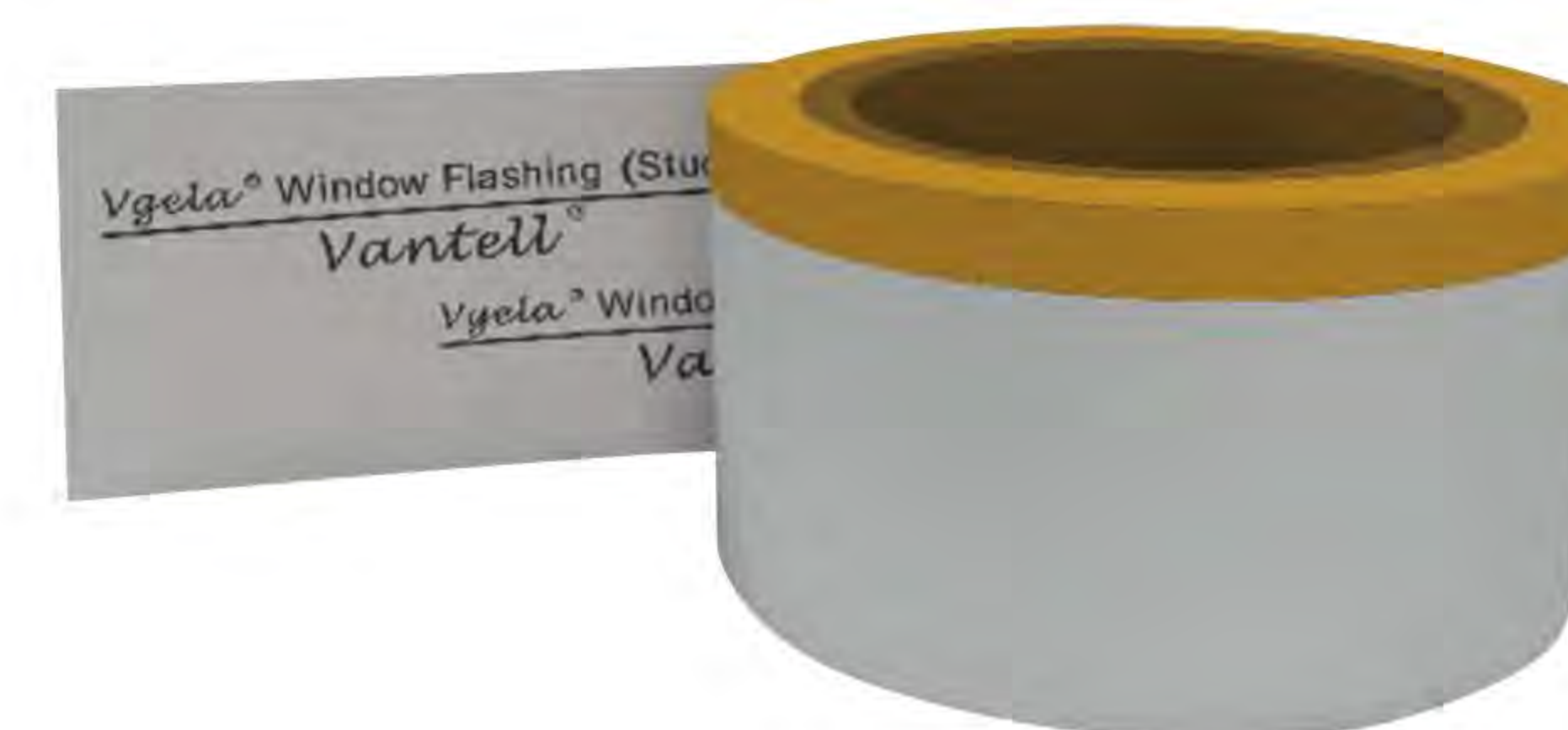
As a non-self-adhesive waterproof and breathable tape, it is mainly used for maintenance structures of ultra-low energy consumption buildings. It is used under conditions where the bonding environment on the outside of doors and windows is poor.



7. Vegla Seam Tape (VSST)

Model	Sizes (mm)
VSST-5020	50*20m

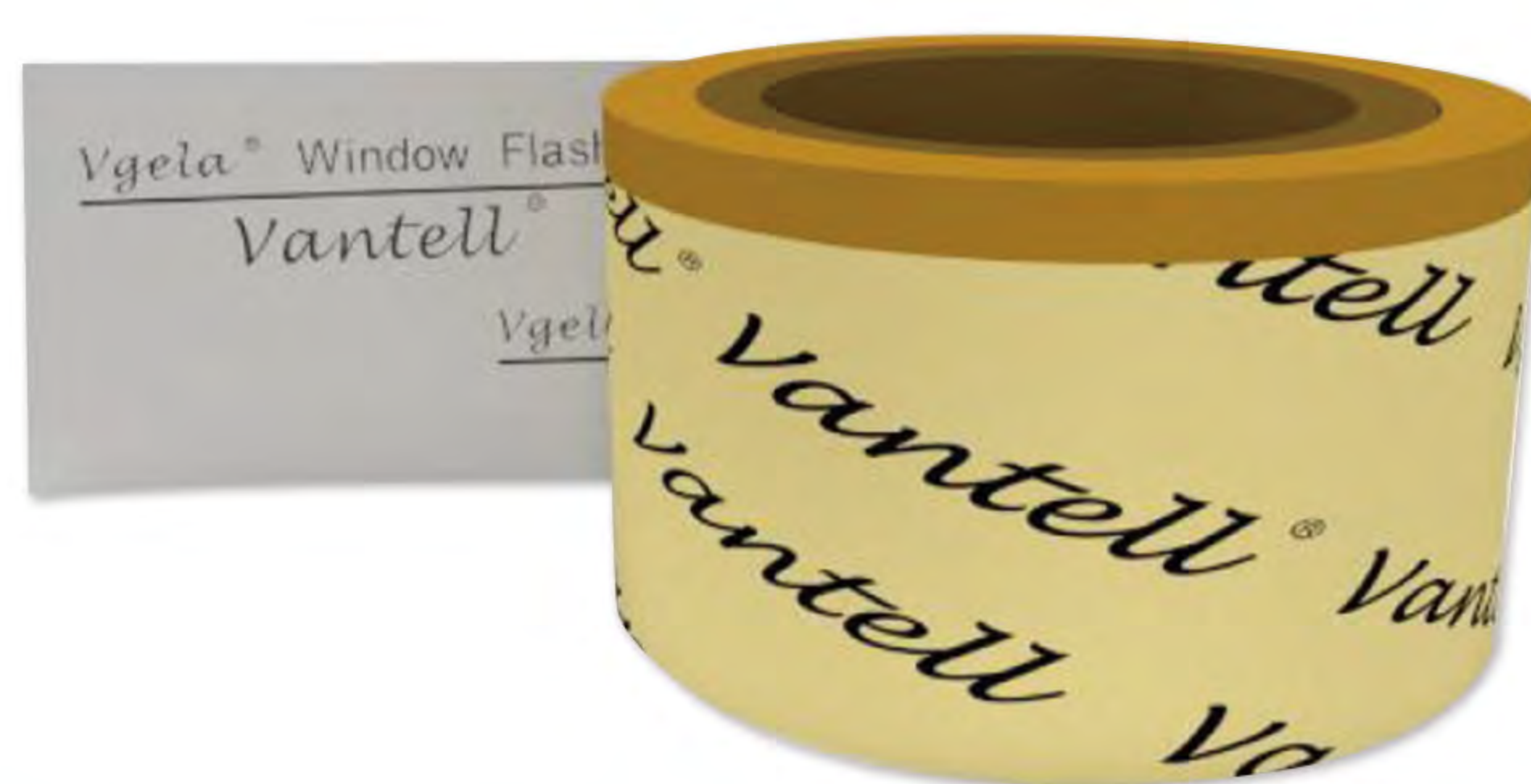
Applied to various overlapping material interfaces and airtight treatment of joints.



10. Non-self-adhesive plastering window sealing vapor barrier tape (VWPUAX)

Model	Sizes (mm)
VWPUAX-10023	100*23m
VWPUAX-15023	150*23m

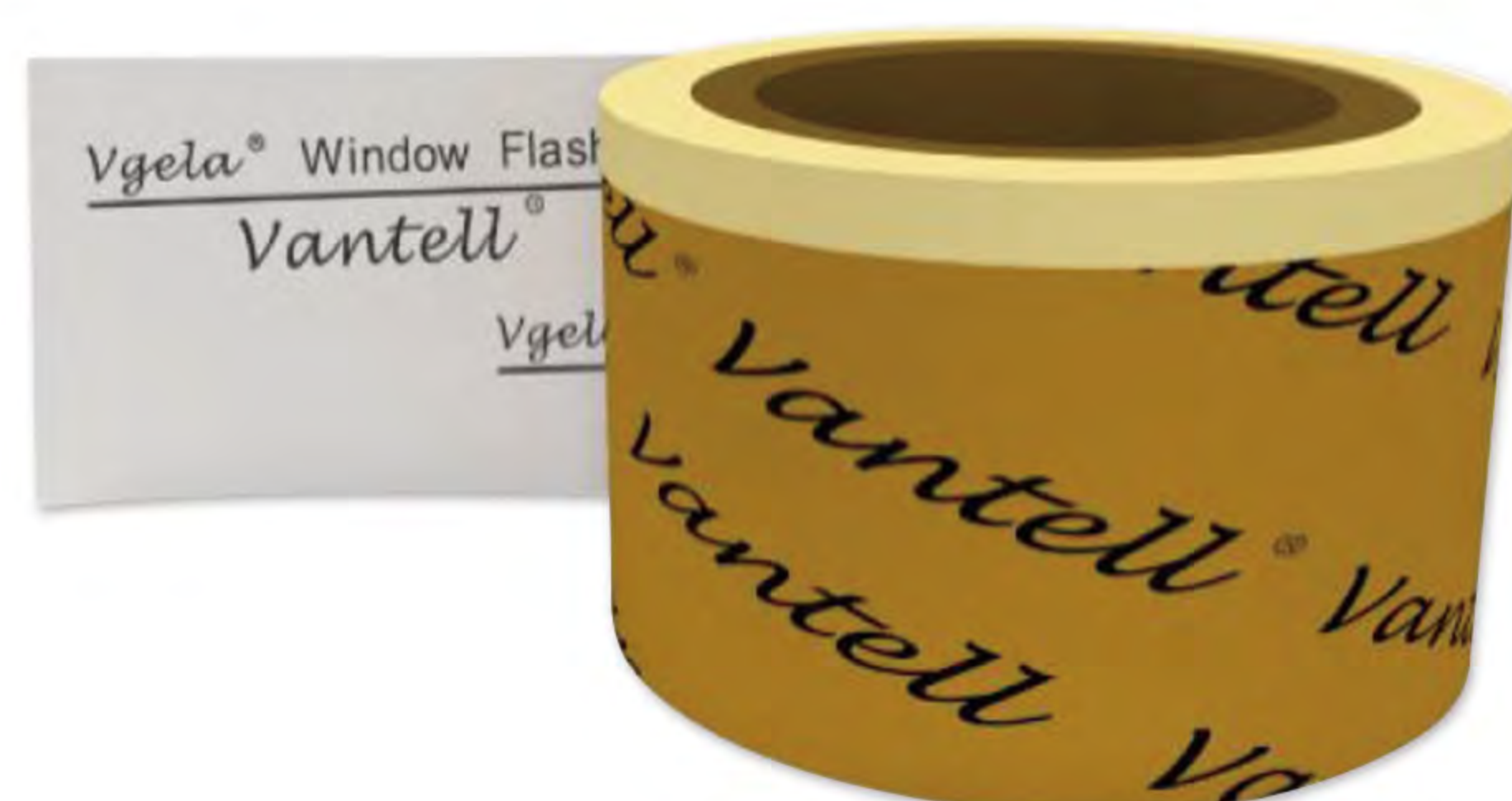
As a non-self-adhesive waterproof and vapor barrier tape, it is mainly used for maintenance structures of ultra-low energy consumption buildings. Used under poor bonding conditions on the inside of doors and windows



11. Acrylic plastering breathable tape (VSTHYP)

Model	Sizes (mm)
VSTHYP -10023	100*23m
VSTHYP -15023	150*23m
VSTHYP -20023	200*23m

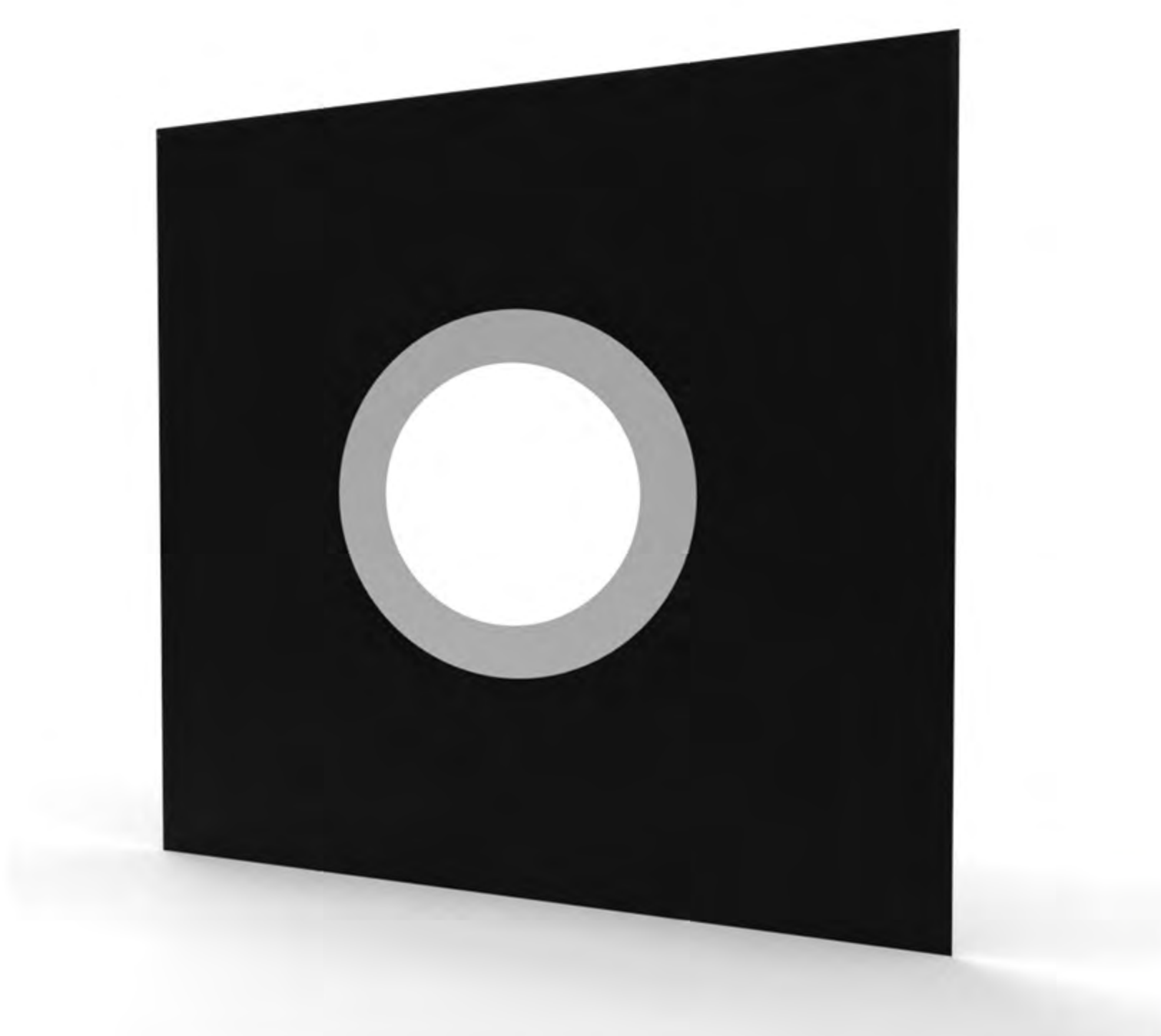
As a self-adhesive waterproof and breathable membrane, it is mainly used in the envelope structure of ultra-low energy consumption buildings. It is used as an air-tight breathable material on the outside of doors and windows, and the surface can be plastered directly.



12. Acrylic plastering vapor barrier tape (VSTAYP)

Model	Sizes (mm)
VSTAYP -10023	100*23m
VSTAYP -15023	150*23m
VSTAYP -20023	200*23m

As a self-adhesive waterproof and vapor barrier membrane, it is mainly used in the envelope structure of ultra-low energy consumption buildings. It is used as an airtight and breathable material on the outside of doors and windows, and the surface can be plastered directly.



13. Vantell Flexible Pipe Flashing

Vantell Flexible Pipe Flashing provides a durable, cost-effective solution for sealing various pipes passing through the exterior walls of buildings. Vantell Flexible Pipe Flashing features self-adhesive properties, allowing for excellent pipe sealing on various surfaces, protecting the building envelope from the effects of rainwater and moisture.



Vantell Water Management Product Introduction

RainScreen



1. Rainscreen (VRS)

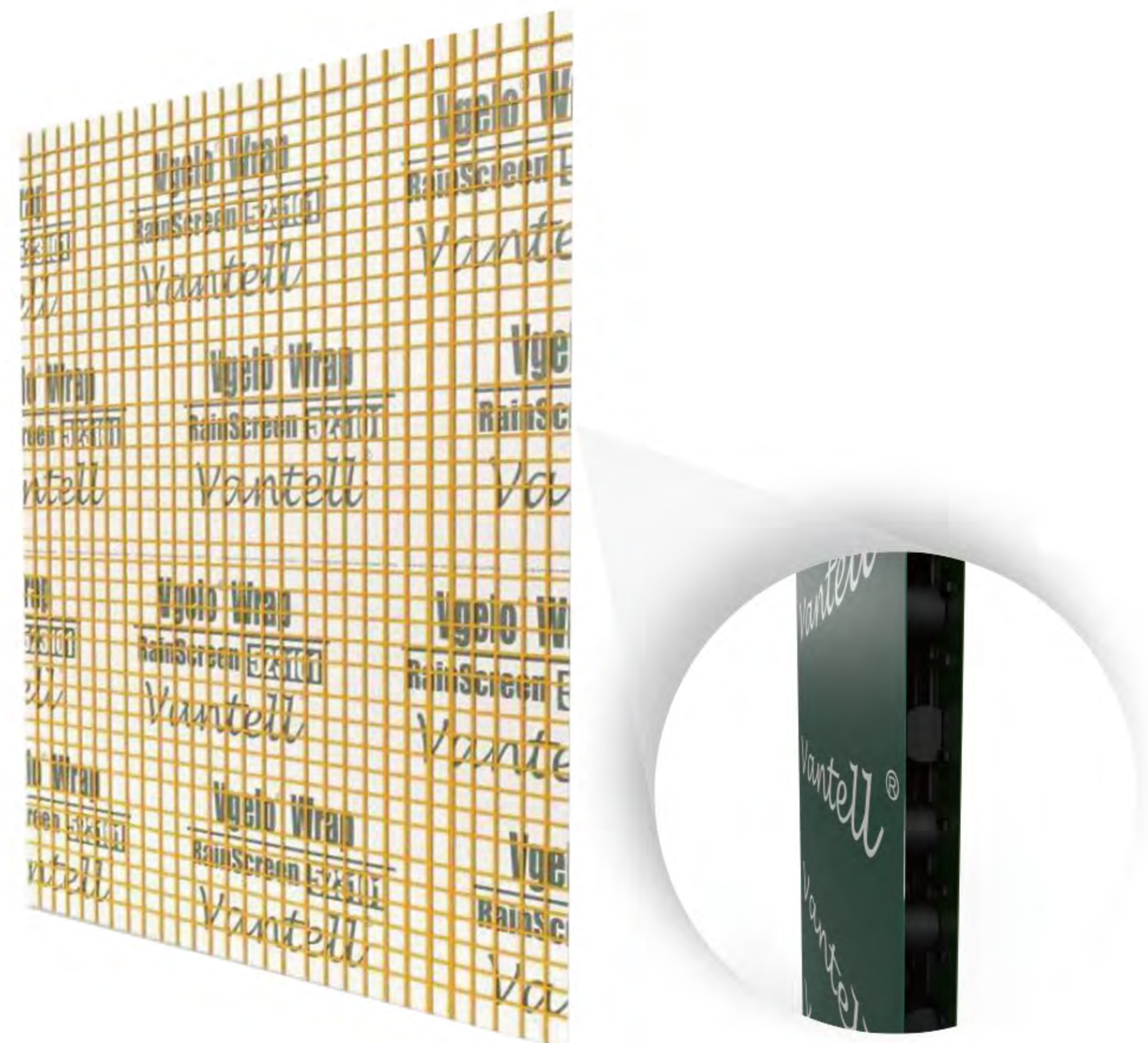
Model	Sizes (mm)
VRS52363	1524*15.24m
VRS523101	1524*15.24m



Rainscreen breaks capillary action, facilitates drainage and ventilation, dries the surface of the insulation layer and the back of the plastering surface in the building envelope, prevents cracking, extends its service life, and at the same time ensures the long-term stability of energy efficiency. The three-dimensional structure of the rain-screen can reduce material costs and installation costs.

2. Plasterable Rainscreen (VRS-S)

Model	Sizes (mm)
VRS-S52363	1524*15.24m
VRS-S523101	1524*15.24m



The combination of rainscreen and plastering layer grid can directly plaster to reduce transportation costs and construction costs, shorten the construction period, and greatly reduce the overall cost.

Vantell Water Management Product Introduction

Housewrap



1.Vgelo Flat Housewrap (VVC)

Model	Sizes (mm)
VVC323	1524*30.48m

With excellent windproof and rainproof properties, it can be used as a waterproof layer, airtight layer, and moisture vapor diffusion barrier component in wooden structures, steel structures, and concrete structures to withstand severe weather for a long time and protect structures, insulation layers, and cladding panels. , maintain long-term effectiveness of energy efficiency.



2.Vgelo Self-Adhesive Housewrap (VWCSA)

Model	Sizes (mm)
VWD52363	1524*15.24m
VWD523101	1524*15.24m

Basic on the classic Vgelo Housewrap with latest Self-adhesive feature in order to build a stronger air tightness building with less labor.



3.Vgelo Drainable Housewrap (VWD)

Model	Sizes (mm)
VWD52315	1524*30.48m

On the basis of ensuring the excellent waterproof and permeable performance of the plane, a drainage channel is added to break the capillary action, dry the back of the decorative panel and the insulation layer, and more effectively ensure the long-term effectiveness of energy efficiency.



4.Veglo Rainscreen Housewrap (VWD)

Model	Sizes (mm)
VWC323	1524*30.48m



6.Roof Underlayment Permeable(VRU)

Model	Sizes (mm)
VWLLVRS52363	1524*15.24m

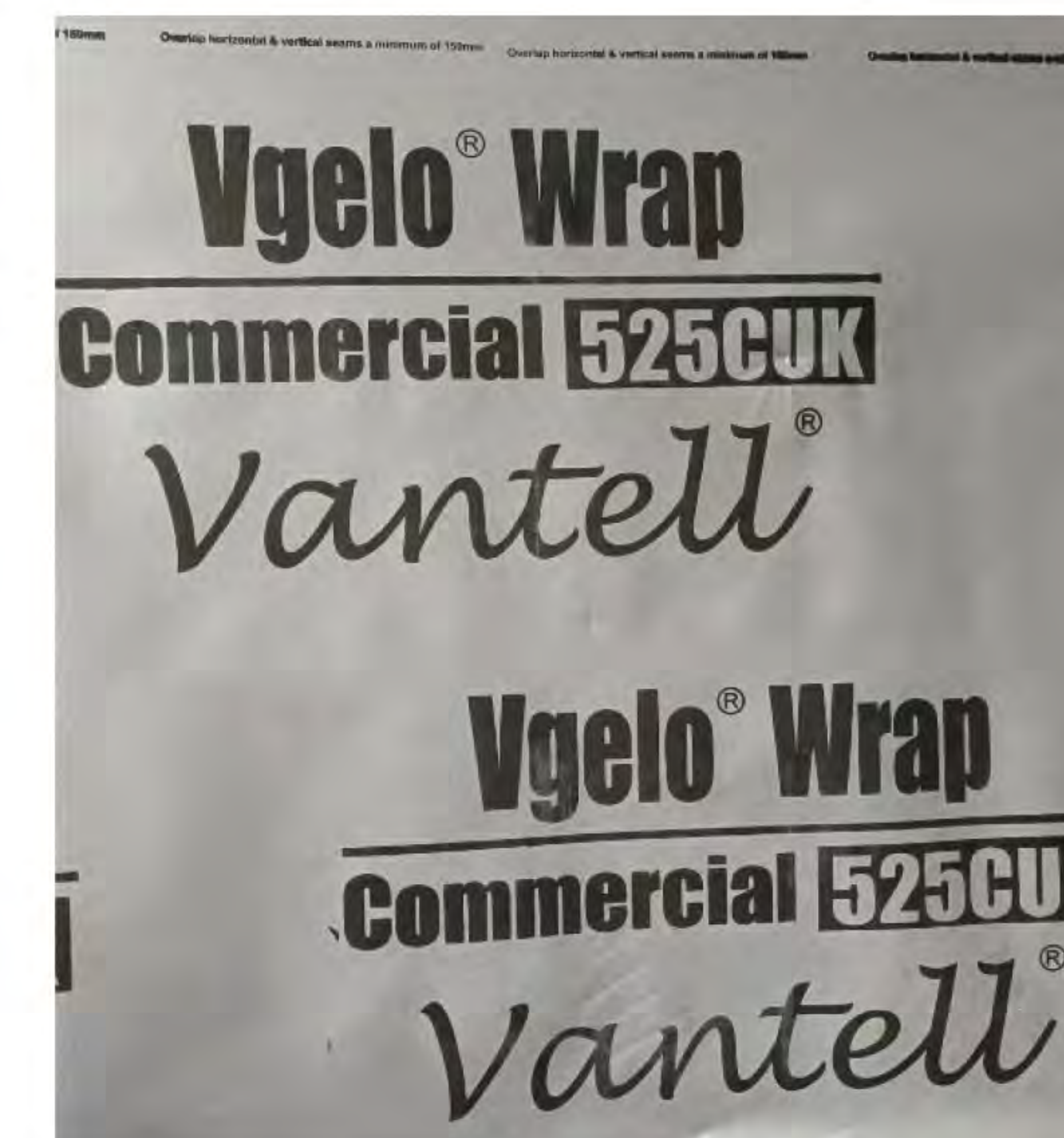
It is a combination of flat waterproof and moisture-permeable cloth and rainproof curtain wall. It has the functions of two products at the same time, reducing transportation and installation costs, shortening the construction period, and greatly reducing the overall cost.

Used in combination with air-insulating membranes on sloped roofs with insulation layers, it has the characteristics of large moisture permeability, waterproof, moisture-permeable, and weatherproof.



5. Veglo Rainscreen Housewrap (stucco) (VWDS)

Model	Sizes (mm)
VWDS52363	1524*15.24m
VWDS523101	1524*15.24m



7.Roof Underlayment Permeable Plus (525CUK)

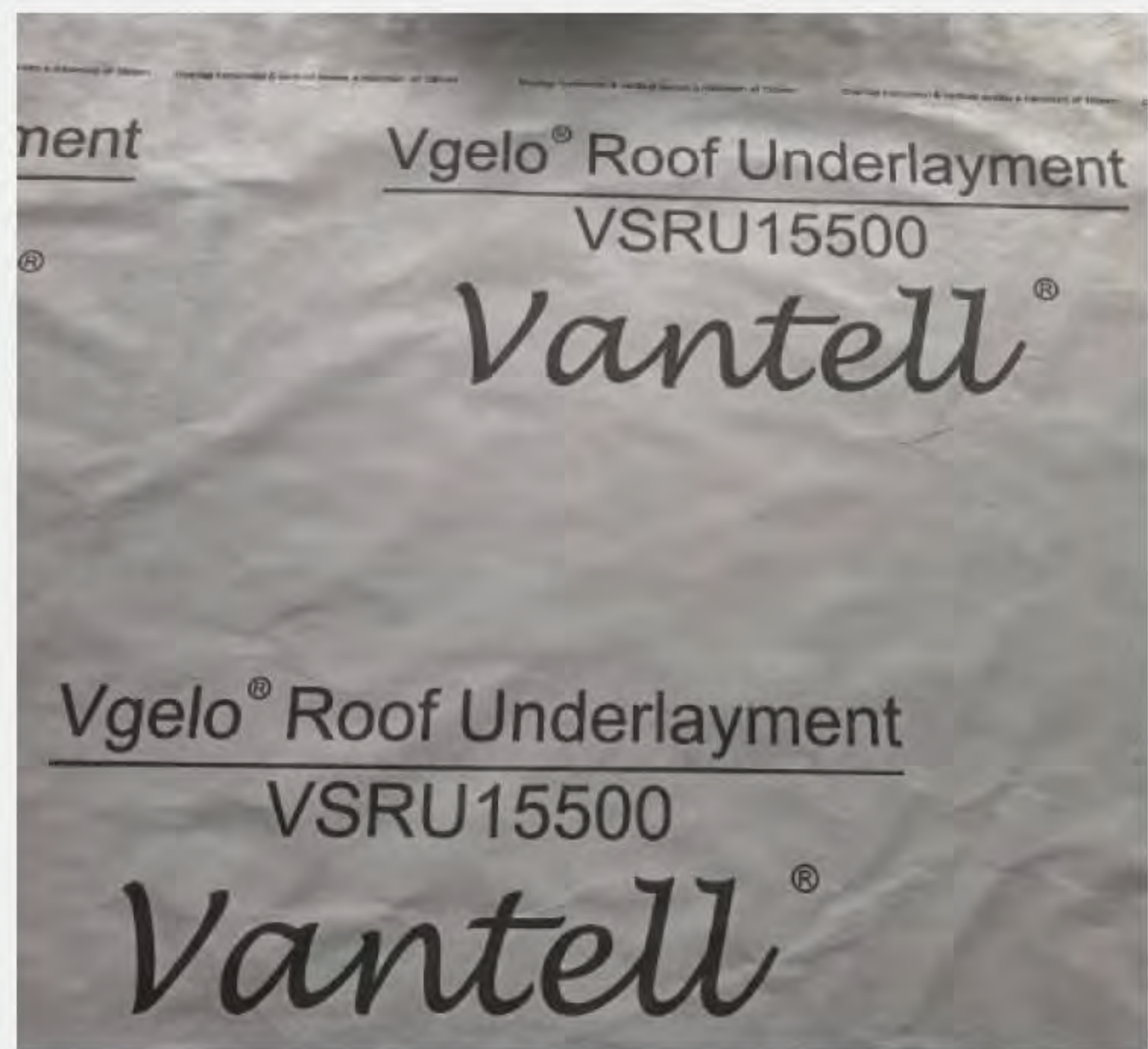
Model	Sizes (mm)
525CUK	1500*50m

On the basis of the waterproof and breathable cloth with rainproof curtain wall, a plaster layer structure is added to further improve the construction efficiency and reduce the overall cost. At the same time, they have their own excellent performance.

Used in combination with air-insulating membranes on sloped roofs with insulation layers, it has the characteristics of large moisture permeability, waterproof, moisture-permeable, and weatherproof.

Vantell Water Management Product Introduction

Vapor Barrier



1.Vgelo Roof Underlayment(VSRU)

Model	Sizes (mm)
VSRU-SA4100	1219*30.48m

Used on sloping roofs, it is waterproof, vapor-proof, wind-proof, and protects the roof from severe weather for a long time, making the building healthy and safe for a long time.



2.Vgelo Roof Underlayment Plus(Reflection) (VSRU)

Model	Sizes (mm)
VSRU15500A	1500*50m

Used on sloping roofs, it is waterproof, vapor-proof, wind-proof, and protects the roof from severe weather for a long time, making the building healthy and safe for a long time.



3.Self-Adhseviel Roof Underlayment (VSRU-SA)

Model	Sizes (mm)
VSRU15500	1500*50m

Used on sloping roofs, because self-adhesive has better waterproofing, water-proofing, vapor barrier, windproof and roof protection effects, making construction more convenient and faster, and shortening the construction period.



4.Vgelo Vapor Barrier (VWMP)

Model	Sizes (mm)
VWMP 15500	1500*50m

It is used on the inside of the wall to block moisture vapor from entering the wall, and can be used as an airtight layer in cold areas.



5.Veglo Utility Moisture Wrap (VUMW)

Model	Sizes (mm)
VPU300	300

It is used in the foundation to block moisture from entering the room and the bottom of the wall, preventing the foundation from being eroded by moisture and extending the life of the building.



6.Foundation dragon frame steam barrier film (VUMF)

Model	Sizes (mm)
VUMF12	304.8*36m

The product is used to prevent moisture from entering the cavity at the bottom of the frame and wall, and to protect the bottom of the wall wooden structure or light steel structure and OSB board from moisture intrusion.

Accessory:



1 . PU sealant

Model	Sizes (mm)
VUMW15500	1500*50m

Apply sealing between various window and wall joints.



2.MS sealant

Model	Sizes (mm)
VMS300	300

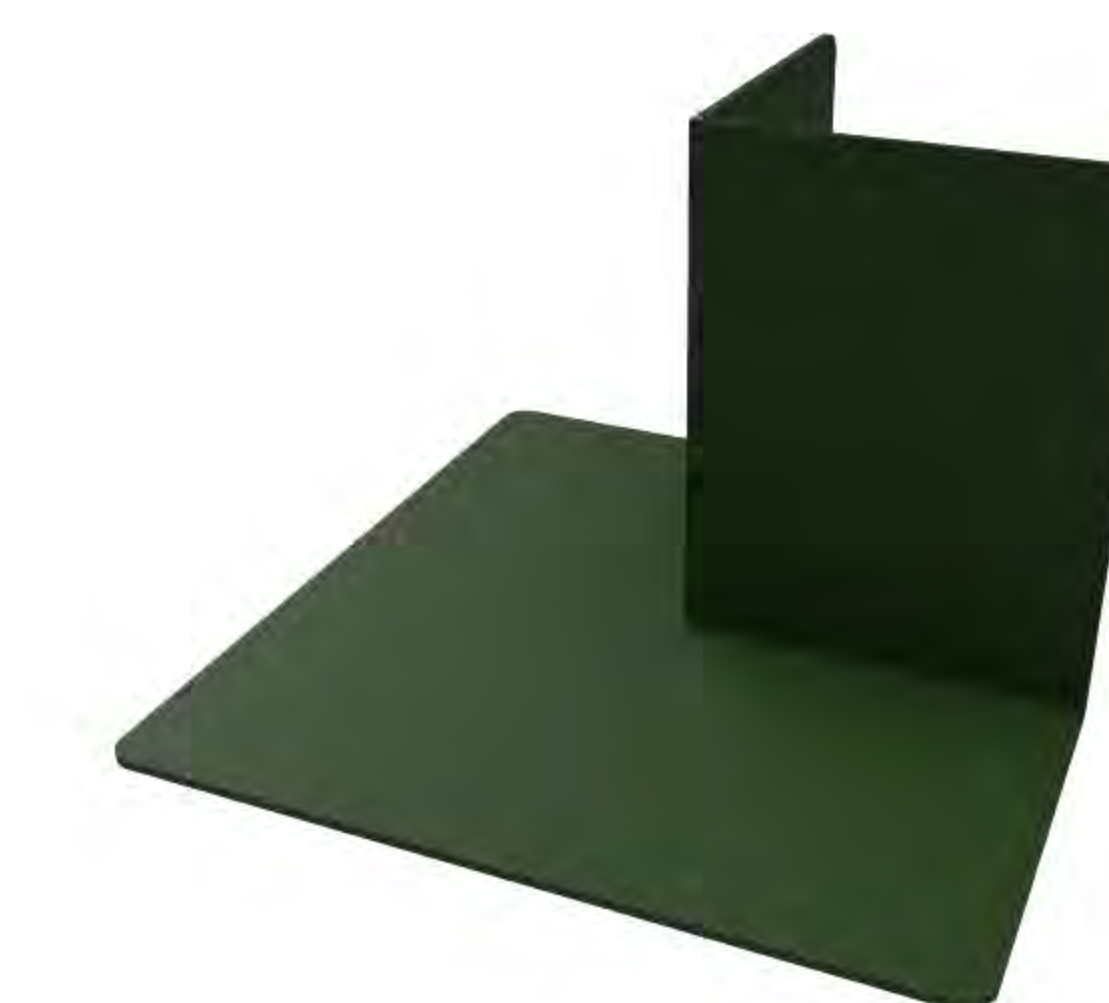
Apply sealing between various window and wall joints.



3 . Pre-pressure expansion belt

Model	Sizes (mm)
VPET2025	20*25

Apply sealing between various window and wall joints.



4.Vantell Plastic Corner Guard

Model	Sizes (mm)
VRACE12	126*126*103

Apply sealing between various windows and corners.