

# NOVIA®

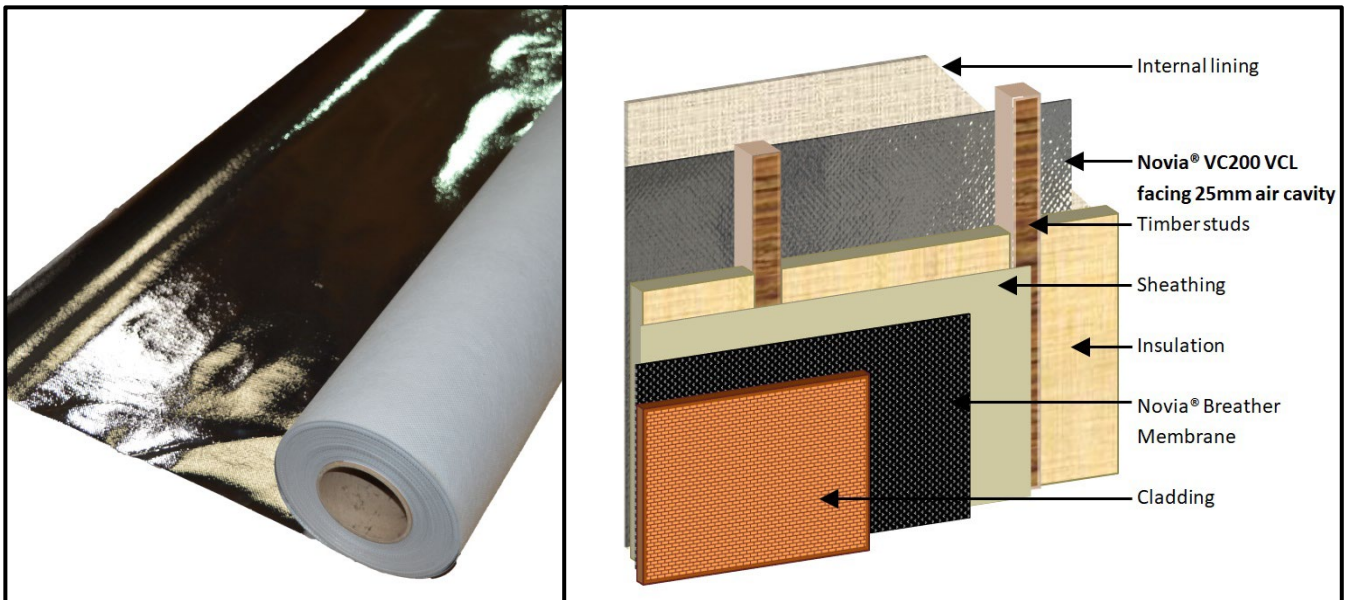
## VC200 Reflective

High Performance Reflective Air Leakage Barrier and Vapour Control Layer for Walls  
Roofs and Floors

**Novia® VC200 Reflective** is a high performance, reflective and air-tight vapour control membrane. It is designed for use as an air leakage barrier and vapour control layer (AVCL) for use in insulated wall, roof and floor applications requiring high moisture resistance. *For vapour-check applications see **Novia® VC8 Reflective**.*

This product is a reflective AVCL which delivers a low vapour permeability solution. **VC200 Reflective** helps to prevent interstitial condensation problems, and is also highly reflective and so delivers greatly improved R and u-values when correctly installed.

**Novia® VC200 Reflective** must be installed in conjunction with our dual tape sealing system to provide a fully airtight seal.



- ✓ High performance vapour control layer (AVCL)
- ✓ Low moisture permeability
- ✓ High reflectivity and low emissivity surface which can deliver improved u-values
- ✓ EN 13501-1 Fire performance class E
- ✓ CE approved to BS EN 13984
- ✓ Minimises interstitial condensation
- ✓ Improves the insulation performance
- ✓ High quality, low cost solution
- ✓ Technically advanced laminate
- ✓ Helps buildings to meet the requirements of BS 5250
- ✓ Install with Novia dual tape sealing system
- ✓ Ideal for use in conjunction with Novia breather membranes for insulated frame applications

Roll size:			
Standard width	1.5	m	
Roll weight	6.2	kg	
Roll length	50	m	
Packing	60	Rolls per pallet	
Nominal technical data:			
	Value	Units	Test Method
Nominal weight:	82	g/m <sup>2</sup>	EN 1849-2
Tensile strength MD/CD	235/120	N/50mm	EN 12311-1
Elongation MD/CD	125/7	%	EN 12311-2
Tear resistance MD/CD	125/150	N	EN 12310-1
Water vapour permeability in Sd	200	m	EN 1931 EN ISO 12572
Reflectivity	95	%	EN 15976
Resistance to water penetration	Pass		EN 1928
Reaction to fire	E	Class	EN 13501-1

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## Installation guidance:

VCLs should always be installed on the warm side (i.e. the inside) within all wall, roof or floor insulated frame applications, and would normally be used in conjunction with **Novia**® external breather membranes which are situated on the cold side (i.e. the outside).

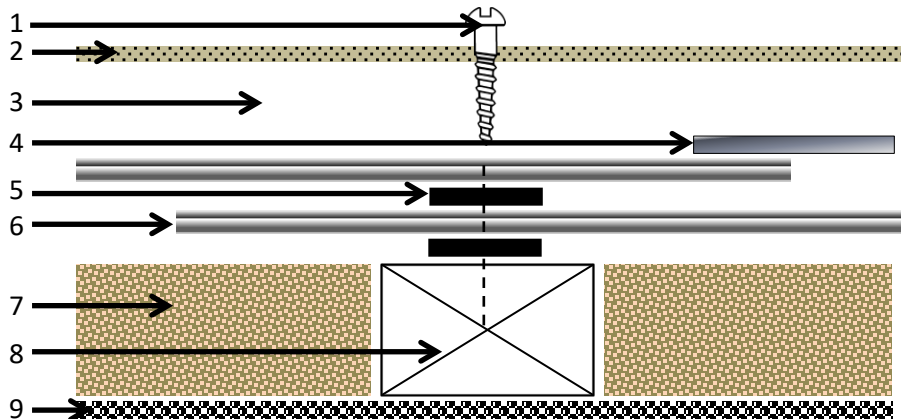
**Novia**® membranes will only perform their job if they are correctly installed using **Novia**® tapes as part of a system. **Novia**® uses a dual tape sealing system on all of our VCL products. It is essential that **Novia**® membranes are installed correctly using our tapes, otherwise these products will not provide the necessary building design outcomes. One of the major causes of condensation problems within finished buildings is due to poorly installed membranes and where incorrect tapes have been used.

All **Novia**® VCL products should be 100% fully sealed to the structure using one of our **double-sided butyl tapes**, and one of the **foil or BOPP lap tapes** to professionally complete the installation. The wider the tape used, then the stronger the final seal will be, and the easier it will be to install as there is more margin for error, so choose a tape based on your own particular application and budget.

**Novia**® recommends our **30mm wide butyl tape** and our **60mm Metallised BOPP tape** for all standard VCL installations.

- Fix the membrane to the structure using suitable galvanised or stainless fixings that will be permanent.
- All VCL membrane joints should have a minimum 150mm overlap and be situated on a stud, rafter or timber.
- We also recommend that in order to improve overall airtightness, butyl tape is pre-applied to all the areas where a fixing is to be made. By preparing the installation in this way, when fixing either the VCL membrane itself or the final wall covering such as plasterboard, then the final seal will still be maintained.
- Care should be taken to ensure that the membrane is not damaged during installation, and that all service entry points are properly sealed.
- Achieved u and R values of the construction are improved when **VC 200 Reflective** is installed facing a minimum 25mm air cavity.

See diagram below for guidance.



Key to example installation diagram:

1. Fixings
2. Plasterboard
3. 25mm air cavity
4. Novia® Metallised BOPP Tape
5. Novia® Double Sided Butyl Tape
6. Novia® VC200 Reflective AVCL
7. Insulation
8. Timber studs
9. Novia® Breather Membrane

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

## General notes:

**Novia**® stocks a wide range of grades and sizes of VCL membranes and will always have one to suit your particular requirements readily available, including our reflective grades which improve the achieved u and R values of any given construction when installed facing a minimum 25mm cavity.

The passage of water vapour through a building envelope needs to be correctly managed in order to limit unwanted and damaging precipitation or condensation within the interstitial layer (the layer of the external building fabric, walls / roof and insulation). This would occur over the winter in the UK as heavily moisture-laden warm air moved outwards through the structure and cooled, due to the typical 20c to 25c temperature difference between the internal and external environmental conditions. As cool air can hold much less moisture, warm air that already has a high humidity will release moisture into the atmosphere in the form of water droplets. Think of this process as the changing of water from a gas into a liquid. This water will damage the internal structures of the building 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.

Vapour Control Layers, also known as Air and Vapour Control Layers (VCLs or AVCL's) are used to manage the transition through the building envelope of naturally occurring water vapour. Water vapour is gaseous water (i.e. water in the form of a gas) which is produced by a range of general building uses and also by the construction process itself. 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. **Novia**® VCL 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 - 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 this is achieved by providing a sealed and air-tight barrier. However, air-leakage will also deposit large amounts of unwanted moisture in exactly the same way as vapour diffusion does, and installations that do not take account of these issues will inevitably have serious problems.

For the optimum effectiveness of any vapour control layer, ensure that the building is constructed fully in accordance with all current Building Regulations and Standards.

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