

Contents

Page

European foreword.....	6
[A1] Introduction [A1]	8
1 Scope	9
2 Normative references	10
2.1 Classification standards.....	10
2.2 Test and calculation standards	10
2.3 Other standards.....	12
3 Terms and definitions	13
4 Performance characteristics and special requirements.....	14
4.1 General.....	14
4.2 Resistance to wind load	14
4.3 Resistance to snow and permanent load.....	15
4.4 Fire characteristics	15
4.4.1 Reaction to fire.....	15
4.4.2 External fire performance.....	15
4.5 Watertightness.....	15
4.6 Dangerous substances.....	15
4.7 Impact resistance	15
4.8 Load-bearing capacity of safety devices.....	15
4.9 Height and width of doorsets and French windows	16
4.10 Ability to release.....	16
4.11 Acoustic performance.....	16
4.12 Thermal transmittance	16
4.13 Radiation properties.....	17
4.14 Air permeability.....	17
4.15 Durability	17
4.15.1 General	17
4.15.2 Durability of certain characteristics	17
4.16 Operating forces	18
4.17 Mechanical strength.....	18
4.18 Ventilation	18
4.19 Bullet resistance.....	18
4.20 Explosion resistance	18
4.20.1 Shock tube.....	18
4.20.2 Range test.....	19
4.21 Resistance to repeated opening and closing	19
4.22 Behaviour between different climates	19
4.23 Burglar resistance.....	19
4.24 Special requirements.....	19
4.24.1 Unframed glass doorsets	19
4.24.2 Power operated windows.....	19
5 Classification and designation.....	19
6 Handling, installation, maintenance and care	24
7 [A1] Evaluation of conformity.....	25

7.1	General	25
7.2	Initial Type Testing (ITT)	25
7.2.1	General	25
7.2.2	Further type testing.....	26
7.2.3	Sampling	26
7.2.4	Test report	27
7.2.5	Cascading ITT.....	27
7.3	Factory Production Control (FPC)	28
7.3.1	General	28
7.3.2	Personnel	29
7.3.3	Equipment.....	29
7.3.4	Raw materials and components.....	29
7.3.5	Production process.....	29
7.3.6	Product testing and evaluation	29
7.3.7	Traceability and marking.....	30
7.3.8	Non-conforming products.....	30
7.3.9	Corrective action	30
7.4	Initial inspection of factory and FPC	30
7.5	Continuous surveillance, assessment and approval of FPC	30
7.6	Testing of samples taken at the factory in accordance with a prescribed plan $\triangle A_1$	31
8	Labelling and marking.....	31
Annex A	(informative) Interdependence between characteristics and components.....	32
A.1	General	32
Annex B	(normative) Determination of sound insulation of windows	34
B.1	General	34
B.2	Determination of sound insulation by testing.....	34
B.3	Determination of sound insulation of single windows with IGUs using tabulated values.....	34
B.3.1	Sound insulation of single windows based on IGU sound insulation data and window construction criteria	34
B.3.2	General conditions for use of procedure in B.3.3	34
B.3.3	Procedure for determination of window R_w (C ; C_{tr}) based on IGU data.....	35
B.4	Test results and tabulated values – Range of application	37
Annex C	(informative) Standards and draft standards on glass.....	38
Annex D	(informative) Examples of performance and requirement profiles of a roof window.....	39
Annex E	(normative) Determination of characteristics	41
E.1	Separate determination of characteristics for windows	41
E.2	Separate determination of characteristics for external pedestrian doorsets	44
Annex F	(informative) Optional selection of representative test specimens for windows	47
F.1	Guidelines for an optional selection of representative test specimens	47
Annex G	(informative) Examples of test sequences for optional combined determination of characteristics for windows	49
G.1	Optional test sequences.....	49
Annex H	(normative) $\triangle A_1$ Selection, preparation, mounting and fixing of test specimen for testing roof windows in accordance with EN 13823 and EN ISO 11925-2 and field of direct application	51
H.1	EN 13823 (SBI test).....	51
H.2	EN ISO 11925-2 (Single flame test)	52
H.3	Field of direct application $\triangle A_1$	53

Annex I (normative) A1 Classification of air permeability of products with described product characteristics A1	54
Annex J (normative) A1 Thermal transmittance for windows with bars A1	55
Annex ZA (informative) A1 Clauses of this European Standard addressing the provisions of the EU Construction Product Directive A1	57
Annex ZB (informative) A1 Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC A1	72
Annex ZC (informative) A1 Relationship between this European Standard and the Essential Requirements of EU Directive 2006/95/EC A1	73
Annex ZD (informative) A1 Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC A1	74
Bibliography.....	75

Figures

Figure 1 — Relationship between various standards.....	7
Figure H.1 — Test specimen and SBI test rig.....	52
Figure J.1 — Attached bar(s).....	55
Figure J.2 — Single cross bar in the IGU with or without attached bars.....	55
Figure J.3 — Multiple cross bars in the IGU with or without attached multiple bars.....	56
Figure J.4 — Glazing bar (Georgian bar).....	56
Figure ZA.1 — Example CE marking information for roof window.....	69
Figure ZA.2 — Example CE marking information for external pedestrian doorset – Example 1.....	70
Figure ZA.3 — Example of CE marking information for external pedestrian doorset – Example 2.....	71

Tables

Table 1 — Classification of characteristics for windows.....	21
Table 2 — Classification of characteristics for external pedestrian doorsets.....	23
Table A.1 — Interdependence between characteristics and components.....	32
Table B.1 — R_w for window based on R_w for IGU.....	36
Table B.2 — $R_w + C_{tr}$ for window based on $R_w + C_{tr}$ for IGU.....	37
Table B.3 — Extrapolation rules for different window sizes.....	37
Table D.1 — Examples of performance and requirement profiles of a roof window.....	39
Table E.1 — Separate determination of characteristics for windows.....	42
Table E.2 (concluded).....	46
Table F.1 — Optional selection of representative test specimens for windows.....	47
Table G.1 — Examples of optional test sequences for combined determination of characteristics for windows.....	50

Table I.1 — Air permeability, classification of products with described product characteristics	54
Table J.1 — Thermal transmittance for windows with bars	55
Table ZA.1 — Relevant clauses (performance characteristics)	58
Table ZA.2 — System(s) of attestation of conformity (AoC) for external pedestrian doorsets and windows (including roof windows)	60
Table ZA.3a — Assignment of evaluation of conformity tasks for products under AoC system 1	62
Table ZA.3b — Assignment of evaluation of conformity tasks for products under AoC system 3	64
Table ZA.3c — Assignment of evaluation of conformity tasks for products under AoC system 4	65