

related test method	<b>EN 1364-1</b>
subject	<b>Guidelines on how to derive rules to reduce the number of test needed when testing non-loadbearing elements with multiple variations and field of application</b>
reference of original query	EGOLF TC2 N455 2007-09-26 Interpretation of EN 1364-1, EN 1634-1 and EN 13501-2 regarding the products Glazed partition, fixed window and openable window

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Non-loadbearing elements are for the large majority tested in 3 x 3 meter frames, casted from high density concrete. According to the direct field of application in EN 1364-1 this implies that the elements can only be installed between roofs and floors consisting of high density concrete.

This is not in line with many of the installations on the building sites in EU.

For elements not tested in 3 x 3 meters (typically unopenable windows, inspection hatches etc.) the field of application also could be broadened.

This document gives suggestions changes regarding field of direct applications for supporting construction in EN 1364-1, with the purpose of:

1. Reducing the number of test needed when testing non-loadbearing elements with multiple variations and field of application.
2. Clarifying the some of the rules that in practice can not be followed.

### **Suggestion to direct field of applications for non-loadbearing walls, regarding supporting constructions**

The field of direct application in EN 1364-1 regarding standard supporting constructions (13.4.1) is clear. The result is applicable to any other supporting construction within the same type (rigid, low density rigid or flexible) that has a greater fire resistance (thicker, denser more layers of boards, as appropriate).

Knowing that majority of all Non-loadbearing wall are tested in 3 x 3 meter high density frame does not correspond to the way the way a large part of the Non-loadbearing walls are installed at the building sights around Europe. This has not resulted in any increase safety risk, and it is in line with the majority of the national regulations.

One way the deal with this problem could be to divide the field of direct application in EN 1364-1 regarding standard supporting constructions in two groups: *Full size elements* and *Small size elements*.

*Definition on full size elements:*



A full size non-loadbearing element is a vertical separating element that goes from the floor to the ceiling. The element shall along all its horizontal edges be adjacent to a supporting construction perpendicular to its own surface.

*Definition on small size elements:*

A Small size element is a vertical separating element that is build into a full size elements ex. fixed windows, inspection hatches etc.

*Suggestion to The field of direct application in EN 1364-1 for full size elements*

The full size Non-loadbearing element can be fixed to any adjacent supporting constructions on the condition that, the adjacent supporting constructions has a resistance to fire equal to or grater than the tested full size Non-loadbearing element.

Full size elements are applicable to *small size elements* mounted in a standard rigid supporting construction.

*Suggestion to The field of direct application in EN 1364-1 for small size elements*

The result is applicable to any other supporting construction within the same type (rigid, low density rigid or flexible) that has a greater or equal to fire resistance (thicker, denser more layers of boards, as appropriate)

Small size elements tested in a standard flexible supporting construction is also applicable to standard rigid supporting constructions that has an equal to or greater fire resistance and has a thickness equal to or grater then the standard flexible supporting construction.