



NEOPANEL

ADVANTAGES

- (a) Following the guidelines of New Zealand's Thermal Insulation Standard (NZS 4218:2009) conservatively the thermal calculation for 70mm Caviteclad Neopanel System (over a 50mm cavity) installed over the surface of a wall incorporating an R=2.2 wall batts reaches a minimum of R= 3.65. This figure jumps to R=4.01 when 90mm Neopor is used. Both results are a massive increase from the original brick veneer which when put to the test using the same thermal calculation and assuming R=2.2 wall batts have been installed only gives an overall thermal value of approximately R=2.22. The huge increase in thermal insulation offered by the Caviteclad Neopanel System will not only keep your dwelling substantially warmer during the winter months and cooler in summer it will also greatly reduce the costs associated with energy consumption over the life of the dwelling.
- (b) Structural Raking tests that have been conducted with Exterior Insulation and Finishing Systems clearly show that the cladding is semi-flexible. Therefore unlike bricks it is able to move independently from the framing. In practice, the screw fastening are able to move a little within the Neopor substrate which greatly reduces the likelihood of future stress fractures that commonly occur in most rigid claddings - even when earthquake style movements occur.
- (c) Caviteclad Neopanel is extremely lightweight and as a finished system weighs approximately 9-10kg/m². By comparison, an average unplastered brick veneer weighs approximately 170kg/m². When this figure is extrapolated out an average 160m² single level New Zealand home a brick veneer cladding will weigh over 25 tonnes more than Specialized's Neopanel alternative.
- (d) It is a scientific fact that the external location of the Neopor EPS foam insulation puts the insulation in the best place: as far toward the outside of the building as possible where the temperature fluctuates. This reduces the amount of energy that is needed to maintain a constant temperature inside the home, and does not leave cold spots like some in-wall insulation that tends to slump over time. By insulating externally you are also able to take full advantage of the thermal mass created by the framing and internal linings of the home. Thermal mass works by using a simple principle of physics, which is that heat will move from warmer surfaces to cooler surfaces. When the sun is shining into a room or you're heating a room with an appliance or fireplace the air is warm and heat will be absorbed by the walls, floor and other surfaces in the room. This can enable you to use simple means such as natural sunlight to heat well positioned portions of the home or if you choose to cool the interior with air conditioning it will allow the building to stay cooler for longer periods using less energy to gain the result desired. By using the thermal mass of the walls you will also help to keep the energy used to heat or cool the dwelling as low as possible ensuring the dwelling remains energy efficient throughout its entire lifecycle.
- (e) The Neopanel System is fixed in place by screwing it to the framing using custom made self-taping screws. By choosing to screw the system in place rather than nailing it to the framing, any further damage to the inside of the dwelling that could result from continuous hammer reverberation in the framing during renovation is avoided.
- (f) Costings for the Caviteclad Neopanel System including all the proprietary flashings, plaster and paint (including application) make the overall system extremely cost effective when compared with recladding using face bricks. However, the cost of the Neopanel System gives substantial savings when compared to the replacement cost of plastered brick claddings or where the original brick veneer has to be plastered because matching bricks cannot be sourced.
- (g) Caviteclad Neopanel can be done in stages. The Neopor substrate and its associated flashing systems can be installed extremely quickly and efficiently and the unplastered, system can then be left exposed to the weather for several months before plastering has to commence. This staged process, if chosen, will allow many homeowners to immediately thermally insulate their homes as well as to make them semi-weathertight for the winter months. The framing and existing wall insulation will not have to be exposed to the elements for any longer than necessary.
- (h) By recladding with Caviteclad Neopanel not only will owners receive a fully BRANZ appraised dry ventilated cavity system, but the new cladding system will be extremely thermally efficient both in summer and winter and the home will be much less susceptible to future damage.