

Living spaces should be arranged so that the rooms where people spend most of their hours are located on the northern side of the unit. Uninhabited rooms, such as bathrooms and storerooms, can be used to screen unwanted western sun or to prevent heat loss on the south-facing facades. Living rooms should ideally be placed on the northern side.

The longer axis of the dwelling should be orientated so that it runs as near east/west as possible.

4.4.1.2 The roof overhang to the northern wall shall be sufficient to shade the windows from midday summer sunshine in accordance with SANS 204. Windows facing east and west should be limited in number and confined to the minimum required for daylight and ventilation.

4.4.2 Floors

Where an underfloor heating system (e.g. in-screed, underlamine heating, undercarpet heating, undertile heating, cut-in underfloor heating, and water-based underfloor heating) is installed, the heating system shall be insulated underneath the slab with insulation that has a minimum *R*-value of not less than 1,0.

4.4.3 External walls

4.4.3.1 Non-masonry walls shall achieve a minimum total *R*-value of

- a) climatic zones 1 and 6: 2,2
- b) climatic zones 2, 3, 4 and 5: 1,9.

4.4.3.2 The following types of masonry walling comply with the *R*-value requirements:

- a) double-skin masonry with no cavity, plastered internally, or rendered externally; or

NOTE The cavity and grouted cavity walling systems exceed the minimum *R*-value of 0,35.

- b) single-leaf masonry walls with a nominal wall thickness greater than or equal to 140 mm (excluding plastering and rendering), plastered internally and rendered externally.

The requirements refer to the external walls of the habitable portions of the building fabric only.

4.4.3.3 For masonry walling types not covered in 4.4.3.2, such walls shall achieve a minimum total *R*-value of 0,35. The total *R*-value shall be determined by means of a test conducted in accordance with ASTM C 1363, ASTM C 518 or ASTM C 177. Surface film resistance shall be in accordance with SANS 6946.

4.4.3.4 Other walling requirements shall be in accordance with SANS 10400-K.

4.4.4 Fenestration

4.4.4.1 Buildings with up to 15 % fenestration area to nett floor area per storey comply with the minimum energy performance requirements.

4.4.4.2 Buildings with a fenestration area to nett floor area per storey that exceeds 15 % shall comply with the requirements for fenestration in accordance with SANS 204.

4.4.4.3 All fenestration air infiltration shall be in accordance with SANS 613.