



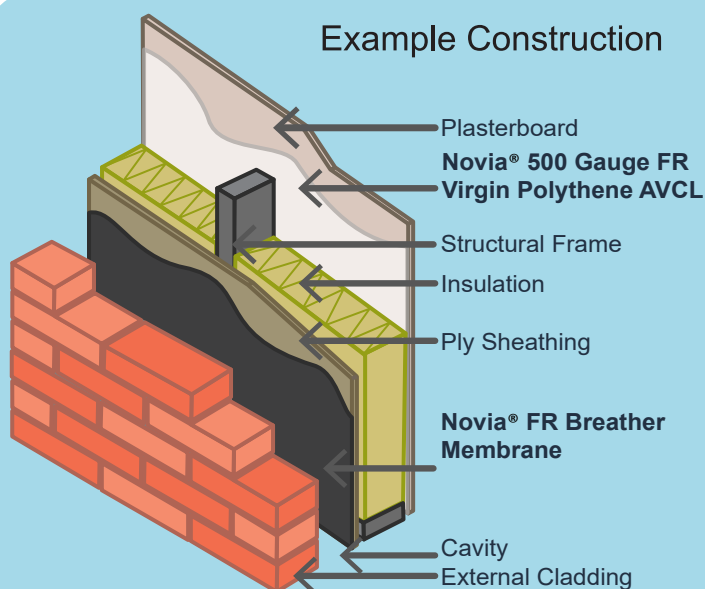
500 Gauge FR Virgin Polythene



B-s1, d0* Fire Rated Virgin Grade Polythene
Air & Vapour Control Layer

Novia® 500 Gauge FR Virgin Polythene is a Class B flame resistant, virgin grade, single-ply blown polythene Air & Vapour Control Layer (AVCL). The material meets EN 13984 and is CE marked. **Novia® 500 Gauge FR Virgin Polythene** complies to EN 13501-1 Fire Classification B-s1,d0*. The membrane has good moisture vapour resistance and is suitable for use in insulated wall or roof applications where there is a moderate risk of interstitial condensation occurring. **Novia® 500 Gauge FR Virgin Polythene** also minimises air leakage and energy heat losses, improving the long-term energy efficiency of constructions. It is a low cost solution for standard and high rise constructions, supplied single wound in 1.5m x 50m rolls. **Novia® 500 FR Gauge Virgin Polythene** is a milky white translucent polythene, with no text or images, which allows for ease of installation to the structural framework.

Example Construction



Key Features:

- CE marked to BS EN 13984
- EN 13501-1 Fire Classification B-s1,d0*
- Low cost fire rated solution for both standard and high rise and high risk constructions
- 75m² supplied single wound in 1.5m x 50m rolls
- Milky white, translucent material allows for ease of installation to framework
- Minimises interstitial condensation and improves insulation performance
- Minimises air leakage and energy heat losses
- Helps towards BS 5250 requirements

For projects that require a fully non-combustible fire rated AVCL we also offer **Novia® FlamePro A1 FR**. See datasheets for more product specific information.

	Value	Units	Test Method
Roll Width	1.5	m	
Roll Length	50	m	
Roll Weight	10	kg	
Thickness	0.125	mm	BS EN 1849-2
Tensile Stength MD / CD	>16 / >16	N/mm ²	BS EN 12311-2
Elongation MD / CD	>600 / >600	%	BS EN 12311-2
Tear Resistance MD / CD	>50 / >50	N	BS EN 12310-1
Water Vapour Resistance in Sd	100	m	BS EN 1931
Water Vapour Transition Resistance	500	MNs/g	BS EN 1931
Water Tightness (2kPa)	Pass		BS EN 1928
Air Leakage	0	m ³ /h/m ² @ ±100Pa	

*Valid for substrates with fire class A2-s1, d0 or A1 with density of at least 515kg/m³ with no cavity between product and substrate. Product tested to EN 13501-1.



Use the QR code to link direct to the product webpage.



NOTE: COSHH safety datasheets available upon request.

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Generic Novia AVCL Information

Air and Vapour Control Layers (AVCLs) should be installed on the warm side of the building envelope, within all insulated wall or roof applications. AVCLs should normally be used in conjunction with Novia breather membranes which are installed on the cold side of the building envelope, before cladding is installed.

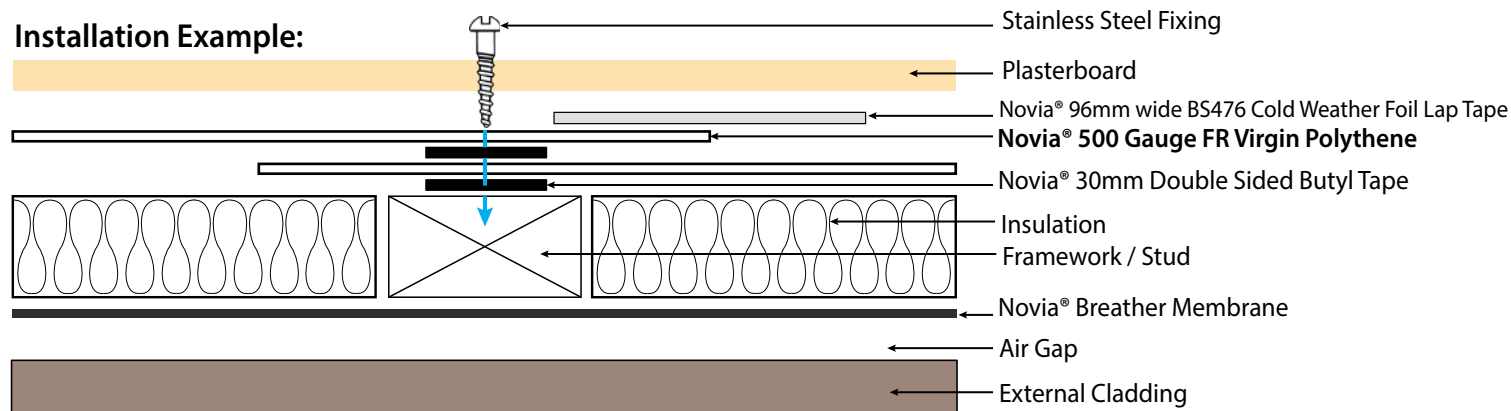
Novia AVCLs will only perform correctly if properly installed. It is therefore essential to use Novia AVCL tapes, as part of a two-tape sealing system. For best results, **Novia® Double-Sided Butyl Tape** should be used in conjunction with a single sided lap tape, either **Novia® BOPP Tape** or **Novia® Aluminium Foil Tape**. If the AVCL is not installed using the Novia two-tape sealing system, it will not provide the necessary building design outcomes. A poorly installed AVCL will not prevent structural damage from unwanted interstitial condensation, which can lead to future structural failures (such as rotten timbers) and can also reduce the thermal performance of the insulation. One of the major causes of interstitial condensation problems within finished buildings is due to poorly installed membranes, and can often be due to the use of incorrect tapes.

Installing Novia® 500 Gauge FR Virgin Polythene

We recommend the use of **Novia® 30mm wide Double-Sided Butyl tape** and **Novia® 96mm wide BS 476 Cold Weather Aluminium Foil Lap Tape**. In addition, **Novia® Airseal 310 FR AVCL sealant** can be used in all applications where additional sealing is required, for example internal corners, floor sections or window reveals. See individual tape and sealant datasheets for further product specific information.

- We recommend that in order to improve overall airtightness, Novia butyl tape is pre-applied to the construction framework on areas where a mechanical fixing is to be made. By preparing the installation in this way when mechanically fixing either the AVCL membrane to itself, and/or to the final internal lining, an airtight seal will be maintained.
- Using suitable galvanised or stainless steel mechanical fixings, which will be permanent, attach the membrane to the framework structure.
- All membrane joints should have a 150mm overlap and, where possible, be situated on a stud, rafter, timber or other framework.
- Care should be taken to ensure that the membrane is not damaged during installation, and that all service entry points are properly sealed with Novia tapes.

Installation Example:



Please note - this diagram is not to scale and should only be used as guidance for the installation.

General Notes for Air & Vapour Control Layers

The passage of water vapour through a building envelope needs to be correctly managed by Air & Vapour Control Layers (AVCLs) to limit unwanted and damaging condensation within the interstitial layer (the layer of the external building fabric, walls/roof and insulation). Interstitial condensation occurs over the winter in the UK as heavily moisture-laden warm air, generated from within the structure, moves outwards through the building envelope and cools, unless an AVCL is correctly installed. Due to a typical 20°C to 25°C temperature difference between the internal and external environmental conditions, warm, moist air would cool and condense as it moved through the building envelope. This is because cool air holds much less moisture compared to warm air. If warm air already has a high humidity it will release any excess moisture into the atmosphere in the form of water droplets (ie condensation). This water will damage the internal structures of the building, such as wooden timbers, over the long term and reduce the thermal performance of the insulation. As little as 3% moisture deposited within the interstitial layer can reduce the stated thermal performance of some types of insulation by 30% or more.

AVCLs as Vapour Control Layers

Novia AVCL products are used to manage the transition of water vapour through the building envelope. Water vapour is initially present in a building due to the construction process, but it continues to be generated on an on-going basis as a result of occupants general use of the building (for example steam from showers & kitchens etc). One way that water vapour moves through the building envelope is by the process of diffusion, whereby it passes directly through a material rather than via any breaks or holes in the structure itself. However, direct moisture diffusion through materials is not the only way that water vapour moves through a building structure.

AVCLs as Air Leakage Barriers

Novia AVCL products will also prevent the unwanted movement of air through any physical holes within the structure, a process which is referred to as air leakage, which is a naturally occurring effect caused by the heat transfer process of convection. Prevention of air leakage is vital to reduce expensive convection energy losses and improve the energy efficiency of the final construction. This is achieved by installing a sealed and airtight barrier in the building envelope. Air leakage will also lead to the deposit of large amounts of unwanted moisture in the same way as vapour diffusion does, and installations that do not take account of these issues will inevitably have serious problems.

Other Notes

- A Novia Breather Membrane should usually be installed on the cold side of the structure to allow easy release of excess moisture vapour into the atmosphere, whilst also performing the task of a secondary protection membrane and preventing penetration by external environmental impurities such as dirt and rain.
- Novia stocks a wide range of grades and sizes of AVCL membranes and will always have one to suit your particular requirements readily available, including our reflective grades which improve the achieved U values of any given construction when installed facing a minimum 25mm cavity.
- For the optimum effectiveness of any Air & Vapour Control Layer ensure that the building is constructed fully in accordance with all current Building Regulations and Standards.
- Always handle material carefully to prevent tears and punctures. Repair any on-site damage with Novia tapes.
- All Novia products should be stored horizontally, indoors and out of direct sunlight. External storage must be on a temporary basis. When stored externally, Novia products should be covered and protected from exposure to weather conditions, especially wind, rain, frost and UV. Pallets should not be stacked.

This datasheet represents the latest understanding of the subject. However, it is for the ultimate user to determine suitability of Novia products within specific applications. The advice and information we have provided is general in nature, and is subject to future revision.

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