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English Version

Windows and doors - Air permeability - Classification

Fenêtres et portes - Perméabilité à l'air - Classification

Fenster und Türen - Luftdurchlässigkeit - Klassifizierung

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (prEN 12207:2014) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12207:1999.

The revision of this European Standard clarifies only the classification method and does not affect existing classification evidence of EN 12210.

1 Scope

This European Standard defines the classification of test results for completely assembled windows and external and internal pedestrian doorsets of any materials after testing in accordance with FprEN 1026.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

FprEN 1026, *Windows and doors — Air permeability — Test method*

3 Terms and definitions

For the purposes of this document the definitions given in FprEN 1026 apply.

4 Classification

The classification is based on a comparison of the air permeability of the test specimen related to overall area and on the air permeability related to the length of opening joint.

4.1 Classification based on the air permeability of the overall area

The total air permeability through the test specimen, measured in accordance with FprEN 1026 is divided by its overall area and the result recorded in $\text{m}^3/\text{h} \cdot \text{m}^2$.

A range of classes is defined for air permeability related to the overall area.

4.2 Classification based on the air permeability of the opening joints

The total air permeability through the test specimen, measured in accordance with FprEN 1026 is divided by the length of the opening joints and the result recorded in $\text{m}^3/(\text{h} \cdot \text{m})$.

A range of classes is defined for air permeability related to the total length of opening joints.

4.3 Definition of the classes

The reference air permeabilities for overall area and joint length are defined at a reference test pressure of 100 Pa. For other pressure steps, the following equation is used:

$$Q = Q_{100} \left(\frac{P}{100} \right)^{2/3}$$

where

Q_{100} is the reference air permeability at a test pressure of 100 Pa, in Pascal (Pa);

Q is air permeability at a test pressure P , in Pascal (Pa).

The lines in Figure 1 (for windows and pedestrian external doorsets) and Figure 2 (for pedestrian internal doorsets) defining the upper limits of each class are derived from the reference air permeabilities at 100 Pa related to overall area length of opening joint (see 4.4 and 4.5).

A specimen belongs to a specified class if the measured air permeability does not exceed the upper limit at any test pressure step in that class.

4.4 Classification based on the overall area

4.4.1 Classification for windows and pedestrian doorsets

Table 1 — Reference air permeability related to overall area

Class	Reference air permeability at 100 Pa $\text{m}^3/\text{h}\cdot\text{m}^2$	Maximum test pressure Pa
1	50	150
2	27	300
3	9	600
4	3	600

4.4.2 Classification for internal pedestrian doorsets

Table 2 — Reference air permeability related to overall area

Class	Reference air permeability at 100 Pa $\text{m}^3/\text{h}\cdot\text{m}^2$	Maximum test pressure Pa
A	50	100
B	27	100
C	9	150
D	3	150

4.5 Classification based on joint length

4.5.1 Classification for windows and pedestrian doorsets

Table 3 — Reference air permeability related to joints length

Class	Reference air permeability at 100 Pa m ³ /hm	Maximum test pressure Pa
1	12,50	150
2	6,75	300
3	2,25	600
4	0,75	600

4.5.2 Classification for internal pedestrian doorsets

Table 4 — Reference air permeability related to joints length

Class	Reference air permeability at 100 Pa m ³ /h · m	Maximum test pressure Pa
A	12,50	100
B	6,75	100
C	2,25	150
D	0,75	150

4.6 Relation between the classifications based on the overall area and the length of the opening joint

If a specimen is classified according to the overall area and the length of the opening joint, which give:

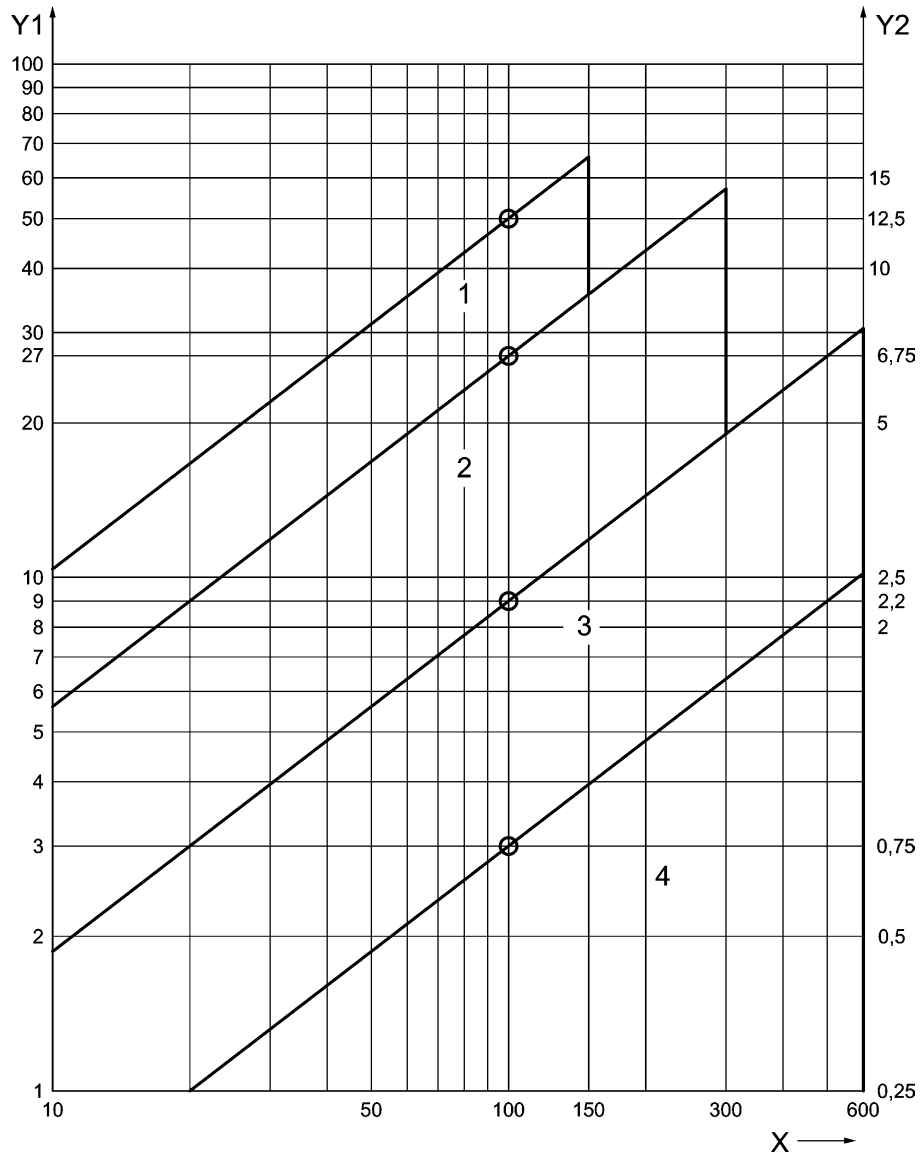
- the same class. the specimen shall be classified in one and the same class;
- two adjacent classes. the specimen shall be classified in the most favourable class (with lower rate);
- a difference of two classes. the specimen shall be classified in the mean class;
- a difference of more than two classes. the specimen shall not be classified.

NOTE For windows with only fixed part, no classification regarding the length of the opening joint.

5 Classification report

In addition to the information given in the test report, the following shall be recorded:

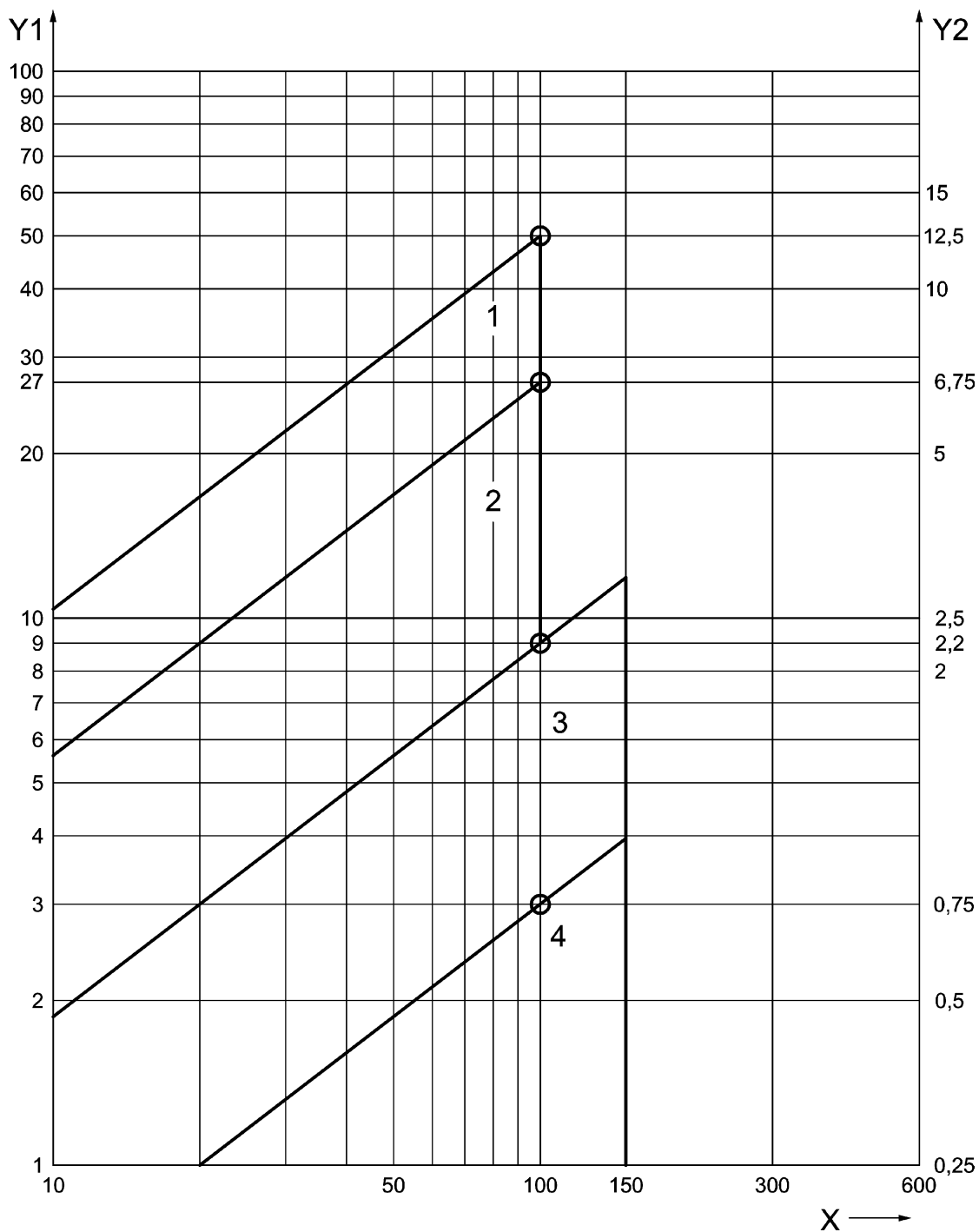
- the classification of the specimen according to :
- the overall area;
- the length of opening joints;
- the final classification of the specimen.



Key

- Y1 $\text{m}^3/\text{h} \cdot \text{m}^2$ of overall area
- Y2 $\text{m}^3/\text{h} \cdot \text{m}$ of opening joints
- X pressure, in Pascal (Pa)
- 1 class 1
- 2 class 2
- 3 class 3
- 4 class 4

Figure 1 — Upper limits of classes for windows and external doorsets



Key

- Y1 $\text{m}^3/\text{h} \cdot \text{m}^2$ of overall area
- Y2 $\text{m}^3/\text{h} \cdot \text{m}$ of opening joints
- X pressure, in Pascal (Pa)
- 1 class A
- 2 class B
- 3 class C
- 4 class D

Figure 2 — Limits of classes for internal doorsets