

FIREWALLS

Control of External Fire Spread

External walls, which comply with the external wall provisions of clause 7.11 of NZBC Acceptable Solutions C/AS1 will meet the performance provision of NZBC Clause C3.3.5. Litecrete panels will meet the requirements for a type A Heat Release rate in applications covered by Table 7.5 of NZBC Acceptable Solutions C/AS1. Litecrete 150 Solid panels will meet all of the performance provision of NZBC Clause C3.3.5:

- Single storey buildings 1m or more from the boundary for all purpose groups.
- Buildings up to 7m high, 1m or more from the boundary, for all-purpose groups other than SC and SD.
- Fully sprinkled buildings up to 25m high, 1m or more from the boundary for all-purpose groups other than SC, SD, SA and SR
- Buildings containing purpose group SH, and with a building height less than 10m and located 1m or more from the boundary.



Fire and Sound Rated Walls

Where a FRR or a flame barrier is required in conjunction with an STC rating, the STC rating will not be affected by the increased spacing of the mechanical fixing required to meet the fire requirements.

External Coatings

The aerated concrete/pumice combination in Litecrete wall and floor panels provides a built-in insulation value. This means that the walls are able to “breathe”, allowing water vapour (condensation) to move through the wall to the exterior of the building. Therefore, there is no requirement for additional insulation or internal linings. The concrete walls can either be painted, clear sealed or plastered. However, vapour-permeable paint, sealer or plaster systems should be used. We recommend systems which have been appraised and/or meet the NZBC requirements.

The benefit of large, flat panel surfaces means that only a skim-coat of plaster plus the paint coating is required for the exterior finish; an extremely cost-effective, durable solution. For interior surfaces there is a large variety of paint or plaster systems. There are also clear sealers available. In all cases the manufacturers’ application and maintenance instructions must be followed, with particular attention given to the following areas:

- Weathering, flashing and sealing systems at door and window openings, junctions with other materials and any other penetrations of the exterior envelope. Sealant details at flat sills must not be used. The need for head flashings will depend on the configuration and design of the detail but are strongly recommended in all circumstances.
- The ground/ foundation/ floor/ wall interface. Particular care needs to be given to ensure that minimum distances between ground and floor level, as stated in NZS 3604:1999, are met.
- External plaster systems are installed and cured within the temperature limitations, climatic and curing conditions set by the manufacturer. For polymer-modified, fibreglass-reinforced and cement-based plasters the temperature range will typically be between 10°C and 30°C.
- The finished external plaster system is sealed and protected from the weather with a vapour-permeable coating system.

Plaster systems:

Sto brand plaster system for Litecrete panels (www.sto.co.nz)

Rockcote brand plaster system for lightweight concrete (www.rockcote.co.nz)

Plaster Systems Ltd's “Ezycote” (www.plastersystems.co.nz)

Coating (Paint) Systems:

BRANZ recommend systems such as Resene X200 for lightweight concrete exteriors. This system consists of Resene sealer/primer and two Resene X200 topcoats in the specified colour (www.resene.co.nz).

Clear Sealer System:

StoPur WV200 aqueous polyurethane resin sealing coat, with a matt finish. This 2-part product is a well proven, vapour-permeable system enabling the achievement of a durable, natural concrete appearance to exterior surfaces (www.sto.co.nz).

Internal Linings

If required the internal lining (Gib® plasterboard) can be fixed direct to Litecrete 220 mm thick wall panels using Fosroc Panel Bond or Selleys Liquid Nails adhesive in beads at 250mm centres. The linings can also screw fixed into 40 mm timber battens attached to Litecrete panels. Gib® coarse thread screws, 32mm x 6 gauge are required at maximum 300mm centres around the sheet edges and at maximum 450mm centres horizontally and vertically within the body of the sheet. The Gib® Board sheet edge distance is a minimum of 12mm.

Finishing of the Gib® Plasterboard is in accordance with Winstone Wallboards Limited technical literature (www.gib.co.nz).

Limitations

The maximum vertical loading allowed on Litecrete Firewalls is 15 kN/m².

