

## 5. NEW ZEALAND BUILDING CODE



### General

When constructed and maintained in accordance with this Manual, an Ambionse wall will satisfy the following provisions of the New Zealand Building Code (NZBC):

Clause B1:	STRUCTURE
Clause B2:	DURABILITY
Clause C1:	OUTBREAK OF FIRE
Clause C3:	SPREAD OF FIRE
Clause C4:	STRUCTURAL STABILITY DURING FIRE
Clause E2:	EXTERNAL MOISTURE
Clause E3:	INTERNAL MOISTURE
Clause F2:	HAZARDOUS BUILDING MATERIALS
Clause G6:	IMPACT AND AIRBORNE SOUND
Clause H1:	ENERGY EFFICIENCY

### Structure & Durability

The reinforced concrete core of an Ambionse wall easily exceeds all the requirements for durability and the Ambionse block will meet the requirements providing the external claddings and internal linings are properly installed and maintained for the life of the structure.

A slight yellowing of the surface of the Ambionse block is normal when exposed to ultraviolet radiation for an extended length of time, but this can simply be brushed or washed off if necessary to apply plaster. When finishing with other claddings or linings, it doesn't need to be removed.

### Fire

Because the structure of the finished wall is a reinforced concrete wall, the following fire resistant ratings apply:

190 Series	FRR	90 minutes
250 Series	FRR	180 minutes
300 Series	FRR	240 minutes

Ambionse blocks are made from fire retardant EPS raw material, which will not sustain a flame, it will simply melt away from it. Any type of Gib® plasterboard at least 10mm thick is a suitable material to provide a 10-minute flame barrier provided the sheets are screw-fixed at 300mm centres around the edges and along the sheet centreline (BRANZ Report FAR2268).

## Moisture

The nature of concrete allows the creation of a virtually weathertight wall. Because Ambionse is simply formwork for reinforced concrete, the same benefits should be expected for a completed Ambionse wall. As with any concrete wall, full information on flashing and sealing of joinery should be sourced from the manufacturers of the cladding and windows used to complete the home to meet the requirements under the Building Code.

## Hazardous Building Materials

No components of the Ambionse wall are hazardous to either the builder constructing the wall or the inhabitants of the Ambionse home. The concrete and the Ambionse block are both inert and produce no off-gassing.

## Impact & Airborne Sound

There are no requirements for sound attenuation under the Building Code for unattached housing, but you will notice a significant improvement in the quietness with an Ambionse home, compared with a conventional timber framed house.

An intertenancy wall solution that complies with the NZBC has been developed with Ambionse. A field test was carried out to confirm a Field STC of FSTC 53 using the 250 Series Ambionse block. (The NZBC requires a Field STC minimum value of FSTC 50). Full specifications for this wall are available from Styrobeck Plastics on 0800 262 466 or [www.ambionse.co.nz](http://www.ambionse.co.nz).

## Energy Efficiency

NZS 4214:1977 sets out the procedure for determining the R-Value of building materials. The completed Ambionse wall has an R-value of at least R3.0. This is well in excess of the NZBC requirements of R0.6 for solid construction (concrete) and R1.5 for non-solid (timber framed) construction.

