

FIRE RESISTANCE ACCORDING TO EN 1364-1:1999 OF A NON-LOAD BEARING GLAZED PARTITION CONSISTING OF A WOODEN FRAME WITH AGC PYROBELITE 9EG GLAZING AND FIREMAX 'ZR' EW 30 VENTILATION GRILLS

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Commissioned by Duco Ventilation & Sun Control located in Veurne, Belgium, Efectis Nederland has examined the fire resistance of a non-load bearing glazed partition, consisting of a wooden frame, with AGC Pyrobelite 9EG glazing and DUCO Firemax 'ZR' EW30 ventilation grills.

The experimental investigation was carried out in accordance with EN 1364-1:1999. Details and results of the fire test are shown in Efectis report 2013-Efectis-R0438c, dated January 2014.

Some data related to the investigated construction is summarized below:

The specimen was a non-load bearing glazed partition consisting of:

- Wooden frame, cross-section 67 x 114 mm (w x d);
- 7 glass panes, manufactured by AGC, Pyrobelite 9EG;
- 3 ventilation grills, manufactured by DUCO, type Firemax 'ZR' EW30;
- Intumescent and sealing materials around frame, glazing and ventilation grills.

Overall dimensions of the partition were 3940 x 3192 mm (w x h).

Criterion	Time of reaching a criterion according to EN 1364-1:1999, measured from the start of the test	
	Time	Test result
Integrity (E)	35 minutes	failure
Insulation (I)	0 minutes	failure
Heat radiation (W)	35 minutes	failure
The heating was terminated after 44 minutes after consulting the client		

Classification according to EN 13501-2:2007+A1:2009

The tested construction / non-load bearing glazed partition can be classified as **E30** and **EW30** according to EN 13501-2:2016. The DUCO Firemax 'ZR' EW 30 ventilation grill is fire resistant in both directions, inside to outside and outside to inside.

Condition and field of application

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability. Other changes are not permitted.

- Decrease in the linear dimensions of panes
- Change in the aspect ratio of the panes, provided that the largest dimension of the pane and its area are not increased
- Decrease in the distance between butt joints
- Decrease in distance between fixing centres
- Increase in the dimensions of framing members
- Allowances for expansion if none were incorporated in the test specimen
- Change in the angle of installation up to 10° from the vertical

Extension of height

- Increase of the element height above the tested height is not allowed.

Extensions of width

- The width of an identical construction may be increased.

Extension of height, width and area

- When enough overrun time is achieved the glass may be increased in length or width for a maximum of 20%, but no more than 21% in area.

Supporting constructions

- The result of a fire resistance test of a glazed wall tested in one of the standard supporting constructions given in EN 1363-1 is applicable to any other supporting construction, within the same type (rigid) that has a greater fire resistance.