EUROPEAN COMMISSION
Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Ecosystems III: Construction, Machinery and Standardisation
Standards Policy

Brussels, 21.1.2026

A Notification under Article 12 of Regulation (EU) No 1025/2012[1]

Subject matter related to

☐	Annual Union Work Programme for European standardisation (Art. 12, point a)
☒	Possible future standardisation requests to the European standardisation organisations (Art. 12, point b)
☐	Formal objections to harmonised standards (Art. 12, point c)
☐	Identifications of ICT technical specifications (Art. 12, point d)
☐	Delegated acts to modify Annexes I or III of Regulation (EU) No 1025/2012 (Art. 12, point e)

Title of the initiative

Draft standardisation request to the European Committee for Standardisation as regards doors, windows and other related products in support of Regulation (EU) 2024/3110 of the European Parliament and of the Council

Additional information

Legislative/Policy reference(s)	Regulation (EU) No 2024/3110 of the European Parliament and of the Council of 27 November 2024 laying down harmonised rules for the marketing of construction products and repealing Regulation (EU) No 305/201 (OJ L, 18.12.2011, p. 1)
EN reference(s)	-
Status	Draft
Other information	This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission. The information transmitted is intended only for the Member State or entity to which it is addressed for discussions and may contain confidential and/or privileged material.
Deadline for feedback	18.2.2026

Commission contact point for this notification

GROW-CONSTRUCTION@ec.europa.eu

[1] OJ L 316, 14.11.2012, p. 12

Brussels, XXX
[…](2026) XXX draft

COMMISSION IMPLEMENTING DECISION

of XXX

on a standardisation request to the European Committee for Standardisation as regards doors, windows and other related products in support of Regulation (EU) 2024/3110 of the European Parliament and of the Council

Only the English, French and German texts are authentic

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COMMISSION IMPLEMENTING DECISION

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THE EUROPEAN COMMISSION,

Having regard to Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council,[1] and in particular Article 10(1) thereof,

Whereas:

(1) Regulation (EU) 2024/3110 of the European Parliament and of the Council[2] lays down harmonised rules for the marketing of construction products, in order to ensure their free movement in the internal market.

(2) In accordance with Article 5(1) of Regulation (EU) 2024/3110, harmonised standards are to provide the methods and the criteria for assessing the performance of a product in relation to its essential characteristics, which according to Article 4(4) of that Regulation are to be laid down in harmonised standards in relation to the basic requirements for construction works.

(3) Harmonised standards made mandatory by implementing acts adopted in accordance with Article 5(8) of Regulation (EU) 2024/3110 contribute to the free movement of construction products in the Union. Given that such standards are technology-neutral and performance-based, they also contribute to ensuring equal conditions of competition among relevant economic operators dealing with construction products, in particular small and medium-sized enterprises. Indirectly, those standards also contribute to lower sales costs benefitting consumers, in particular.

(4) Regulation (EU) 2024/3110 repealing Regulation (EU) No 305/2011[3] introduces changes with regard to the provision of general product information as well as instructions for use and safety information. Article 9(2) of that regulation specifies rules about the development of guidelines including technical details, necessary for

[1] OJ L 316, 14.11.2012, p. 12

[2] Regulation (EU) No 2024/3110 of the European Parliament and of the Council of 27 November 2024 laying down harmonised rules for the marketing of construction products and repealing Regulation (EU) No 305/201 (OJ L, 18.12.2011, p. 1, ELI: http://data.europa.eu/eli/reg/2024/3110/oj).

[3] Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC (OJ L 88, 4.4.2011, p. 5, ELI: http://data.europa.eu/eli/reg/2011/305/oj).

drawing up general product information, instructions for use and safety information to be included in harmonised standards.

(5) Article 16(3) of Regulation (EU) 2024/3110 also provides for developing guidelines in harmonised standards to ensure interoperability of the human- and machine-readable formats for making the declaration of performance and conformity available on a website.

(6) Several harmonised standards have been drafted in support of Directive 89/106/EEC[4] on the basis of standardisation mandate M/101 of 7 September 1994 to the European Committee for Standardisation (CEN) concerning standards for external and internal doors and windows, roof openings, rooflights (including fire doors and shutters) and related building hardware. Those harmonised standards supported Regulation (EU) No 305/2011 and need to be revised to take into account essential changes introduced by Regulation (EU) 2024/3110.

(7) The intention to request drafting of harmonised standards in support of Regulation (EU) 2024/3110 is stated in Action 29 of the Annex to the 2026 annual Union work programme for European standardisation[5].

(8) CEN has indicated that the work covered by the request falls entirely within its area of competence.

(9) It is therefore appropriate to request CEN to draft new harmonised standards and to revise the existing harmonised standards for doors, windows and other related products in support of Regulation (EU) 2024/3110.

(10) Standardisation activities should not cover areas where standardisation needs cannot be identified in relation to given basic requirements for construction works or parts of them. For the purposes of this standardisation request and in order to ensure a consistent and uniform interpretation, it should be clarified that the scope of products referred to are windows, hatches, pedestrian doorsets, industrial doors, commercial doors, garage doors, individual rooflights, individual roof hatches, continuous rooflights, building hardware, gates, barriers, awnings, external blinds, internal blinds and external shutters. CEN should ensure that harmonised standards of these products correspond to the intended uses for the established purposes.

(11) In accordance with Regulation (EU) 2024/3110, the establishment of the essential characteristics and their assessment methods should apply the least onerous approach with sufficient reliability, avoid duplications of assessments and inconsistencies and respect the basic principles and reference points set out for them. The assessment methods and criteria to be included in harmonised standards in relation to their essential characteristics should take into account the state of the art and current practice, in order to enable those standards to adequately serve the public interest by facilitating the fulfilment of basic requirements for construction works.

(12) Since essential characteristics of construction products have been defined in Article 3(7) of Regulation (EU) 2024/3110 as those characteristics of the construction products which relate to the basic requirements for construction works and those which are listed as predetermined environmental essential characteristics, the

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[4] Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (OJ L 40, 11.2.1989, p. 12, ELI: http://data.europa.eu/eli/dir/1989/106/oj).

[5] Commission Notice The 2026 annual Union work programme for European standardisation *[reference to be included when available]*.

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standardisation requests should aim at dealing with all the existing standardisation needs for products to be covered by them in relation to those basic requirements for construction works. Therefore, for each essential characteristic, one assessment method and the physical dimensions according to the SI standards should be provided. Additionally, when appliable, the statistical value used, the units in which the performance is expressed, and the rounding method used should also be provided.

(13) For the essential characteristics related to the release or emission of dangerous substances, the harmonised standards should prioritise assessment methods applicable across materials.

(14) The essential characteristics related to environmental sustainability of the product should be enumerated in the harmonised standard including the predetermined environmental essential characteristics. CEN should establish product category rules that enable the whole life cycle analysis of the products concerned and the declaration of their performance in relation to the essential characteristic environmental sustainability. That standardisation work should be based on the standards developed in the framework of the standardisation mandate M/350 “development of horizontal standardised methods for the assessment of the integrated environmental performance of buildings” of 29 March 2004 as amended, and on the conditions laid down pursuant to Article 12(1) of Regulation (EU) 2024/3110. CEN should also consider environmental sustainability scenarios.

(15) Pursuant to Article 5(3) of Regulation (EU) 2024/3110 CEN is to provide the technical details necessary for the implementation of the assessment and verification system that is to be applied, including the applicable factory production control. The technical details should take into account the specific conditions of the manufacturing process of the construction product concerned.

(16) In accordance with Article 5(4) of Regulation (EU) 2024/3110, when requested, harmonised standards should also provide voluntary or mandatory threshold levels and classes of performance in relation to essential characteristics and those essential characteristics which always have to be declared by manufacturers. These elements should be developed in accordance with the basic principles and reference points for their establishment and be aligned to the elements set out in delegated acts adopted in accordance with the third subparagraph of Article 5(5) of that Regulation.

(17) Harmonised standards should therefore enable the economic operators to provide all the necessary information about the performance of construction products covered by those standards and thus facilitate the free movement of those products in the internal market.

(18) Harmonised standards should also furnish Member State authorities with all the necessary means to set requirements for the performance of construction products covered by those standards, in relation to their essential characteristics, which could impact the fulfilment of the basic requirements for construction works.

(19) In addition, harmonised standards should cater for sufficient means for the final users of construction products covered by them to fulfil all the information needs of those users.

(20) In order to fulfil the requirements set out in Article 5 of Regulation (EU) 2024/3110, notably to reach the necessary level of transparency and legal clarity, each drafter or revised harmonised standard should systematically include clear and concise information on the results of the CEN standardisation work. That information is

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necessary in order to facilitate the work of market surveillance authorities, assist notified bodies in performing their functions, and provide manufacturers, especially small and medium-sized enterprises using a harmonised standard, with working tools enabling them to fully benefit from harmonisation.

(21) Harmonised standards should be drafted and revised by consistently applying relevant rules for drafting standards, to ensure that they are of an appropriate quality, and should reflect the generally acknowledged state of art.

(22) The European standardisation organisations (ESO) have agreed to follow the Guidelines for the execution of standardisation requests.

(23) In order to ensure transparency and facilitate the execution of the requested standardisation activities CEN should prepare a work programme and submit it to the Commission.

(24) In order to enable the Commission to better monitor the requested standardisation work, CEN should provide the Commission with access to an overall project plan containing detailed information on the execution of the standardisation request.

(25) Experience shows that during execution of the standardisation request, it could be necessary to adjust the scope of the request or the deadlines set therein. CEN should therefore promptly report to the Commission if they consider that more time is required to draft the standards or the standardisation deliverables than what was initially foreseen or that it is appropriate to adapt the scope of the request, in order to allow the Commission to take appropriate action.

(26) In accordance with Article 10(3) of Regulation (EU) No 1025/2012 each standardisation request is subject to acceptance by the relevant European standardisation organisation. It is therefore necessary to provide for the rules on validity of this request if it is not accepted by CEN.

(27) In order to ensure legal certainty as to the validity of the request after its execution, it is appropriate to provide for a date of expiry of this Decision.

(28) The harmonised standards adopted in response to the standardisation request set out in this Decision may be subject to access to documents requests in accordance with Regulation (EU) 1049/2001 of the European Parliament and of the Council[6]. In its judgement of 5 March 2024, in case C-588/21 P[7], the Court of Justice recognised that there is an overriding public interest, within the meaning of Article 4(2) of Regulation (EU) 1049/2001, justifying the disclosure of harmonised standards.

(29) Given that several harmonised standards have been drafted on the basis of standardisation mandate M/101 and this Decision provides for a basis to complete work on draft harmonised standards based on that mandate, it is appropriate to provide for the end of validity of the standardisation mandate M/101.

(30) The European standardisation organisations, the European stakeholders' organisations receiving Union financing and the CPR Acquis Expert Group[8] established by Article 4(1) of Regulation (EU) 2024/3110 have been consulted.

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6 Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents (OJ L 145, 31.5.2001, p. 43, ELI: http://data.europa.eu/eli/reg/2001/1049/oj).

7 Judgment of the Court (Grand Chamber) of 5 March 2024, *Public.Resource.Org, Inc. and Right to Know CLG v European Commission*, C-588/21 P, ECLI: EU:C:2024:201, paragraph 85.

8 Commission expert group on the Construction Products Regulation Technical Acquis process (E03776)

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(31) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 22 of Regulation (EU) No 1025/2012.

HAS ADOPTED THIS DECISION:

Article 1
Requested standardisation activities

The European Committee for Standardisation (CEN) is requested to draft new standardisation deliverables listed in Table 1 of Annex I to this Decision and to revise existing harmonised standards listed in Table 2 of Annex I to this Decision in support of Regulation (EU) 2024/3110 for doors, windows and other related products by the deadlines set in that Annex.

The standards referred to in the first paragraph shall meet the requirements set out in Annex II.

CEN shall provide the Commission with the titles of the requested harmonised standards in all the official languages of the Union.

Article 2
Work programme

CEN shall prepare work programme indicating all the standards referred to in the first paragraph of Article 1, the responsible technical bodies and a timetable for the execution of the requested standardisation activities in line with the deadlines set out in Annex I.

The draft work programme shall take into account the priorities set out in point 2 of Annex II for the execution of the request referred to in Article 1.

CEN shall submit the draft work programme to the Commission by [*OP please insert the date = 2 months after the date of notification of this Decision by the Commission*] and provide it with access to an overall project plan.

CEN shall inform the Commission of any amendments to the work programme.

Article 3
Reporting

1. CEN shall report annually to the Commission on the execution of the request referred to in Article 1 indicating the progress made in implementation of the work programme referenced to in Article 2.
2. It shall submit the first annual report to the Commission by 30 June 2027. Subsequent annual reports shall be submitted by 30 June each year.
3. CEN shall provide the Commission with the final report by 30 June 2030.
4. CEN shall promptly report to the Commission any major concerns relating to the scope of the request referred to in Article 1 and the deadlines set out in Annex I.

Article 4
Validity of the standardisation request

Where, in accordance with Article 10(3) of Regulation (EU) No 1025/2012, CEN indicates that it does not accept the request referred to in Article 1 of this Decision, that request may not constitute a basis for the standardisation activities referred to in that Article 1 of this Decision for the standardisation organisation concerned.

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This Decision shall expire on 30 June 2031.

Article 5
Validity of the standardisation request

Standardisation mandate M/101 of 7 September 1994 shall expire on 31 December 2026.

Article 6
Addressee

This Decision is addressed to the European Committee for Standardisation.

Done at Brussels,

For the Commission

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ANNEX I

List of new harmonised standards to be drafted and list of harmonised standards to be revised as referred to in Article 1

Table 1 List of new harmonised standards to be drafted and deadlines for their adoption

Reference information		Deadline for the adoption by the ESOs
1.	European standard: 'Windows, hatches and pedestrian doorsets - Performance assessment and declaration'	15 June 2029
2.	European standard: 'Industrial, commercial and garage doors - Performance assessment and declaration'	15 June 2029
3.	European standard: 'Individual rooflights, individual roof hatches and continuous rooflights - Performance assessment and declaration'	15 June 2029
4.	European standard: 'Building hardware - Performance assessment and declaration'	15 June 2029
5.	European standard: 'Sustainability of construction works - Environmental product declarations - Product Category Rules for windows, hatches and pedestrian doorsets'	15 June 2028
6.	European standard: 'Sustainability of construction works - Environmental product declarations - Product Category Rules for industrial, commercial and garage doors'	15 June 2028
7.	European standard: 'Sustainability of construction works - Environmental product declarations - Product Category Rules for individual rooflights, individual roof hatches and continuous rooflights'	15 June 2028
8.	European standard: 'Sustainability of construction works - Environmental product declarations - Product Category Rules for gates and barriers'	15 December 2028
9.	European standard: 'Sustainability of construction works - Environmental product declarations - Product Category Rules for awnings, external blinds, internal blinds and external shutters'	15 December 2028

Table 2 List of new harmonised standards to be revised and deadlines for their adoption

Reference information	Deadline for the adoption by the

		ESOs
1.	EN 13241 to cover ‘Gates and barriers - Performance assessment and declaration’	15 June 2029
2.	EN 13561 to cover ‘Awnings - Performance assessment and declaration’	15 December 2029
3.	EN 13561 to cover ‘External blinds - Performance assessment and declaration’	15 December 2029
4.	EN 13120 to cover ‘Internal blinds - Performance assessment and declaration’	15 December 2029
5.	EN 13659 to cover ‘External shutters - Performance assessment and declaration’	15 December 2029
6.	EN 17610 to cover ‘Sustainability of construction works - Environmental product declarations - Product Category Rules for building hardware’	15 December 2028

ANNEX II

Requirements for the standardisation deliverables and standards referred to in Article 1

PART A. GENERAL REQUIREMENTS FOR THE STANDARDISATION DELIVERABLES AND STANDARDS LISTED IN ANNEX I

1. LEGAL REQUIREMENTS TO BE SUPPORTED BY THE HARMONISED STANDARDS

The harmonised standards shall support the establishment of a harmonised system as set out in Regulation (EU) 2024/3110.

The harmonised standards shall provide the methods and the criteria for assessing the performance of construction products in relation to their essential characteristics. The harmonised standards shall give only product specific provisions. Those product-specific provisions shall include implementation rules in relation to the applicable assessment and verification system as defined in the relevant Union legal acts. Based on this request the harmonised standards shall not support any legal requirements other than those referenced in the first paragraph of this point and in particular shall not:

(a) make any references to provisions of Regulation (EU) 2024/3110 or reproduce its requirements in their normative body;

(b) modify any definitions set out in Regulation (EU) 2024/3110 or define any legally relevant terms not defined in that Regulation;

(c) address any requirements, responsibilities, contractual arrangements or obligations for any economic operator, notified bodies, market surveillance authorities, or any other body.

Each harmonised standard developed on the basis of the request referred to in Article 1 of this Decision shall refer to this Decision.

In each revised standard, CEN shall include information on significant changes that were introduced in that standard compared to its harmonised predecessor.

The harmonised standards shall not make the assessment and declaration of performance of essential characteristics included in that standard dependent on requirements of administrative or organisational nature. These include management system requirements for organisations, competence requirement for natural persons, normative references to management system standards or any other normative reference.

2. LEGAL REQUIREMENTS TO BE COVERED BY AN INDIVIDUAL HARMONISED STANDARD

2.1. General

In order to adopt an implementing act making the harmonised standards, requested in Annex I, mandatory or mandatory with restrictions, these standards shall fulfil the requirements laid down in Article 5 of Regulation (EU) 2024/3110.

In particular, the essential characteristics laid down in the harmonised standards shall correspond to this standardisation request; the content of the harmonised standards shall be in line with the general principles and reference points for the establishment of those essential characteristics and their assessment methods applicable to standardisation under Regulation (EU) 2024/3110.

CEN shall follow the procedures in place for quality verification of harmonised standard before their adoption.

2.2. References to standards

The harmonised standards shall only contain unequivocal dated normative references to other CEN standards, CEN ISO standards, ISO standards or parts thereof ('supporting standards'). Supporting standards or parts thereof may neither conflict with Union law nor provide for discretion where such discretion has not been laid down in Union law and shall not include direct or indirect references to national provisions.

Supporting standards shall not include normative references to other standards or parts thereof other than those fulfilling the conditions set out in this point. Where these conditions are not fulfilled, the harmonised standard may clarify the normative reference referred to, including the dates of the chain of references which are applicable.

2.3. Essential characteristics

In relation to the assessment and declaration of essential characteristics, the standards shall include the reference assessment method for each essential characteristic (the harmonised standard may offer additional information referring to other supporting standards as regards sampling or testing conditions when needed).

For all essential characteristics, the same methods and criteria for assessing the performance shall apply across products, unless it is found necessary, and justified in writing, to apply particular methods and or criteria in relation to particular products.

For the essential characteristics related to the content and release of emission of dangerous substances, the harmonised standards shall apply assessment methods applicable across materials, consistent with those developed by the Technical Committee dealing with construction products – assessment of release of dangerous substances.

For the essential characteristics related to environmental sustainability, the harmonised standards shall identify and enumerate all the relevant elements of performance related to the whole life cycle of the products concerned. This standardisation work shall be consistent with Annex II of Regulation (EU) 2024/3110, the most updated version of the horizontal standard dealing with sustainability of construction works – environmental product declarations – core rules for the product category of construction products and with the applicable complementary product category rules defined in the harmonised standard listed in Table 1, points 5 to 9 and Table 2, point 6, of Annex I.

When the declared performance is a numerical value or a class obtained from a numerical value, the harmonised standards shall include the following information for each essential characteristic:

(a) the physical dimensions according to the SI standard: time (T), length (L), mass (M), electric current (I), thermodynamic temperature (K), amount of substance (N) and luminous intensity (J) a derivation of them or ratio in case of dimensionless quantities (relevant for declarations in a Digital Product Passport (DPP));

(b) the statistical value declared expressed using a specific point, like the fractile (e.g., 50% fractile is the median) and a confidence interval, which indicates the range within which the true value is likely to fall, as well as the probability that this interval contains the true value. In justified circumstances a simpler method, such as setting out a characteristic value can also be applied;

(c) the units in which the performance is expressed or dimensionless;

(d) when applicable, the rounding method used for the declaration.

2.4. Additional elements set out in relation to essential characteristics

The harmonised standards shall provide voluntary or mandatory threshold levels and classes of performance in relation to essential characteristics and those essential characteristics which always have to be declared by manufacturers. These elements should be developed in accordance with the basic principles and reference points set out as recommendations in Parts B, C, F and G. Other voluntary or mandatory threshold levels, classes of performance and mandatory declarations shall not be included unless properly justified.

2.5. Assessment and verification

The harmonised standards shall provide guidance on the technical details necessary for the implementation of the applicable assessment and verification systems set out by delegated acts adopted in accordance with Article 10 or Regulation (EU) 2024/3110.

Harmonised standards shall describe the applicable factory production control following the general requirements included in Part H and the specific requirements for each standard are included in Parts B and C.

2.6. Guidelines for the drawing up of general product information, instructions for use and safety information

The standards shall provide guidelines, including technical details, necessary for drawing up general product information, instructions and safety information in accordance with Annex IV to Regulation (EU) 2024/3110.

The information provided shall be enough, both in terms of quantity and quality, to enable potential purchasers to make informed decisions.

Guidelines and technical details issued in accordance with Article 9(2) or Regulation (EU) 2024/3110 shall also recommend where the respective information is to be provided. That location shall be one where the information is least likely to be overlooked.

General requirements for the guidelines are included in Part I and specific requirements for each standard are included in Parts B and C.

2.7. Guidelines to ensure interoperability of the human- and machine-readable formats

The standards shall provide guidelines, including technical details, necessary to ensure that the format of the declaration of performance and conformity is digitised in a human- and machine-readable format by providing product data templates aligned to the technical content of the standard. The content must be technology neutral and facilitate the inclusion of the concepts in the Construction digital product passport system provided for in Article 75 of Regulation (EU) 2024/3110.

PART B. SPECIFIC REQUIREMENTS FOR DRAFTING THE NEW STANDARDISATION DELIVERABLES LISTED IN TABLE 1 OF ANNEX I

1. REQUIREMENTS FOR ALL STANDARDISATION DELIVERABLES

The standardisation deliverables shall reflect the generally acknowledged state of the art.

2. REQUIREMENTS FOR SPECIFIC STANDARDISATION DELIVERABLES

2.1. European standard on windows, hatches and pedestrian doorsets requested in Table 1, point 1, of Annex I

2.1.1. Products

The standard shall cover the products described in this section.

2.1.1.1. Windows and hatches

2.1.1.1.1. Scope

The standard shall address windows made of framing profiles with at least one infill. Windows can be either fixed, manually operated and/or power operated. They may include other components such as shutters, blinds, awnings and ventilation devices.

Windows are intended to be used internally in vertical walls and partitions or externally in vertical walls or inclined roofs to close an opening and may or may not provide any combination of the following features: admit daylight; admit solar gains; provide view; provide ventilation; and provide access.

Windows on escape routes, for fire compartmentation and smoke control, and for anti-violation purposes are included in this product definition.

The standard shall address hatches which are openable and either manually operated and/or power operated.

Hatches are intended to be used internally in vertical walls and partitions or externally in vertical walls or inclined roofs to provide access for pedestrians, goods and services and may or may not provide any combination of the following features: admit daylight; admit solar gains; provide view and provide ventilation.

Hatches on escape routes, for fire compartmentation and smoke control, and for anti-violation purposes are included in this product definition.

A power-operated product opens and/or closes upon receipt of a manual or automatic actuating signal.

The following products are excluded from this product definition:

– Hatches to which ladders or stairs are attached;

– Windows and hatches intended to be used for natural smoke and heat exhaust ventilation;

– Balcony glazings and terrace glazings;

– Windows, hatches, rooflights and roof hatches intended to be used in horizontal roofs, ceilings and in slightly inclined positions requiring an upstand and a waterproofing system to ensure the water is drained away from the roof opening.

Reused products are excluded from the scope.

2.1.1.1.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 1.

Table 1: Windows and hatches

Group	BRCW[1]	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
		resistance to fire E		Part G.3	
		resistance to fire EI		Part G.4	
		resistance to fire EW		Part G.5	
		resistance to fire EI-M		Part G.6	
		resistance to fire RE		Part G.7	only relevant for roof windows
		resistance to fire REI		Part G.8	only relevant for roof windows
		smoke control		Part G.9	
		self-closing		Part G.10	
		external fire performance		Part G.11	
hygiene and health	3	ventilation capacity of air transfer devices - airflow coefficient			
		ventilation capacity of air transfer devices - pressure exponent			
		watertightness - pedestrian doorsets, windows and rooflights		Table 33	only relevant for external use
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
safety and accessibility	4	resistance to snow and permanent load			only relevant for products intended to be installed in external inclined roofs
		manual operating forces - non-vertical sliding windows - window operating forces		Table 34	only relevant for non-vertical sliding windows intended to be operated by manual force
		manual operating forces - non-vertical sliding windows - force/torque for hand operated hardware		Table 35	only relevant for non-vertical sliding windows intended to be operated by manual force
		manual operating forces - non-vertical sliding windows - force/torque for finger operated hardware		Table 36	only relevant for non-vertical sliding windows intended to be operated by manual force
		manual operating forces - vertical sliding windows - force/torque for hand operated hardware		Table 37	only relevant for vertical sliding windows intended to be operated by manual force
		manual operating forces - vertical sliding windows - force/torque for finger operated hardware		Table 38	only relevant for vertical sliding windows intended to be operated by manual force
		impact resistance - soft body		Table 39	
		resistance to wind load - pressure limits - testing		Table 40	only relevant for external use
		resistance to wind load - relative frontal deflection - testing		Table 41	only relevant for external use
		resistance to wind load - relative frontal deflection - calculation		Table 41	only relevant for external use
		resistance against bullet attack - handguns and rifles		Table 42	
		resistance against bullet attack -		Table 43	

[1] Basic Requirements for Construction Works.

Group	BRCW[1]	Essential characteristic	EU threshold	Class	Comments
		shotguns			
		resistance against bullet attack - assault rifle		Table 44	
		explosion resistance - shock tube		Table 45	
		explosion resistance - arena test - small charges		Table 46	
		explosion resistance - arena test - large charges		Table 47	
		load bearing capacity of safety devices	≥ 350 N for 60 s		only relevant if safety device included in the product
acoustic performance	5	direct airborne sound insulation - testing			
		direct airborne sound insulation - tabulated values			
thermal performance	6	thermal transmittance reference size - testing			
		thermal transmittance reference size - calculation			
		thermal transmittance reference size - tabulated values			
		thermal transmittance - glazing			
		thermal transmittance - frame			
		thermal transmittance - opaque panel			
		linear thermal transmittance at glazing, spacer and frame transition			
		linear thermal transmittance between opaque panel and frame			
		linear thermal transmittance of glazing bars			
		thermal transmittance with extended shutter and/or shading equipment			only relevant for products integrating shading equipment
		air permeability related to overall area - windows and external doorsets		Figure 1	
		air permeability related to opening joint length - windows and external doorsets		Figure 2	only relevant for openable products
		total solar energy transmittance - glazing			
		total solar energy transmittance - glazing with extended shutter and/or shading equipment			only relevant for products integrating shading equipment
		light transmittance - glazing			
		light transmittance - glazing with extended shutter and/or shading equipment			only relevant for products integrating shading equipment
environmental sustainability	7, 8	all included in Part E.2			

2.1.1.1.3. Assessment and verification

All general requirements included in Part H.

2.1.1.1.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following dimensions and information for each unit produced, when applicable:

(1) ventilation area at open position;

(1) clear opening height;

(2) clear opening width;

(3) area of the glazing;

(4) areas of the frame;

(5) area of the opaque panel;

(6) perimeter of the glazing;

(7) perimeter of the opaque panel;

(8) length of the glazing bars; and

(9) opaque area fraction.

Dimensions of different units may be provided together in the same table.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.1.1.2. Internal pedestrian doorsets

2.1.1.2.1. Scope

The standard shall address internal pedestrian doorsets made of at least one door leaf and building hardware, either manually operated and/or power operated. They may include a door frame and other components such as side panel(s), flush over panel(s), transom panel(s), and glazing(s) and other infills installed within a single frame for inclusion in a single opening.

Internal pedestrian doorsets are intended to be used to close, fully or partly, an opening and to provide passage mainly for pedestrians in internal walls and internal partitions.

Internal pedestrian doorsets on escape routes, for fire compartmentation and smoke control, and for anti-violation purposes are included in this product definition.

Internal pedestrian doorsets intended to be used for natural smoke and heat exhaust ventilation systems are excluded from this product definition.

A power-operated product opens and/or closes upon receipt of a manual or automatic actuating signal.

Reused products are excluded from the scope.

2.1.1.2.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 2.

Table 2: Internal pedestrian doorsets

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
		resistance to fire E		Part G.3	
		resistance to fire EI		Part G.4	
		resistance to fire EW		Part G.5	
		smoke control		Part G.9	
		self-closing		Part G.10	
		release of hold-open device		Table 48	only relevant if hold-open device included in the product
hygiene and	3	ventilation capacity of air transfer			

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
health		devices - airflow coefficient			
		ventilation capacity of air transfer devices - pressure exponent			
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
safety and accessibility	4	manual operating forces - pedestrian doorsets - closing or commence motion force		Table 49	only relevant for products intended to be operated by manual force
		manual operating forces - pedestrian doorsets - force for hand operated hardware		Table 50	only relevant for products intended to be operated by manual force
		manual operating forces - pedestrian doorsets - force for finger operated hardware		Table 51	only relevant for products intended to be operated by manual force
		impact resistance - soft body		Table 39	
		resistance against bullet attack - handguns and rifles		Table 42	
		resistance against bullet attack - shotguns		Table 43	
		resistance against bullet attack - assault rifle		Table 44	
		explosion resistance - shock tube		Table 45	
		explosion resistance - arena test - small charges		Table 46	
		explosion resistance - arena test - large charges		Table 47	
		climate related deformation		Table 52	
acoustic performance	5	direct airborne sound insulation - testing			only relevant if product is suitable for testing
		direct airborne sound insulation - tabulated values			
thermal performance	6	thermal transmittance reference size - testing			
		thermal transmittance reference size - calculation			
		thermal transmittance reference size – tabulated values			
		thermal transmittance - glazing			
		thermal transmittance - frame			
		thermal transmittance - opaque panel			
		linear thermal transmittance at glazing, spacer and frame transition			
		linear thermal transmittance between opaque panel and frame			
		linear thermal transmittance of glazing bars			
		air permeability related to overall area - internal pedestrian doorsets		Figure 3	
		air permeability related to opening joint length - internal pedestrian doorsets		Figure 4	
		light transmittance - glazing			
environmental sustainability	7, 8	all included in Part E.2			

2.1.1.2.3. Assessment and verification

All general requirements included in Part H.

2.1.1.2.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following dimensions and information for each unit produced, when applicable:

(1) ventilation area at open position;

(2) clear opening height;

(3) clear opening width;

(4) area of the glazing;

(5) areas of the frame;

(6) area of the opaque panel;

(7) perimeter of the glazing;

(8) perimeter of the opaque panel;

(9) length of the glazing bars;

(10) test climate under which the climate related deformation was determined;

(11) torque for hand operated hardware; and

(12) torque for finger operated hardware.

Dimensions of different units may be provided together in the same table.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.1.1.3. External pedestrian doorsets

2.1.1.3.1. Scope

The standard shall address external pedestrian doorsets made of at least one door leaf and building hardware, either manually operated and/or power operated. They may include a door frame and other components such as side panel(s), flush over panel(s), transom panel(s), and glazing(s) and other infills installed within a single frame for inclusion in a single opening.

External pedestrian doorsets are intended to be used to close, fully or partly, an opening and to provide passage mainly for pedestrians in external walls as a part of the building envelope.

External pedestrian doorsets on escape routes, for fire compartmentation and smoke control, and for anti-violation purposes are included in this product definition.

External pedestrian doorsets intended to be used for natural smoke and heat exhaust ventilation systems are excluded from this product definition.

A power-operated product opens and/or closes upon receipt of a manual or automatic actuating signal.

Reused products are excluded from the scope.

2.1.1.3.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 3.

Table 3: External pedestrian doorsets

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
		resistance to fire E		Part G.3	
		resistance to fire EI		Part G.4	
		resistance to fire EW		Part G.5	
		smoke control		Part G.9	
		self-closing		Part G.10	
		release of hold-open device		Table 48	only relevant if hold-open device included in the product
hygiene and health	3	ventilation capacity of air transfer devices - airflow coefficient			
		ventilation capacity of air transfer devices - pressure exponent			
		watertightness - pedestrian doorsets, windows and roofligths		Table 33	
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
safety and accessibility	4	manual operating forces - pedestrian doorsets - closing or commence motion force		Table 49	only relevant for products intended to be operated by manual force
		manual operating forces - pedestrian doorsets - force for hand operated hardware		Table 50	only relevant for products intended to be operated by manual force
		manual operating forces - pedestrian doorsets - force for finger operated hardware		Table 51	only relevant for products intended to be operated by manual force
		impact resistance - soft body		Table 39	
		resistance to wind load - pressure limits - testing		Table 40	
		resistance to wind load - pressure limits - calculation		Table 40	
		resistance to wind load - relative frontal deflection - testing		Table 41	
		resistance to wind load - relative frontal deflection - calculation		Table 41	
		resistance against bullet attack - handguns and rifles		Table 42	
		resistance against bullet attack - shotguns		Table 43	
		resistance against bullet attack - assault rifle		Table 44	
		explosion resistance - shock tube		Table 45	
		explosion resistance - arena test - small charges		Table 46	
		explosion resistance - arena test - large charges		Table 47	
		climate related deformation		Table 52	
acoustic performance	5	direct airborne sound insulation - testing			
		direct airborne sound insulation - tabulated values			
thermal performance	6	thermal transmittance reference size - testing			

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
		thermal transmittance reference size - calculation			
		thermal transmittance reference size – tabulated values			
		thermal transmittance - glazing			
		thermal transmittance - frame			
		thermal transmittance - opaque panel			
		linear thermal transmittance at glazing, spacer and frame transition			
		linear thermal transmittance between opaque panel and frame			
		linear thermal transmittance of glazing bars			
		air permeability related to overall area - windows and external doorsets		Figure 1	
		air permeability related to opening joint length - windows and external doorsets		Figure 2	
		total solar energy transmittance - glazing			
		light transmittance - glazing			
environmental sustainability	7, 8	all included in Part E.2			

2.1.1.3.3. Assessment and verification

All general requirements included in Part H.

2.1.1.3.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following dimensions and information for each unit produced, when applicable:

(1) ventilation area at open position;

(2) clear opening height;

(3) clear opening width;

(4) area of the glazing;

(5) areas of the frame;

(6) area of the opaque panel;

(7) perimeter of the glazing;

(8) perimeter of the opaque panel; and

(9) length of the glazing bars;

(10) test climate under which the climate related deformation was determined;

(11) torque for hand operated hardware; and

(12) torque for finger operated hardware.

Dimensions of different units may be provided together in the same table.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall

be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.2. European standard on industrial, commercial and garage doors requested in Table 1, point 2, of Annex I

2.2.1. Scope

The standard shall address industrial, commercial and garage doors made of at least one door leaf and building hardware, either manually operated and/or power operated. They may include a door frame and other components such as glazing(s) and other infills.

Industrial, commercial and garage doors are intended to be used to close an opening and to provide passage mainly for goods and vehicles accompanied or driven by persons.

The standard shall also address doors such as rolling shutters and rolling grilles intended to be used mainly to provide access for persons rather than goods or vehicles.

Industrial, commercial and garage doors for fire compartmentation and smoke control are included in this product definition.

Industrial, commercial and garage doors intended to be used for natural smoke and heat exhaust ventilation are excluded from this product definition.

A power-operated product opens and/or closes upon receipt of a manual or automatic actuating signal.

Reused products are excluded from the scope.

2.2.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 4.

Table 4: Industrial, commercial and garage doors

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
		resistance to fire E		Part G.3	
		resistance to fire EI		Part G.4	
		resistance to fire EW		Part G.5	
		smoke control		Part G.9	
		self-closing		Part G.10	
		release of hold-open device		Table 48	relevant if hold-open device included in the product
hygiene and health	3	watertightness - industrial, commercial and garage doors		Table 53	
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
safety and accessibility	4	manual operating forces - industrial, commercial and garage doors	≤ 150 N for residential ≤ 260 N for industrial		relevant for products intended to be operated by manual force; thresholds are multiplied by 1.5 for units only power-operated
		impact resistance - soft body		Table 39	
		resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - testing		Table 54	
		resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - calculation		Table 54	only relevant for products too large for full size testing

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
		resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - testing		Table 55	
		resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - calculation		Table 55	only relevant for products too large for full size testing
		resistance against bullet attack - handguns and rifles		Table 42	
		resistance against bullet attack - shotguns		Table 43	
		resistance against bullet attack - assault rifle		Table 44	
		explosion resistance - shock tube		Table 45	
		explosion resistance - arena test - small charges		Table 46	
		explosion resistance - arena test - large charges		Table 47	
acoustic performance	5	direct airborne sound insulation - testing			
thermal performance	6	thermal transmittance - calculation			
		air permeability positive - industrial, commercial and garage doors and gates		Table 56	
		air permeability negative - industrial, commercial and garage doors and gates		Table 57	
environmental sustainability	7, 8	all included in Part E.2			

2.2.3. Assessment and verification

All general requirements included in Part H.

2.2.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the dimensions of the product for each unit produced.

Dimensions of different units may be provided together in the same table.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.3. European standard on <u>individual rooflights, individual roof hatches and continuous rooflights</u> requested in Table 1, point 3, of Annex I

2.3.1. Products

The standard shall cover the products described in this section.

2.3.1.1. Individual rooflights and individual roof hatches

2.3.1.1.1. Scope

The standard shall address individual rooflights that are non-structural elements which are standalone units, fixed or openable, and either manually operated and/or power operated. They may include other components such as upstands, shutters, blinds, awnings and ventilation devices.

Individual rooflights are intended to be used in horizontal roofs, and in slightly inclined positions requiring an upstand and a waterproofing system to ensure the water is drained away from the roof opening and may or may not provide any combination of the following features: admit daylight; admit solar gains; and provide ventilation.

The standard shall address individual roof hatches which are standalone units, openable either manually operated and/or power operated. They may include other components such as upstands, shutters, blinds, awnings and ventilation devices.

Individual roof hatches are intended to be used in horizontal roofs, and in slightly inclined positions requiring an upstand and a waterproofing system to ensure the water is drained away from the roof opening to provide access for pedestrians, goods and services and may or may not provide any combination of the following features: admit daylight; admit solar gains; and provide ventilation.

Individual rooflights and individual roof hatches for fire compartmentation and smoke control are included in this product definition.

The following products are excluded from this product definition:

– Individual roof hatches with integrated ladders or stairs.

– Individual rooflights and individual roof hatches on escape routes and for anti-violation purposes.

– Individual rooflights and individual roof hatches intended to be used for natural smoke and heat exhaust ventilation.

The performance assessed and declared apply to the product in its entirety, including any upstand and integrated component.

A power-operated product opens and/or closes upon receipt of a manual or automatic actuating signal.

Reused products are excluded from the scope.

2.3.1.1.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 5.

Table 5: Individual rooflights and individual roof hatches

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
		resistance to fire E		Part G.3	
		resistance to fire EI		Part G.4	
		resistance to fire EW		Part G.5	
		resistance to fire RE		Part G.7	
		resistance to fire REI		Part G.8	
		smoke control		Part G.9	
		self-closing		Part G.10	
		external fire performance		Part G.11	
hygiene and health	3	ventilation capacity of air transfer devices - airflow coefficient			
		ventilation capacity of air transfer devices - pressure exponent			
		watertightness - pedestrian doorsets, windows and rooflights		Table 33	
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility	4	manual operating forces - roof hatches			relevant only for openable roof hatches
		slip resistance[2]			
		impact resistance - soft body - rooflights and roof hatches			
		impact resistance - hard body - rooflights and roof hatches			
		impact resistance - residual stability after impact			
		resistance to upward loads			
		resistance to continuously distributed downward loads			
		resistance to concentrated downward loads			
		durability of elasticity modulus - thermoplastic materials			only relevant for thermoplastic glazing
		durability of elasticity modulus - thermosetting materials			only relevant for thermosetting plastic glazing
		durability of tensile strength - thermoplastic materials			only relevant for plastic thermoplastic glazing
		durability of tensile strength - thermosetting materials			only relevant for thermosetting plastic glazing
		stability in open position			only relevant for openable roof hatches
acoustic performance	5	direct airborne sound insulation - testing			
		direct airborne sound insulation - tabulated values			
thermal performance	6	thermal transmittance - testing			
		thermal transmittance - calculation			
		thermal transmittance - tabulated values			
		thermal transmittance with extended shutter and/or shading equipment			
		air permeability - rooflights of plastic and glass and roof hatches		Figure 5	
		total solar energy transmittance - glazing			
		total solar energy transmittance - glazing with extended shutter and/or shading equipment			
		light transmittance - glazing			
		light transmittance - glazing with closed shutter and/or shading equipment			
		durability of light transmittance - thermoplastic materials			only relevant for plastic thermoplastic glazing
		durability of light transmittance - thermosetting materials			only relevant for thermosetting plastic glazing
		yellowness index - thermoplastic materials			only relevant for plastic thermoplastic glazing
		yellowness index - thermosetting materials			only relevant for thermosetting plastic glazing
environmental sustainability	7, 8	all included in Part E.2			

2.3.1.1.3. Assessment and verification

All general requirements included in Part H.

[2] To be aligned to the outcome of the work on slip resistance for floorings.

2.3.1.1.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following dimensions for each unit produced, when applicable:

(1) ventilation area at open position;

(2) clear opening length (only relevant for roof hatches);

(3) clear opening width (only relevant for roof hatches;

(4) opaque area fraction.

Dimensions of different units may be provided together in the same table.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.3.1.2. Continuous rooflights

2.3.1.2.1. Scope

The standard shall address continuous rooflights that are non-structural elements which are uninterrupted runs of glazing fixed or openable either manually operated and/or power operated. They may include other components such as upstands, shutters, blinds, awnings and ventilation devices.

Continuous rooflights are intended to be used to cover large parts in horizontal roofs, and in slightly inclined positions requiring an upstand and a waterproofing system to ensure the water is drained away from the roof opening and may or may not provide any combination of the following features: admit daylight; admit solar gains; and provide ventilation.

Continuous rooflights for fire compartmentation and smoke control are included in this product definition.

The following products are excluded from this product definition:

– Continuous rooflights on escape routes and for anti-violation purposes.

– Continuous roof lights intended to be used for natural smoke and heat exhaust ventilation.

The performance assessed and declared apply to the product in its entirety, including any upstand and integrated component.

A power-operated product opens and/or closes upon receipt of a manual or automatic actuating signal.

Reused products are excluded from the scope.

2.3.1.2.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 6.

Table 6: Continuous rooflights

Group	BRCW	Essential characteristic	EU threshold	Class	Comments

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
		resistance to fire E		Part G.3	
		resistance to fire EI		Part G.4	
		resistance to fire EW		Part G.5	
		resistance to fire RE		Part G.7	
		resistance to fire REI		Part G.8	
		smoke control		Part G.9	
		self-closing		Part G.10	
		external fire performance		Part G.11	
hygiene and health	3	ventilation capacity of air transfer devices - airflow coefficient			
		ventilation capacity of air transfer devices - pressure exponent			
		watertightness - pedestrian doorsets, windows and roofligths		Table 33	
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
safety and accessibility	4	slip resistance[3]			
		impact resistance - soft body - rooflights and roof hatches			
		impact resistance - hard body - rooflights and roof hatches			
		impact resistance - residual stability after impact			
		resistance to upward loads			
		resistance to continuously distributed downward loads			
		resistance to concentrated downward loads			
		durability of elasticity modulus - thermoplastic materials			only relevant for thermoplastic glazing
		durability of elasticity modulus - thermosetting materials			only relevant for thermosetting plastic glazing
		durability of tensile strength - thermoplastic materials			only relevant for plastic thermoplastic glazing
		durability of tensile strength - thermosetting materials			only relevant for thermosetting plastic glazing
acoustic performance	5	direct airborne sound insulation - testing			
		direct airborne sound insulation - calculation			
		direct airborne sound insulation - tabulated values			
thermal performance	6	thermal transmittance - testing			
		thermal transmittance - calculation			
		thermal transmittance - tabulated values			
		thermal transmittance with extended shutter and/or shading equipment			
		air permeability - rooflights of plastic and glass and roof hatches		Figure 5	
		total solar energy transmittance - glazing			
		total solar energy transmittance - glazing with extended shutter and/or shading equipment			
		light transmittance - glazing			
		light transmittance - glazing with			

[3] To be aligned to the outcome of the work on slip resistance for floorings.

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
		extended shutter and/or shading equipment			
		durability of light transmittance - thermoplastic materials			only relevant for plastic thermoplastic glazing
		durability of light transmittance - thermosetting materials			only relevant for thermosetting plastic glazing
		yellowness index - thermoplastic materials			only relevant for plastic thermoplastic glazing
		yellowness index - thermosetting materials			only relevant for thermosetting plastic glazing
environmental sustainability	7, 8	all included in Part E.2			

2.3.1.2.3. Assessment and verification

All general requirements included in Part H.

2.3.1.2.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following dimensions for each unit produced, when applicable:

(1) ventilation area at open position; and

(2) opaque area fraction.

Continuous rooflights shall be accompanied by an assembling guideline identifying the instructions to be followed to obtain the declared performance.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4. European standard on building hardware requested in Table 1, point 4, of Annex I

2.4.1. Products

The standard shall cover the products described in this section.

2.4.1.1. Panic exit devices

2.4.1.1.1. Scope

The standard shall address panic exit devices mechanically operated by either a push-bar, a touch-bar or a pivot touch bar when it is moved anywhere long its effective length in the direction of travel and/or in an arc downwards. The bar is positioned on the side of the room to be evacuated.

Panic exit devices are intended to be used on escape routes during emergency situations to ensure safe and efficient escape through a doorway with minimum effort and without prior knowledge of the device.

The following products are excluded from this product definition

– Panic exit devices intended to be used by severely disabled.

– Panic exit devices where electrical action is necessary to release in the direction of exit.

– Panic exit devices operated by a level handle, touch pad or push pad.

Reused products are excluded from the scope.

2.4.1.1.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 7.

Table 7: Panic exit devices

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	bar projection	≤ 150 mm	Table 58	mandatory declaration
		release force without load of 1000N	≤ 80 N	Table 59	mandatory declaration
		release force with load of 1000N	≤ 220 N	Table 60	mandatory declaration
		self-closing - door closing force - emergency and panic devices	≤ 50 N	Table 61	mandatory declaration
		corrosion resistance	≥ 96 h	Table 62	mandatory declaration
		durability of self-closing - panic and emergency exit devices	≥ 100000 cycles at 0 N sealing force	Table 63	mandatory declaration
		durability of emergency release	≥ 100000 cycles at 0 N sealing force	Table 64	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.1.3. Assessment and verification

All general requirements included in Part H.

2.4.1.1.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information, when applicable:

(1) minimum temperature of the temperature dependence of the release force; and

(2) maximum temperature of the temperature dependence of the release force.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.2. Emergency exit devices

2.4.1.2.1. Scope

The standard shall address emergency exit devices mechanically operated by either a lever handle, a touch pad or a push pad.

Emergency exit devices are intended to be used during emergency situations to ensure safe and efficient escape through a doorway where people are familiar with the exit and its hardware and therefore a panic situation is unlikely to happen.

Emergency exit devices installed in combination with panic exit devices on double-leaf doorsets where each device is fitted to one door leaf respectively are included in this product definition.

The following products are excluded from this product definition

– Emergency exit devices intended to be used on inwardly opening double leaf doorsets.

– Emergency exit devices intended to be used by severely disabled.

– Emergency exit devices where electrical action is necessary to release in the direction of exit.

– Emergency exit devices operated by a horizontal bar.

Reused products are excluded from the scope.

2.4.1.2.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 8.

Table 8: Emergency exit devices

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	bar projection	≤ 150 mm	Table 58	mandatory declaration
		release force - lever handle or touch pad	≤ 70 N	Table 65	mandatory declaration lever handle and touch pad devices
		release force - push pad	≤ 150 N	Table 66	mandatory declaration push pad devices
		self-closing - door closing force - panic and emergency exit devices	≤ 50 N	Table 61	mandatory declaration
		corrosion resistance	≥ 96 h	Table 62	mandatory declaration
		durability of self-closing - emergency and panic exit devices	≥ 100000 cycles at 0 N sealing force	Table 63	mandatory declaration
		durability of emergency release	≥ 100000 cycles at 0 N sealing force	Table 64	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.2.3. Assessment and verification

All general requirements included in Part H.

2.4.1.2.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information, when applicable:

(1) minimum temperature of the temperature dependence of the release force; and

(2) maximum temperature of the temperature dependence of the release force.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.3. Mechanical lockcases

2.4.1.3.1. Scope

The standard shall address lockcases mechanically operated including locks and their locking plates.

Mechanical lockcases are intended to be used on doors used as entrance or other entrance system including intended uses for fire safety and/or smoke control. The contribution of the lockcase to the fire resistance of the product in which it is installed is not taken into consideration.

The following products are excluded from this product definition

– Electromechanically operated lockcases.

– Mechanically operated multipoint locks and their locking plates.

– Locks for safes.

– Furniture locks.

– Prison locks.

Reused products are excluded from the scope.

2.4.1.3.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 9.

Table 9: Mechanical lockcases

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4 3	self-closing - door closing force - lockcases and locks	≤ 50 N	Table 67	mandatory declaration and threshold only applicable to devices intended to be used for fire safety and/or smoke control
		durability of self-closing - mechanical lockcases - number of latch actions		Table 68	mandatory declaration
		durability of self-closing - mechanical lockcases - number of shared latch actions key		Table 69	mandatory declaration
		durability of self-closing - mechanical lockcases - number of shared latch actions handle		Table 70	mandatory declaration
		durability of self-closing - mechanical lockcases - number of cycles of an automatically locking deadbolt		Table 71	mandatory declaration
		corrosion resistance		Table 62	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental	7, 8	all included in Part E.2			

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
sustainability					

2.4.1.3.3. Assessment and verification

All general requirements included in Part H.

2.4.1.3.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information, when applicable:

(1) self-closing, return force of latch bolt.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.4. Electromechanical lockcases

2.4.1.4.1. Scope

The standard shall address lockcases electromechanically operated including locks and their locking plates.

Electromechanical lockcases are intended to be used on doors used as entrance or other entrance system including intended uses for fire safety and/or smoke control. The contribution of the lockcase to the fire resistance of the product in which it is installed is not taken into consideration.

The following products are excluded from this product definition

– Mechanically operated lockcases.

– Mechanically operated multipoint locks and their locking plates.

– Locks for safes.

– Furniture locks.

– Prison locks.

Reused products are excluded from the scope.

2.4.1.4.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 10.

Table 10: Electromechanical lockcases

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	self-closing - door closing force - lockcases and locks	≤ 50 N	Table 67	mandatory declaration and threshold only applicable to devices intended to be used for fire safety and/or smoke control
		durability of self-closing - electromechanical lockcases		Table 72	mandatory declaration
		corrosion resistance		Table 62	mandatory declaration

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.4.3. Assessment and verification

All general requirements included in Part H.

2.4.1.4.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information, when applicable:

(1) self-closing, return force of latch bolt.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.5. Multipoint locks

2.4.1.5.1. Scope

The standard shall address multipoint locks mechanically operated and their locking plates.

Multipoint locks are intended to be used on doors used as entrance or other entrance system including intended uses for fire safety and/or smoke control. The contribution of the multipoint lock and the locking plate to the fire resistance of the product in which it is installed is not taken into consideration.

The following products are excluded from this product definition

– Mechanically operated single point lockcases and their locking plates.

– Electromechanically operated lockcases.

– Locks for safes.

– Furniture locks.

– Prison locks.

Reused products are excluded from the scope.

2.4.1.5.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 11.

Table 11: Multipoint locks

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	self-closing - door closing force - lockcases and locks	≤ 50 N	Table 67	mandatory declaration and threshold only applicable to devices intended to be used for fire safety and/or smoke

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
					control
		durability of self-closing - multipoint locks		Table 73	mandatory declaration
		corrosion resistance		Table 62	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.5.3. Assessment and verification

All general requirements included in Part H.

2.4.1.5.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information, when applicable:

(1) self-closing, return force of latch bolt.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.6. Single axis door hinges

2.4.1.6.1. Scope

The standard shall address single axis hinges mounted on a frame and on the edge of the door leaf allowing the door to swing freely in one direction, for which the axis of rotation of the hinge remains fixed in its position during the operational cycle between closed and open position.

Single axis hinges are intended to be used on doors to allow the closing and opening of the door leaf including intended uses for fire and smoke compartmentation, fire safety, smoke control and/or locked doors on escape routes.

The following products are excluded from this product definition

– Hinges incorporating spring-assisted or door-closing mechanisms.

– Variable geometry hinges and single or double action pivots.

– Door closers incorporating door coordinator devices.

– Hinges to be used on windows and door-height windows

Reused products are excluded from the scope.

2.4.1.6.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 12.

Table 12: Single axis door hinges

Group	BRCW	Essential characteristic	EU threshold	Class	Comments

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	initial friction torque		Table 74	mandatory declaration
		static load - load deformation - lateral displacement under load	≤ 2 mm		mandatory declaration
		static load - load deformation - vertical displacement under load	≤ 4 mm		mandatory declaration
		static load - load deformation - lateral residual displacement after unloading	≤ 0.6 mm		mandatory declaration
		static load - load deformation - vertical residual displacement after unloading	Table 75		mandatory declaration
		static load - overload criteria	≤ 2 cycles	Table 76	mandatory declaration
		durability - lateral displacement (wear) under load	≤ 0.5 mm		mandatory declaration
		durability - vertical displacement (wear) under load	Table 77		
		durability - maximum friction torque		Table 78	mandatory declaration
		durability - cycles	≥ 200000 cycles	Table 79	mandatory declaration
		durability - overload criteria	≤ 2 cycles	Table 80	mandatory declaration
		corrosion resistance		Table 62	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.6.3. Assessment and verification

All general requirements included in Part H.

2.4.1.6.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information for each unit produced, when applicable:

(1) the door mass used in the tests;

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.7. Multi axis door hinges

2.4.1.7.1. Scope

The standard shall address multi axis hinges mounted with at least one component on a frame and one component on the edge of the door leaf connecting a door and a frame in such a way as to allow the door to swing freely with the instantaneous axis of rotation of the hinge changing its position in space and maintaining its direction perpendicular to a horizontal plane during the operational cycle between closed and open position.

Multi axis hinges are intended to be used on doors to allow the closing and opening of the door leaf including intended uses for fire and smoke compartmentation, fire safety, smoke control and/or locked doors on escape routes.

The following products are excluded from this product definition

– Hinges incorporating spring-assisted or door-closing mechanisms.

– Single or double action pivots.

– Variable geometry links to be used on windows and door-height windows.

– Door closers incorporating door coordinator devices.

– Hinges to be used on windows and door-height windows.

Reused products are excluded from the scope.

2.4.1.7.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 13.

Table 13: Multi axis door hinges

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	initial friction torque		Table 74	mandatory declaration
		static load - load deformation - lateral displacement under load	≤ 2 mm		mandatory declaration
		static load - load deformation - vertical displacement under load	≤ 4 mm		mandatory declaration
		static load - load deformation - lateral residual displacement after unloading	≤ 0.6 mm		mandatory declaration
		static load - load deformation - vertical residual displacement after unloading	Table 75		mandatory declaration
		static load - overload criteria	≤ 2 cycles	Table 76	mandatory declaration
		durability - lateral displacement (wear) under load	≤ 0.5 mm		mandatory declaration
		durability - vertical displacement (wear) under load	Table 77		
		durability - maximum friction torque		Table 78	mandatory declaration
		durability - cycles	≥ 200000 cycles	Table 79	mandatory declaration
		durability - overload criteria	≤ 2 cycles	Table 80	mandatory declaration
		corrosion resistance		Table 62	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.7.3. Assessment and verification

All general requirements included in Part H.

2.4.1.7.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information for each unit produced, when applicable:

(1) the door mass used in the tests;

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.8. Controlled door closing devices

2.4.1.8.1. Scope

The standard shall address controlled door closing devices mounted on or in the frame, on or in the door, or in the floor which are manually operated where the energy for closing is generated by the user upon opening the door, such that when the door is released, it returns to a closed position in a controlled manner.

Controlled door closing devices are intended to be used on self-closing swing doors that are expected to close controlled and reliably and at the same time ensure easy access by people in case of fire and where fire compartmentation or smoke control is required.

The following products are excluded from this product definition

– Electrically powered hold-open devices to be incorporated in controlled door closing devices.

– Controlled door closing devices with a mechanical hold mechanism.

– Devices which do not exert a checking control during door closing.

– Controlled door closing devices incorporating door coordinator devices.

Reused products are excluded from the scope.

2.4.1.8.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 14.

Table 14: Controlled door closing devices

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	door closer power size	class 3	Table 81**Error! Reference source not found.**	mandatory declaration
		closing time deviation decrease	≤ 30%		mandatory declaration
		controlled closing	≥ 70°	Table 82	mandatory declaration
		zero position	≤ 6 mm		mandatory declaration
		backcheck	≤ 90°		mandatory declaration
		delayed closing	≤ 25 s	Table 83	mandatory declaration
		angles of operation	≥ 105°	Table 84	mandatory declaration
		closing time at minimum temperature	≥ 3 s ≤ 25 s	Table 85	mandatory declaration
		closing time at maximum temperature	≥ 3 s ≤ 25 s	Table 86	mandatory declaration
		durability of self-closing - controlled door closing devices	≥ 200000 cycles	Table 87	mandatory declaration
		corrosion resistance		Table 62	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.8.3. Assessment and verification

All general requirements included in Part H.

2.4.1.8.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information for each unit produced, when applicable:

(1) door closer power size for each application of fitting position stated;

(2) the maximum door mass for the door closer power size;

(3) the maximum door width for the door closer power size;

(4) the minimum temperature for the temperature dependence of the closing time;

(5) the maximum temperature for the temperature dependence of the closing time;

(6) the maximum opening angle up to which the self-closing is effective and from which an opening limiter must be installed to prevent further opening; and

(7) range of latch control.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.9. Electrically powered hold-open devices

2.4.1.9.1. Scope

The standard shall address electrically powered hold-open devices for swing doors including devices powered by a battery.

Electrically powered hold-open devices are mounted separately from the controlled door closing device or integrated in it. They are intended to be used to hold a door at a fixed position or to allow the door to swing freely. They are also intended to be used to provide reliable hold-open and release of self-closing functionality in case of fire compartmentation and where smoke control for doors is required. In each case, interruption of the electrical supply will cause the controlled door to close, including intended uses for fire compartmentation and smoke control.

The following products are excluded from this product definition

– Smoke for fire detection elements.

– Hold-open devices that require electrical energy to enable the electrical release.

Reused products are excluded from the scope.

2.4.1.9.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 15.

Table 15: Electrically powered hold-open devices

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	release of hold-open device	≥ 100000	Table 48	mandatory declaration
		door closer power size	class 3	Table 81	mandatory declaration for electrically powered integrated products

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
		electrical release of hold-open device	≤ 3 s		mandatory declaration
		manual release of hold-open device	≥ 15 N·m	Table 88	mandatory declaration
		settle back of hold-open angle	≤ 5°		mandatory declaration
		continuous hold-open position	≤ 2°		mandatory declaration
		closing time deviation - increase	≤ 100%		mandatory declaration for electrically powered integrated products
		closing time deviation - decrease	≤ 30%		mandatory declaration for electrically powered integrated products
		controlled closing	≥ 20 s	Table 82	mandatory declaration for electrically powered integrated products
		zero position	≤ 6 mm		only relevant for electrically powered integrated products
		delayed closing	≤ 25 s	Table 83	only relevant for electrically powered integrated products
		angles of operation	≥ 105°	Table 84	mandatory declaration for electrically powered integrated products
		backcheck	≤ 90°		only relevant for electrically powered integrated products
		temperature dependence of closing time - minimum temperature	≥ 3 s ≤ 25 s	Table 85	mandatory declaration for electrically powered integrated products
		temperature dependence of closing time - maximum temperature	≥ 3 s ≤ 25 s	Table 86	mandatory declaration for electrically powered integrated products
		durability of self-closing - controlled door closing devices	≥ 200000 cycles	Table 87	mandatory declaration for electrically powered integrated products
		corrosion resistance		Table 62	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.9.3. Assessment and verification

All general requirements included in Part H.

2.4.1.9.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information for each unit produced, when applicable:

(1) hold-open angle;

(2) door closer power size for each application of fitting position stated;

(3) maximum door mass for the door closer power size;

(4) maximum door width for the door closer power size;

(5) minimum temperature for the temperature dependence of the closing time;

(6) maximum temperature for the temperature dependence of the closing time;

(7) maximum opening angle up to which the self-closing is effective and from which an opening limiter must be installed to prevent further opening;

(8) range of latch control; and

(9) the range of door closer power sizes for which it is intended, only for separated electrically powered hold-open device.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4.1.10. Door coordinator devices

2.4.1.10.1. Scope

The standard shall address door coordinator devices mounted separately to controlled door closing devices and power operated pedestrian swing door drives with a self-closing function, incorporated into them or incorporated into controlled door closing devices with electrically powered hold-open devices.

Door coordinator devices are intended to be used on double leaf swing doors where it is necessary to ensure the correct sequence of closing, including double leaf swing doors with incorporated rebated meeting stiles for fire and smoke compartmentation and smoke control.

Reused products are excluded from the scope.

2.4.1.10.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 16.

Table 16: Door coordinator devices

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
safety and accessibility including fire safety	2, 4	release of hold-open device	≥ 100000	Table 48	mandatory declaration for electrically powered integrated products
		door closer power size	class 3	Table 81	mandatory declaration for door coordinator integrated products
		electrical release of hold-open device	≤ 3 s		mandatory declaration for electrically powered integrated products
		manual release of hold-open device	≥ 15 N·m	Table 88	mandatory declaration for electrically powered integrated products
		settle back of hold-open angle	≤ 5°		mandatory declaration for electrically powered integrated products
		continuous hold-open position	≤ 2°		mandatory declaration for electrically powered integrated products
		closing time deviation - increase	≤ 100%		mandatory declaration for door coordinator integrated products
		closing time deviation - decrease	≤ 30%		mandatory declaration for door coordinator integrated products
		controlled closing	≥ 20 s	Table 82	mandatory declaration for door coordinator integrated products

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
		zero position	≤ 6 mm		only relevant for door coordinator integrated products
		delayed closing	≤ 25 s	Table 83	only relevant for door coordinator integrated products
		angles of operation	≥ 105°	Table 84	mandatory declaration for door coordinator integrated products
		backcheck	≤ 90°		only relevant for door coordinator integrated products
		temperature dependence of closing time - minimum temperature	≥ 3 s ≤ 25 s	Table 85	mandatory declaration for door coordinator integrated products
		temperature dependence of closing time - maximum temperature	≥ 3 s ≤ 25 s	Table 86	mandatory declaration for door coordinator integrated products
		durability of self-closing - controlled door closing devices	≥ 200000 cycles	Table 87	mandatory declaration for door coordinator integrated products
		durability of self-closing - door coordinator devices	≥ 50000 cycles	Table 89	mandatory declaration
		corrosion resistance		Table 62	mandatory declaration
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.1.10.3. Assessment and verification

All general requirements included in Part H.

2.4.1.10.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following information for each unit produced, when applicable:

(1) the information on the application and adjustment of carry bars on double-leaf door sets, as well as on how to carry out a functional test when opening via the secondary door leaf;

(2) range of door closer power sizes for which it is intended, only for controlled door closing device or power operated swing door drives with self-closing function provided as separated door coordinators;

(3) hold-open angle;

(4) door closer power size for each application of fitting position stated;

(5) the maximum door mass for the door closer power size;

(6) the maximum door width for the door closer power size;

(7) the minimum temperature for the temperature dependence of the closing time;

(8) the maximum temperature for the temperature dependence of the closing time; and

(9) the maximum opening angle up to which the self-closing is effective and from which an opening limiter must be installed to prevent further opening range of latch control.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.5. Standards on product category rules for windows, hatches and pedestrian doorsets requested in Table 1, point 5, of Annex I

The technical content shall establish complementary product category rules (c-PCR) applicable to windows, hatches and pedestrian doorsets including integrated accessories such as roller shutters in accordance with the requirements established in Part.E.1.

The c-PCR shall provide rules for establishing the declared unit as the reference unit defined in the product standard for other essential characteristics. The c- PCR standard shall also provide calculations methods to extrapolate the environmental performance for units of different dimensions.

The c-PCR shall include an assessment method for reference service life that explicitly acknowledges the default reference service life of 30 years.

2.6. Standards on product category rules for industrial, commercial and garage doors requested in Table 1, point 6, of Annex I

The technical content shall establish complementary product category rules (c-PCR) applicable to industrial, commercial and garage doors in accordance with the requirements established in Part.E.1.

The c-PCR shall provide rules for establishing the declared unit as the unit for which the declaration of performance and conformity is provided.

The c-PCR shall include an assessment method for reference service life that explicitly acknowledges the default reference service life of 25 years.

2.7. Standards on product category rules for individual rooflights, individual roof hatches and continuous rooflights requested in Table 1, point 7, of Annex I

The technical content shall establish complementary product category rules (c-PCR) applicable to individual rooflights, individual roof hatches and continuous rooflights in accordance with the requirements established in Part.E.1.

The c-PCR shall provide rules for establishing the declared unit as the reference unit defined in the product standard for other essential characteristics. The c- PCR standard shall also provide calculations methods to extrapolate the environmental performance for units of different dimensions.

The c-PCR shall include an assessment method for reference service life that explicitly acknowledges the default reference service life of 30 years.

2.8. Standards on product category rules for gates and barriers requested in Table 1, point 8, of Annex I

The technical content shall establish complementary product category rules (c-PCR) applicable to gates and barriers in accordance with the requirements established in Part.E.1.

The c-PCR shall provide rules for establishing the declared unit as the unit for which the declaration of performance and conformity is provided.

The c-PCR shall include an assessment method for reference service life that explicitly acknowledges the default reference service life of 25 years.

2.9. Standards on product category rules for awnings, external blinds, internal blinds and external shutters requested in Table 1, point 9, of Annex I

The technical content shall establish complementary product category rules (c-PCR) applicable to awnings, external blinds, internal blinds and external shutters in accordance with the requirements established in Part.E.1.

The c-PCR shall provide rules for establishing the declared unit as the unit for which the declaration of performance and conformity is provided.

The c-PCR shall include an assessment method for reference service life that explicitly acknowledges the following default reference service life values:

– internal blinds: 15 years;

– external blinds: 25 years;

– awnings: 20 years; and

– external shutters: 30 years.

PART C. SPECIFIC REQUIREMENTS FOR DRAFTING THE NEW STANDARDS LISTED IN TABLE 2 OF ANNEX I

1. REQUIREMENTS FOR ALL STANDARDS

The harmonised standards shall reflect the generally acknowledged state of the art.

2. REQUIREMENTS FOR SPECIFIC STANDARDS

2.1. European standard on gates and barriers requested in Table 2, point 1, of Annex I

2.1.1. Scope

The standard shall address manually and/or power operated gates and barriers installed as a section of a fence or a wall outside the building envelope.

Gates and barriers are intended to be used to allow and restrict entrance to a restricted or bounded area including on escape routes and for anti-violation purposes.

The standard shall address manually and/or power operated barriers in internal walls or partitions, in external walls as part of the building or externally in fences or walls outside the building envelope including products in the form of one or more poles.

Barriers are intended to be used to control passage of pedestrian or vehicles through an entrance.

A power-operated product opens and/or closes upon receipt of a manual or automatic actuating signal.

Reused products are excluded from the scope.

2.1.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 17.

Table 17: Gates and barriers

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
safety and accessibility	4	manual operating forces - gates and barriers	≤ 150 N for residential ≤ 260 N for industrial		relevant for products intended to be operated by manual force; thresholds are multiplied by 1.5 for units only power-operated
		resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers		Table 54	only relevant for external use
		resistance to wind load - suction - industrial, commercial and garage doors, gates and barriers		Table 55	only relevant for external use
environmental sustainability	7, 8	all included in Part E.2			

2.1.3. Assessment and verification

All general requirements included in Part H.

2.1.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the dimensions of the product for each unit produced.

Dimensions of different units may be provided together in the same table.

The product description included in the general product information may include a designation code based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.2. European standard on awnings requested in Table 2, point 2, of Annex I

2.2.1. Scope

The standard shall address awnings mainly made of slats and/or fabrics.

Awnings are intended to be used externally as a projecting element from the façade to modify light and solar characteristics of a glazing element such as a windows, door or curtain wall, mainly by providing shade.

Awnings intended to be installed indoor are excluded from this product definition.

Reused products are excluded from the scope.

2.2.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 18.

Table 18: Awnings

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
safety and accessibility	4	resistance to wind load - external blinds, awnings and external venetian blinds		Table 90	
		resistance to water pocked load		Table 91	
		resistance to snow load			
thermal performance	6	reference total solar energy transmittance including reference glazing		Table 92	
		solar transmittance			
		solar reflectance - side 1			
		solar reflectance - side 2			
		light transmittance			
		light reflectance - side 1			
		light reflectance - side 2			
environmental sustainability	7, 8	all included in Part E.2			

2.2.3. Assessment and verification

All general requirements included in Part H.

2.2.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following, when applicable:

(1) designation code for operating forces after cycling - extension/retraction in accordance with Table 19.

Table 19: Designation code operating forces after cycling - extension/retraction -

designation	number of cycles - extension/retraction
0	≥ 0
1	≥ 3000
2	≥ 7000
3	≥ 10000

(2) designation code for operating forces after cycling - tilting in accordance with Table 20.

Table 20: Designation code operating forces after cycling - tilting

designation	number of cycles - tilting
0	≥ 0
1	≥ 6000
2	≥ 14000
3	≥ 20000

(3) information about the content of tin, cadmium, lead stabilisers, chromium VI and biocides.

The product description included in the general product information shall include the dimensions of the product for each unit produced. Dimensions of different units may be provided together in the same table.

Information about the installation conditions and the type of product for which snow load is not relevant.

The product description included in the general product information may include additional designation codes based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.3. European standard on external blinds requested in Table 2, point 3, of Annex I

2.3.1. Scope

The standard shall address external blinds mainly made of slats and/or fabrics including venetian blinds.

External blinds are intended to be used externally to modify light, solar and thermal characteristics of a glazing element such as a window, door or curtain wall, or to protect against insect penetration.

Reused products are excluded from the scope.

2.3.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 21.

Table 21: External blinds

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
safety and	4	resistance to wind load - external		Table 90	

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
accessibility		blinds, awnings and external venetian blinds			
		resistance to snow load			
thermal performance	6	additional thermal resistance			
		reference total solar energy transmittance including reference glazing		Table 92	
		solar transmittance			
		solar reflectance - side 1			
		solar reflectance - side 2			
		light transmittance			
		light reflectance - side 1			
		light reflectance - side 2			
environmental sustainability	7, 8	all included in Part E.2			

2.3.3. Assessment and verification

All general requirements included in Part H.

2.3.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following, when applicable:

(1) designation code for operating forces after cycling - extension/retraction in accordance with Table 22.

Table 22: Designation code operating forces after cycling - extension/retraction -

designation	number of cycles - extension/retraction
0	≥ 0
1	≥ 3000
2	≥ 7000
3	≥ 10000

(2) designation code for operating forces after cycling - tilting in accordance with Table 23.

Table 23: Designation code operating forces after cycling - tilting

designation	number of cycles - tilting
0	≥ 0
1	≥ 6000
2	≥ 14000
3	≥ 20000

(3) information about the content of tin, cadmium, lead stabilisers, chromium VI and biocides.

The product description included in the general product information shall include the dimensions of the product for each unit produced. Dimensions of different units may be provided together in the same table.

Information about the installation conditions and the type of product for which snow load is not relevant.

The product description included in the general product information may include additional designation codes based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall

be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.4. European standard on internal blinds requested in Table 2, point 4, of Annex I

2.4.1. Scope

The standard shall address internal blinds mainly made of slats and/or fabrics.

Internal blinds are intended to be used internally to modify light, solar and thermal characteristics of a glazing element such as a window, door or curtain wall.

Reused products are excluded from the scope.

2.4.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 24.

Table 24: Internal blinds

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
emission of dangerous substances to indoor air	3	all included in Part D.1 and Part D.2			
thermal performance	6	additional thermal resistance			
		reference total solar energy transmittance including reference glazing		Table 92	
		solar transmittance			
		solar reflectance - side 1			
		solar reflectance - side 2			
		light transmittance			
		light reflectance - side 1			
		light reflectance - side 2			
environmental sustainability	7, 8	all included in Part E.2			

2.4.3. Assessment and verification

All general requirements included in Part H.

2.4.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following, when applicable:

(1) designation code for operating forces after cycling - extension/retraction in accordance with Table 25.

Table 25: Designation code operating forces after cycling - extension/retraction -

designation	number of cycles - extension/retraction
0	≥ 0
1	≥ 2000
2	≥ 5000
3	≥ 10000

(2) designation code for operating forces after cycling - tilting in accordance with Table 26.

Table 26: Designation code operating forces after cycling - tilting

designation	number of cycles - tilting
0	≥ 0
1	≥ 4000
2	≥ 10000
3	≥ 20000

The product description included in the general product information shall include the dimensions of the product for each unit produced. Dimensions of different units may be provided together in the same table.

The product description included in the general product information may include additional designation codes based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.5. European standard on external shutters requested in Table 2, point 5, of Annex I

2.5.1. Scope

The standard shall address external shutters mainly made of rigid laths and/or panels.

External shutters are intended to be used externally to modify light, solar and thermal characteristics of a glazing element such as a window, door or curtain wall, and to provide mechanical resistance.

Reused products are excluded from the scope.

2.5.2. Performance declaration

The list of essential characteristics and the request to propose threshold levels, and classes and whether their declaration is mandatory are provided in Table 27.

Table 27: External shutters

Group	BRCW	Essential characteristic	EU threshold	Class	Comments
fire safety	2	reaction to fire		Part G.2	
safety and accessibility	4	resistance to wind load - shutters		Table 93	
		resistance to snow load			
thermal performance	6	additional thermal resistance			
		reference total solar energy transmittance including reference glazing		Table 92	
		solar transmittance			
		solar reflectance - side 1			
		solar reflectance - side 2			
		light transmittance			
		light reflectance - side 1			
		light reflectance - side 2			
environmental sustainability	7, 8	all included in Part E.2			

2.5.3. Assessment and verification

All general requirements included in Part H.

2.5.4. Guidelines for the drawing up of general product information, instructions for use and safety information

All general requirements included in Part I.

The product description included in the general product information shall include the following, when applicable:

(1) designation code for operating forces after cycling - extension/retraction in accordance with Table 28;

Table 28: Designation code operating forces after cycling - extension/retraction -

designation	number of cycles - extension/retraction
0	≥ 0
1	≥ 3000
2	≥ 7000
3	≥ 10000

(2) designation code for operating forces after cycling - tilting in accordance with Table 29;

Table 29: Designation code operating forces after cycling - tilting

designation	number of cycles - tilting
0	≥ 0
1	≥ 6000
2	≥ 14000
3	≥ 20000

(3) direct airborne sound insulation; and

(4) information about the content of tin, cadmium, lead stabilisers, chromium VI and biocides.

The product description included in the general product information shall include the dimensions of the product for each unit produced. Dimensions of different units may be provided together in the same table.

Information about the installation conditions and the type of product for which snow load is not relevant.

The product description included in the general product information may include additional designation codes based on the performance of the product and other characteristics in accordance with the rules established in the harmonised standard. The designation code shall be consistent with the declared performance in the Declaration of Performance and Conformity (DoPC) for the relevant essential characteristics.

2.6. Standards on product category rules for building hardware requested in Table 2, point 6, of Annex I

The technical content shall establish complementary product category rules (c-PCR) applicable to building hardware in accordance with the requirements established in Part.E.1.

The c-PCR shall provide rules for establishing the declared unit as the unit for which the declaration of performance and conformity is provided.

The c-PCR shall include an assessment method for reference service life that explicitly acknowledges the default reference service life of 25 years.

PART D. ESSENTIAL CHARACTERISTICS RELATED TO THE RELEASE OF DANGEROUS SUBSTANCES

1. EMISSION OF DANGEROUS SUBSTANCES TO INDOOR AIR

The emission of each of the compound in Table 30 obtained from the list of EU LCI values developed under the framework of the EU-LCI subgroup[4] is an essential characteristic.

Table 30: List of compounds linked to EU LCI values

row	CAS number	compound
1	108-88-3	Toluene
2	100-41-4	Ethylbenzene
3	1330-20-7 106-42-3 108-38-3 95-47-6	Xylene (o-, m-, p-) and mix of o-, m- and p-xylene isomers
4	98-82-8	Isopropylbenzene (cumene)
5	103-65-1	n-Propylbenzene
6	108-67-8 95-63-6 526-73-8	Trimethylbenzene (1,2,3-,1,2,4-,1,3,5-)
7	611-14-3	2-Ethyltoluene
8	527-84-4 535-77-3 99-87-6 25155-15-1	Cymene (o-, m- ,p-,) (1-isopropyl-2(3,4)-methylbenzene) and mix of o-, m-, and p-cymene
9	95-93-2	1,2,4,5-Tetramethylbenzene
10	104-51-8	n-Butylbenzene
11	99-62-7 100-18-5	Diisopropylbenzene (1,3-, 1,4-)
12	2189-60-8	Phenyl octane and isomers
13	100-42-5	Styrene
14	98-83-9	2-Phenylpropene (α-methylstyrene)
15	637-50-3	1-Propenyl benzene (ß-methyl styrene)
16	611-15-4 100-80-1 622-97-9 25013-15-4	Vinyl toluene (o-, m-, p-) and mix of o-, m-, and p-vinyl toluene
17	91-20-3	Naphthalene
18	91-17-8	Decahydronaphthalene
19	95-13-6	Indene
20	110-54-3	n-Hexane
21	110-82-7	Cyclohexane
22	108-87-2	Methyl cyclohexane
23	142-82-5	n-Heptane
24		Other saturated aliphatic hydrocarbons C6-C8
25		Other saturated aliphatic hydrocarbons C9-C16
26		Other saturated aliphatic hydrocarbons C17-C22
27	498-15-7	3-Carene
28	80-56-8	α-Pinene
29	127-91-3	ß-Pinene
30	138-86-3 5989-27-5 5989-54-8	Limonene
31		Other terpene hydrocarbons
32	75-65-0	2-Methyl-2-propanol (tert-butanol)
33	78-83-1	2-Methyl-1-propanol
34	71-36-3	1-Butanol
35	71-41-0 30899-19-5	1-Pentanol (all isomers)

[4] https://single-market-economy.ec.europa.eu/sectors/construction/eu-lci-subgroup_en

row	CAS number	compound
	94624-12-1 6032-29-7 584-02-1 137-32-6 123-51-3 598-75-4 75-85-4 75-84-3	
36	111-27-3	1-Hexanol
37	108-93-0	Cyclohexanol
38	104-76-7	2-Ethyl-1-hexanol
39	111-87-5	1-Octanol
40	123-42-2	4-Hydroxy-4-methyl-pentane-2-on (diacetone alcohol)
41		Other C6 - C13 saturated alcohols n- and iso-
42	105-08-8	1,4-Cyclohexanedimethanol
43	108-95-2	Phenol
44	128-37-0	BHT (2,6-di-tert-butyl-4-methylphenol)
45	100-51-6	Benzyl alcohol
46	107-21-1	Ethandiol (ethylenglykol)
47	96-49-1	Ethylene carbonate
48	7397-62-8	Butyl glycolate
49	111-46-6	Diethylene glycol
50	57-55-6	Propylene glycol (1,2-dihydroxypropane)
51	108-32-7	Propylene carbonate
52	623-84-7	Propylene glycol diacetate
53	110-98-5 25265-71-8	Dipropylene glycol
54	110-63-4	1,4-Butanediol
55	107-41-5	Hexylene glycol (2-methyl-2,4-pentanediol)
56	6846-50-0	2,2,4-Trimethylpentanediol diisobutyrate
57	109-86-4	Ethylene glycol monomethyl ether (2-methoxyethanol)
58	110-49-6	2-Methoxyethyl acetate
59	110-71-4	1,2-Dimethoxyethane
60	111-96-6	Diethylene glycol dimethyl ether (1-methoxy-2-(2-methoxy-ethoxy)-ethane)
61	25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate
62	109-59-1	Ethylene glycol isopropylether (2-methylethoxyethanol)
63	112-49-2	Triethylene glycol-dimethyl ether
64	110-80-5	Ethylene glycol monoethyl ether (2-ethoxyethanol)
65	111-15-9	2-Ethoxyethyl acetate
66	629-14-1	1,2-Diethoxyethane
67	111-90-0	Diethylene glycol monoethyl ether (2-(2-ethoxyethoxy)ethanol)
68	2807-30-9	Ethylene glycol monoisopropyl ether (2-propoxyethanol)
69	111-76-2	Ethylene glycol monobutylether (2-butoxyethanol)
70	112-07-2	2-Butoxyethyl acetate
71	112-34-5	Diethylene glycol monobutylether
72	124-17-4	Diethylene glycol monomethyl ether acetate (butyldiglykolacetate, 2-(2-butoxyethoxy) ethyl acetate)
73	122-99-6	2-Phenoxyethanol
74	112-25-4	Ethylene glycol n-hexyl ether (2-hexoxyethanol)
75	112-59-4	Diethylene glycol n-hexyl ether (2-(2-hexoxyethoxy)-ethanol)
76	107-98-2	Propylene glycol monomethyl ether (1-methoxy-2-propanol)
77	1589-47-5	1-Propylene glycol 2-methyl ether (2-methoxy-1-propanol)
78	70657-70-4	1-Propylene glycol 2-methyl ether acetate (2-methoxy-1-propyl acetate)
79	7778-85-0	1,2-Propylene glycol dimethyl ether
80	34590-94-8	Dipropylene glycol monomethyl ether
81	88917-22-0	Dipropylene glycol monomethyl ether acetate
82	29911-27-1	Dipropylene glycol mono-n-propylether
83	29911-28-2 35884-42-5 132739-31-2	Dipropylene glycol mono-n(t)-butylether
84	20324-33-8 25498-49-1	Tripropylene glycol mono-methylether

row	CAS number	compound
85	63019-84-1 89399-28-0 111109-77-4	Dipropylene glycol dimethyl ether
86	2517-43-3	3-Methoxy-1-butanol
87	1569-01-3 30136-13-1	1,2-Propylene glycol n-propylether
88	5131-66-8 29387-86-8 15821-83-7 63716-40-5	1,2-Propylene glycol n-butylether
89	104-68-7	Diethylene glycol phenylether
90	126-30-7	Neopentyl glycol
91	50-00-0	Formaldehyde
92	75-07-0	Acetaldehyde
93	123-38-6	Propanal
94	123-72-8	Butanal
95	110-62-3	Pentanal
96	66-25-1	Hexanal
97	111-71-7	Heptanal
98	123-05-7	2-Ethyl-hexanal
99	124-13-0	Octanal
100	124-19-6	Nonanal
101	112-31-2	Decanal
102	4170-30-3 123-73-9 15798-64-8	2-Butenal (Crotonaldehyd)
103	1576-87-0 764-39-6 31424-04-1	2-Pentenal
104	6728-26-3 505-57-7 16635-54-4 1335-39-3 73543-95-0	2-Hexenal
105	2463-63-0 18829-55-5 57266-86-1 29381-66-6	2-Heptenal
106	2363-89-5 2548-87-0 25447-69-2 20664-46-4	2-Octenal
107	2463-53-8 18829-56-6 60784-31-8	2-Nonenal
108	3913-71-1 2497-25-8 3913-81-3	2-Decenal
109	2463-77-6 53448-07-0 1337-83-3	2-Undecenal
110	98-01-1	Furfural
111	111-30-8	Glutaraldehyde
112	100-52-7	Benzaldehyde
113	78-93-3	2-Butanone (ethylmethylketone)
114	563-80-4	3-Methyl-2-butanone
115	108-10-1	4-Methyl-2-pentanone (methylisobutylketone)
116	120-92-3	Cyclopentanone
117	108-94-1	Cyclohexanone
118	1120-72-5	2-Methylcyclopentanone
119	583-60-8	2-Methylcyclohexanone
120	98-86-2	Acetophenone
121	116-09-6	1-Hydroxyacetone (1-hydroxy-2-propanone)
122	67-64-1	Acetone
123	64-19-7	Acetic acid

row	CAS number	compound
124	79-09-4	Propionic acid
125	79-31-2	Isobutanoic acid (isobutyric acid)
126	107-92-6	Butanoic acid (butyric acid)
127	75-98-9	2,2-Dimethylpropanoic acid (pivalic acid)
128	109-52-4	n-Pentanoic acid (valeric acid)
129	142-62-1	n-Hexanoic acid (caproic acid)
130	111-14-8	n-Heptanoic acid
131	124-07-2	n-Octanoic acid
132	149-57-5	2-Ethylhexanoic acid
133	108-21-4	Propyl acetate (n-, iso-)
134	108-65-6	2-Methoxy-1-methylethyl acetate
135	107-31-3	Methyl formate
136	592-84-7	n-Butyl formate
137	80-62-6	Methyl methacrylate
138	110-19-0	Isobutyl acetate
139	123-86-4	n-Butyl acetate
140	103-09-3	2-Ethylhexyl acetate
141	96-33-3	Methyl acrylate
142	140-88-5	Ethyl acrylate
143	141-32-2	n-Butyl acrylate
144	103-11-7	2-Ethylhexyl acrylate
145	627-93-0	Dimethyl adipate
146	106-65-0	Dimethyl succinate
147	1119-40-0	Dimethyl glutarate
148	71195-64-7	Diisobutyl glutarate
149	925-06-4	Diisobutyl succinate
150	105-75-9	Dibutyl fumarate
151	105-76-0	Maleic acid dibutylester
152	13048-33-4	Hexamethylene diacrylate
153	96-48-0	Butyrolactone
154	97-88-1	n-Butyl methacrylate
155	688-84-6	2-Ethylhexyl methacrylate
156	127-18-4	Tetrachloroethene
157	106-46-7	1,4-Dichlorobenzene
158	123-91-1	1,4-Dioxane
159	105-60-2	Caprolactame
160	872-50-4	N-methyl-2-pyrrolidon
161	556-67-2	Octamethylcyclotetrasiloxane (D4)
162	541-02-6	Decamethylcyclopentasiloxane (D5)
163	540-97-6	Dodecamethylcyclohexasiloxane (D6)
164	100-97-0	Hexamethylenetetramine
165	96-29-7	2-Butanonoxime
166	126-73-8	Tributyl phosphate
167	78-40-0	Triethyl phosphate
168	26172-55-4	5-Chloro-2-methyl-2H-isothiazol-3-one (CIT)
169	2682-20-4	2-Methyl-4-isothiazolin-3-one (MIT)
170	121-44-8	Triethylamine
171	109-99-9	Tetrahydrofuran
172	68-12-2	Dimethylformamide
173	107-50-6	Tetradecamethylcycloheptasiloxane (D7)
174	2687-91-4	N-Ethyl-2-pyrrolidone

2. EMISSION OF CRM-VOC SUBSTANCES TO INDOOR AIR

The emission of each of the compounds obtained from the list of carcinogenic, mutagenic and reproductive toxicants (CMR) under the framework of the Regulation (EC) No 1907/2006[5] provided in Table 31 is an essential characteristic.

Table 31: List of compounds CMR

[5] OJ L 396, 30.12.2006, pp. 1–850, ELI: http://data.europa.eu/eli/reg/2006/1907/oj.

row	CAS number	compound
1	79-44-7	dimethylcarbamoyl chloride
2	57-14-7	N,N-dimethylhydrazine
3	540-73-8	1,2-dimethylhydrazine
4	542-56-3	isobutyl nitrite
5	115-96-8	tris(2-chloroethyl)phosphate
6	680-31-9	hexamethylphosphoric triamide; hexamethylphosphoramide
7	1120-71-4	1,3-propanesultone; 1,2-oxathiolane 2,2-dioxide
8	71-43-2	benzene
9	106-93-4	1,2-dibromoethane
10	107-06-2	1,2-dichloroethane; ethylene dichloride
11	106-94-5	1-bromopropane; n-propyl bromide
12	78-87-5	1,2-dichloropropane; propylene dichloride
13	96-12-8	1,2-dibromo-3-chloropropane
14	79-01-6	trichloroethylene; trichloroethene
15	126-99-8	chloroprene (stabilised); 2-chlorobuta-1,3-diene (stabilised)
16	100-44-7	α-chlorotoluene; benzyl chloride
17	98-07-7	α,α,α-trichlorotoluene; benzotrichloride
18	96-18-4	1,2,3-trichloropropane
19	96-23-1	1,3-dichloro-2-propanol
20	764-41-0	1,4-dichlorobut-2-ene
21	75-26-3	2-bromopropane
22	96-13-9	2,3-dibromopropan-1-ol; 2,3-dibromo-1-propanol
23	5216-25-1	α, α,α,4-tetrachlorotoluene; p-chlorobenzotrichloride
24	106-89-8	1-chloro-2,3-epoxypropane; epichlorhydrin
25	542-88-1	bis(chloromethyl) ether; oxybis(chloromethane)
26	1464-53-5	2,2'-bioxirane; 1,2:3,4-diepoxybutane
27	97-99-4	tetrahydro-2-furylmethanol; tetrahydrofurfuryl alcohol
28	556-52-5	2,3-epoxypropan-1-ol; glycidol; oxiranemethanol
29	122-60-1	phenyl glycidyl ether
30	107-30-2	chlormethyl methyl ether
31	96-09-3	styrene oxide
32	57044-25-4	R-2,3-epoxy-1-propanol
33	51594-55-9	R-1-chloro-2,3-epoxypropane
34	111-41-1	2-(2-aminoethylamino)ethanol; (AEEA)
35	120-80-9	1,2-dihydroxybenzene
36	80-05-7	bisphenol A; 4,4’-isopropylidenediphenol
37	94-59-7	safrole; 5-allyl-1,3-benzodioxole
38	106-91-2	2,3-epoxypropyl methacrylate; glycidyl methacrylate
39	51-79-6	urethane (INN); ethyl carbamate
40	50471-44-8	vinclozolin (ISO)
41	625-45-6	methoxyacetic acid
42	84-69-5	diisobutyl phthalate
43	84-75-3	dihexyl phthalate
44	335-67-1	perfluorooctanoic acid
45	375-95-1 [1]	perfluorononan-1-oic acid [1]
46	21049-39-8 [2]	perfluorononan-1-oic acid sodium salts [2]
47	4149-60-4 [3]	perfluorononan-1-oic acid ammonium salts [3]
48	335-76-2	nonadecafluorodecanoic acid
49	107-13-1	acrylonitrile
50	79-46-9	2-nitropropane
51	98-95-3	nitrobenzene
52	39300-45-3	dinocap (ISO)
53	92-93-3	4-nitrobiphenyl
54	91-23-6	2-nitroanisole
55	88-72-2	2-nitrotoluene
56	103-33-3	azobenzene
57	592-62-1	methyl-ONN-azoxymethyl acetate; methyl azoxy methyl acetate
58	60-09-3	4-aminoazobenzene; 4-phenylazoaniline
59	91-59-8	2-naphthylamine
60	90-04-0	2-methoxyaniline; o-anisidine
61	119-93-7	4,4'-bi-o-toluidine
62	92-87-5	benzidine
63	838-88-0	4,4'-methylenedi-o-toluidine

row	CAS number	compound
64	1116-54-7	2,2'-(nitrosoimino)bisethanol
65	95-53-4	o-toluidine; 2-aminotoluene
66	621-64-7	nitrosodipropylamine
67	106-47-8	4-chloroaniline
68	95-69-2	4-chloro-o-toluidine
69	137-17-7	2,4,5-trimethylaniline
70	120-71-8	6-methoxy-m-toluidine; p-cresidine
71	60-34-4	Methylhydrazine
72	151-56-4	ethyleneimine; aziridine
73	24602-86-6	tridemorph (ISO); 2,6-dimethyl-4-tridecylmorpholine
74	75-55-8	2-methylaziridine; propyleneimine
75	91-22-5	quinoline
76	288-32-4	imidazole
77	148-24-3	quinolin-8-ol; 8-hydroxyquinoline
78	1072-63-5	1-vinylimidazole
79	79-06-1	acrylamide; prop-2-enamide
80	127-19-5	N,N-dimethylacetamide
81	75-12-7	formamide
82	79-16-3	N-methylacetamide
83	123-39-7	N-methylformamide

PART E. ESSENTIAL CHARACTERISTICS RELATED TO ENVIRONMENTAL SUSTAINABILITY

1. GENERAL

The c-PCR standard shall enable the life cycle analysis of the products concerned for the full life cycle of the product including module D and the declaration of their performance in relation to the essential characteristic environmental sustainability as defined in point 2.

The c-PCR standard shall also provide information for the declaration of each module for the harmonised European scenarios as defined in point 3.

This standardisation work shall be based on the standards developed in the framework of the standardisation mandate M/350 and its revisions "development of horizontal standardised methods for the assessment of the integrated environmental performance of buildings" of 29 March 2004 as amended.

The c-PCR standards shall focus on the environmental assessment of the products concerned and the use of reliable data provided by the suppliers and service providers involved in the manufacturing process.

The product category rules shall provide:

(a) guidance about the modelling approaches to be applied to the processes related to the product. This additional information is not restricted to the manufacturing processes and inputs. It can be applied to transport or end of life procedures and must be revised when new technologies are implemented in the market.

(b) recommendations about system boundaries to achieve a high degree of harmonisation whilst respecting applicable rules defined in the standards developed in the framework of the standardisation mandate M/350 and its revisions. In case issues related to the end-of-life are identified as resulting in assessment divergences, they must be addressed in a coherent way.

(c) rules for establishing the declared unit as the unit for which the declaration of performance and conformity is provided. The relevant product standard can complement these rules with additional details. The environmental performance of the product shall relate to the product type as it was placed on the market.

(d) the assessment method for reference service life shall acknowledge the default reference service life set out for each product and provide the following:

  (1) description of the technical and functional conditions under which the default value is considered valid, including, where relevant, assumptions related to intended use, exposure conditions, installation or execution, and foreseeable maintenance.

  (2) explanations on how the default reference service life is linked to the performance of essential characteristics that are relevant to durability, ageing, resistance to degradation, or long-term functional performance.

  (3) rules for declaring a reference service life longer than the default value. For this purpose, the assessment method shall describe the technical solutions and performance requirements by which such a longer reference service life may be justified. This shall include, where relevant, higher performance levels for existing essential characteristics, or supplementary assessment methods or conditions demonstrating improved resistance to degradation or ageing.

(e) general information about the environmental sustainability scenarios and where possible product specific rules. The scenarios to be considered are available in point 3, other scenarios may also be included if relevant for the products included in the scope of the c-PCR. Further refinement of the harmonised scenario and description is possible when properly justified.

(f) only in exceptional circumstances product specific rules can be further refined in product standard.

Allocation rules shall be consistent with other product families.

2. LIST OF ESSENTIAL CHARACTERISTICS

The first essential characteristic is the reference service life followed by the list of predetermined environmental essential characteristics included in points (a) to (s) of Annex II to Regulation (EU) 2024/3110 and the following:

(1) use of renewable primary energy excluding renewable primary energy resources used as raw materials

(2) use of renewable primary energy resources used as raw materials

(3) total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)

(4) use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials

(5) use of non-renewable primary energy resources used as raw materials

(6) total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)

(7) use of secondary material

(8) use of renewable secondary fuels

(9) use of non-renewable secondary fuels

(10) net use of fresh water

(11) hazardous waste disposed

(12) non-hazardous waste disposed

(13) radioactive waste disposed

(14) components for re-use

(15) materials for recycling

(16) materials for energy recovery

(17) exported energy

(18) biogenic carbon content in product

(19) biogenic carbon content in accompanying packaging

3. ENVIRONMENTAL SUSTAINABILITY RELATED HARMONISED SCENARIOS

The harmonised scenarios in Table 32 shall be included for the applicable standards, additional scenarios may be added if considered relevant for the assessment of the environmental performance of the products.

Table 32: List of harmonised scenarios

Module	Harmonised scenario	Description	Comments
A1-A3	N/A	calculation according to the constituents and manufacturing process	
A4	transport by lorry	transport of the declared unit by lorry, value declared per km	different scenarios to be defined in the standard depending on the size and weight
A4	transport by train	transport of the declared unit by train, value declared per km	
A4	transport by ship (inland waterway)	transport of the declared unit by ship, value declared per km	
A4	transport by ship (ocean)	transport of the declared unit by ship, value declared per km	
A5	installation	processes, ancillary materials and energy consumed to install the reference unit	
B1	use	consumption of auxiliary materials or components	batteries for remote controls
B2	maintenance	cleaning	if not relevant, impacts equal to zero
B2	painting/varnishing	removal of the paint and application of the new paint/varnish	when relevant
B3	repair of elements		applicable when the reference service life of the components is shorter than the reference service life of the product
B4	replacement of elements	sealant replacement	
B5	refurbishment of elements		if not relevant, impacts equal to zero
B6	operational energy use		for product with power consumption
B7	operational water use		if not relevant, impacts equal to zero
C1	demolition		material transformed into debris
C1	disassembly		
C2	transport by lorry of debris	transport of the declared unit by lorry, value declared per km	
C2	transport by lorry of complete elements	transport of the declared unit by lorry, value declared per km	
C3	processing for reuse		different scenarios to be defined in the standard for each material to be reused
C3	processing for recycling		different scenarios to be defined in the standard for each applicable material flow and recycling process: timber, pvc, aluminium, glass, steel, sealants, cloth, etc.
C4	disposal at a landfill site	treatment and disposal	different scenarios to be defined in the standard for each applicable material flow
D	reuse		scenarios complementary to scenarios C3 applicable outside the boundary limits
D	recycling		scenarios complementary to scenarios C3 applicable outside the boundary limits

PART F ESSENTIAL CHARACTERISTICS BASIC PRINCIPLES AND REFERENCE POINTS

1. GENERAL

Essential characteristics shall provide continuity with the system already in place. However, the performance assessed, and the assessment methods shall reflect the state of the art on performance assessment and declaration. Further, the assessment methods shall not be designed to address individual uses.

For essential characteristics that can be determined by different methods, calculation is expected to refer to more conservative results than testing and tabulated values are expected to refer to more conservative results than calculation.

In particular, assessment methods and information about the following essential characteristics shall be developed.

2. SMOKE CONTROL

The ability to restrict the amount of smoke passing the product in its closed position in the event of fire.

3. WATERTIGHTNESS

The pressure at which sprayed water does not leak through the product.

4. RESISTANCE TO WATER POCKET LOAD

The ability of the construction product to withstand the load of water accumulating on top of it.

5. CLIMATE RELATED DEFORMATION

The reaction of a product when exposed to different climates on the two faces under varying specified temperature and humidity conditions.

6. SOLAR TRANSMITTANCE

The fraction of incident solar radiation that is directly transmitted by the product.

7. THERMAL TRANSMITTANCE FOR A PRODUCT WITH EXTENDED SHUTTER AND/OR SHADING EQUIPMENT

The rate of heat transfer through the product per unit area and per degree of temperature difference between the inside and outside when the shutter and/or shading equipment is in extended position.

8. TOTAL SOLAR ENERGY TRANSMITTANCE OF THE GLAZING WITH EXTENDED SHUTTER AND/OR SHADING EQUIPMENT

The fraction of the incident solar radiation that is totally transmitted by the glass when the shutter and/or shading equipment is in extended position.

9. LIGHT TRANSMITTANCE OF THE GLAZING WITH EXTENDED SHUTTER AND/OR SHADING EQUIPMENT

The fraction of the incident light that is transmitted by the glass when the shutter and/or shading equipment is in extended position.

10. ADDITIONAL THERMAL RESISTANCE

The thermal resistance provided with the semi-closed airspace and the curtain.

11. MANUAL OPERATING FORCES

The force/torque that needs to be exerted to open and close.

12. SELF-CLOSING

The ability to close fully into its frame and engage any latching device that may be fitted without human intervention[6].

13. RELEASE OF HOLD-OPEN DEVICES

Ability of the product to release to enable the reliable closing in the event of fire and/or smoke or failure of the power supply, after a number of test cycles reflecting the estimated service life-time[7].

14. SELF-CLOSING - DOOR CLOSING FORCE

Maximum force for closing the door leaf to the fully closed (latched) position[8].

15. VENTILATION CAPACITY OF AIR TRANSFER DEVICES

The ventilation capacity of air transfer devices shall be expressed by the two essential characteristics *ventilation capacity of air transfer devices - airflow coefficient* and *ventilation capacity of air transfer devices - pressure exponent*.

Ventilation area at open position, clear opening height and clear opening width are parameters declared in the general product information, instructions for use and safety information.

16. RESISTANCE TO WIND LOAD

The resistance to wind load shall be expressed by the two essential characteristics *resistance to wind load - pressure limits - testing/calculation* and *resistance to wind load - relative frontal deflection - testing/calculation*.

17. MANUAL OPERATING FORCES - INDUSTRIAL, COMMERCIAL AND GARAGE DOORS

The essential characteristic *manual operating forces - industrial, commercial and garage doors* includes a threshold for products intended to be operated by manual force which are not

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6 Self-closing (C) and durability of self-closing (C0 – C5) was combined into just one essential characteristic *self-closing*

7 Release of hold-open device and durability of release of hold-open device was combined into just one essential characteristic *release of hold-open device.*

8 Former term for self-closing: re-engagement force

applicable to power-operated only products. In this case the thresholds are multiplied by 1.5 if the declared performance is limited to power-operated only products.

PART G CLASSES OF PERFORMANCE AND THRESHOLDS BASIC PRINCIPLES AND REFERENCE POINTS

1. GENERAL

Classification systems are expected to cover the full range of possible performances, but some performances may be limited by threshold levels.

The declaration 'NULL' is possible for essential characteristics covered by applicable classes of performance in accordance with point (9)(b) of Annex V to Regulation (EU) 2024/3110 with the exception of essential characteristics subject to mandatory declaration requirement or to a mandatory threshold level.

2. REACTION TO FIRE

The classes of performance applicable to the essential characteristic *reaction to fire* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

3. RESISTANCE TO FIRE E

The classes of performance applicable to the essential characteristic *resistance to fire E* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

4. RESISTANCE TO FIRE EI

The classes of performance applicable to the essential characteristic *resistance to fire EI* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

5. RESISTANCE TO FIRE EW

The classes of performance applicable to the essential characteristic *resistance to fire EW* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

6. RESISTANCE TO FIRE EI-M

The classes of performance applicable to the essential characteristic *resistance to fire EI-M* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

7. RESISTANCE TO FIRE RE

The classes of performance applicable to the essential characteristic *resistance to fire RE* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

8. RESISTANCE TO FIRE REI

The classes of performance applicable to the essential characteristic *resistance to fire REI* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

9. RESISTANCE TO FIRE - SMOKE CONTROL

The classes of performance applicable to the essential characteristic *resistance to fire - smoke control* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

10. RESISTANCE TO FIRE - SELF CLOSING

The classes of performance applicable to the essential characteristic *resistance to fire - self closing* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

11. EXTERNAL FIRE PERFORMANCE

The classes of performance applicable to the essential characteristic *external fire performance* shall follow the applicable classification established for this purpose under Regulation (EU) 2024/3110.

12. WATERTIGHTNESS - PEDESTRIAN DOORSETS, WINDOWS AND ROOFLIGHTS

The classes of performance applicable to the essential characteristic *watertightness - pedestrian doorsets, windows and rooflights* shall follow the indications provided in Table 33.

Table 33: Classes of performance watertightness - pedestrian doorsets, windows and rooflights

essential characteristic	declaration	test pressure
watertightness - pedestrian doorsets, windows and rooflights	1	0 Pa
	2	50 Pa
	3	100 Pa
	4	150 Pa
	5	200 Pa
	6	250 Pa
	7	300 Pa
	8	450 Pa
	9	600 Pa
	10	750 Pa
	11	900 Pa
	12	1050 Pa
	13/E1200	1200 Pa
	14/E1350	1350 Pa
	15/E1500	1500 Pa
	16/E1650	1650 Pa
	17/E1800	1800 Pa

13. MANUAL OPERATING FORCES - NON-VERTICAL SLIDING WINDOWS

The classes of performance applicable to the essential characteristics *manual operating forces - non-vertical sliding windows* shall follow the indications provided in Table 34 to Table 36.

Table 34: Classes of performance manual operating forces - non-vertical sliding windows - window operating forces

essential characteristic	declaration	window operating forces
manual operating forces - non-vertical sliding windows - window operating forces	0	> 100 N
	1	≤ 100 N
	2	≤ 30 N

Table 35: Classes of performance manual operating forces - non-vertical sliding windows - force/torque for hand operated hardware

essential characteristic	declaration	torque for hand operated hardware	force for hand operated hardware
manual operating forces - non-vertical sliding windows - force/torque for hand operated hardware	0	> 10 Nm	> 100 N
	1	≤ 10 Nm	≤ 100 N
	2	≤ 5 Nm	≤ 30 N

Table 36: Classes of performance manual operating forces - non-vertical sliding windows - force/torque for finger operated hardware

essential characteristic	declaration	torque for finger operated hardware	force for finger operated hardware
manual operating forces - non-vertical sliding windows - force/torque for finger operated hardware	0	> 5 Nm	> 50 N
	1	≤ 5 Nm	≤ 50 N
	2	≤ 2 Nm	≤ 20 N

14. MANUAL OPERATING FORCES - VERTICAL SLIDING WINDOWS

The classes of performance applicable to the essential characteristics *manual operating forces - vertical sliding windows* shall follow the indications provided in Table 37 and Table 38.

Table 37: Classes of performance manual operating forces - vertical sliding windows - force/torque for hand operated hardware

essential characteristic	declaration	force to start motion	force to operate	torque for hand operated hardware	force for hand operated hardware
manual operating forces - vertical sliding windows - force/torque for hand operated hardware	A	> 180 N	> 150 N	> 10 Nm	> 100 N
	B	≤ 180 N	≤ 150 N	≤ 10 Nm	≤ 100 N
	C	≤ 150 N	≤ 125 N	≤ 10 Nm	≤ 100 N
	D	≤ 120 N	≤ 100 N	≤ 10 Nm	≤ 100 N
	E	≤ 90 N	≤ 75 N	≤ 5 Nm	≤ 30 N

Table 38: Classes of performance manual operating forces - vertical sliding windows - force/torque for finger operated hardware

essential characteristic	declaration	force to start motion	force to operate	torque for finger operated hardware	force for finger operated hardware
manual operating forces - vertical sliding windows - force/torque for finger operated hardware	A	> 180 N	> 150 N	> 5 Nm	> 50 N
	B	≤ 180 N	≤ 150 N	≤ 5 Nm	≤ 50 N
	C	≤ 150 N	≤ 125 N	≤ 5 Nm	≤ 50 N
	D	≤ 120 N	≤ 100 N	≤ 5 Nm	≤ 50 N
	E	≤ 90 N	≤ 75 N	≤ 2 Nm	≤ 20 N

15. IMPACT RESISTANCE - SOFT BODY

The classes of performance applicable to the essential characteristic *impact resistance - soft body* shall follow the indications provided in Table 39.

Table 39: Classes of performance impact resistance - soft body

essential characteristic	declaration	drop height
impact resistance - soft body	0	≥ 100 mm
	1	≥ 200 mm

essential characteristic	declaration	drop height
	2	≥ 300 mm
	3	≥ 450 mm
	4	≥ 700 mm
	5	≥ 950 mm

16. RESISTANCE TO WIND LOAD - PRESSURE LIMITS

The classes of performance applicable to the essential characteristics *resistance to wind load - pressure limits - testing* and *resistance to wind load - pressure limits - calculation* shall follow the indications provided in Table 40.

Table 40: Classes of performance resistance to wind load - pressure limits - testing

essential characteristics	declaration	pressure limit P1	pressure limit P2	pressure limit P3
resistance to wind load - pressure limits - testing/calculation	1	≥ 400 Pa	≥ 200 Pa	≥ 600 Pa
	2	≥ 800 Pa	≥ 400 Pa	≥ 1200 Pa
	3	≥ 1200 Pa	≥ 600 Pa	≥ 1800 Pa
	4	≥ 1600 Pa	≥ 800 Pa	≥ 2400 Pa
	5	≥ 2000 Pa	≥ 1000 Pa	≥ 3000 Pa
	6	≥ 2400 Pa	≥ 1200 Pa	≥ 3600 Pa

17. RESISTANCE TO WIND LOAD - RELATIVE FRONTAL DEFLECTION

The classes of performance applicable to the essential characteristics *resistance to wind load - relative frontal deflection - testing* and *resistance to wind load - relative frontal deflection - calculation* shall follow the indications provided in Table 41.

Table 41: Classes of performance resistance to wind load - relative frontal deflection

essential characteristics	declaration	relative frontal deflection
resistance to wind load - relative frontal deflection - testing/calculation	0	> 1/150
	A	≤ 1/150
	B	≤ 1/200
	C	≤ 1/300

18. RESISTANCE AGAINST BULLET ATTACK - HANDGUNS AND RIFLES

The classes of performance applicable to the essential characteristic *resistance against bullet attack - handguns and rifles* shall follow the indications provided in Table 42.

Table 42: Classes of performance resistance against bullet attack - handguns and rifles

essential characteristic	declaration	weapon	calibre	strikes
resistance against bullet attack - handguns and rifles	FB1	rifle	0.22 LR	3
	FB2	handgun	9 mm luger	3
	FB3	handgun	0.357 magnum	3
	FB4	handgun	0.44 rem magnum	3
	FB5	rifle	5.56 x 45 (twist length 178 mm ± 10 mm)	3
	FB6	rifle	7.62 x 51	3
	FB7	rifle	7.62 x 51 (twist length 254 mm ± 10 mm)	3

19. RESISTANCE AGAINST BULLET ATTACK - SHOTGUNS

The classes of performance applicable to the essential characteristic *resistance against bullet attack - shotguns* shall follow the indications provided in Table 43.

Table 43: Classes of performance resistance against bullet attack - shotguns

essential characteristic	declaration	weapon	calibre	strikes
resistance against bullet attack - shotguns	FSG1	shotgun	12/70	1
	FSG2	shotgun	12/70	3

20. RESISTANCE AGAINST BULLET ATTACK - ASSAULT RIFLE

The classes of performance applicable to the essential characteristic *resistance against bullet attack - assault rifle* shall follow the indications provided in Table 44.

Table 44: Classes of performance resistance against bullet attack - assault rifle

essential characteristic	declaration	weapon	calibre	strikes
resistance against bullet attack - assault rifle	FKS	rifle	7,62 x 39 (twist length 240 mm ± 10 mm)	3

21. EXPLOSION RESISTANCE - SHOCK TUBE

The classes of performance applicable to the essential characteristic *explosion resistance - shock tube* shall follow the indications provided in Table 45.

Table 45: Classes of performance explosion resistance - shock tube

essential characteristic	declaration	peak pressure	positive impulsion
explosion resistance - shock tube	EPR0	≥ 25 kPa	≥ 230 kPa·ms
	EPR1	≥ 50 kPa	≥ 370 kPa·ms
	EPR1+	≥ 75 kPa	≥ 490 kPa·ms
	EPR2	≥ 100 kPa	≥ 900 kPa·ms
	EPR3	≥ 150 kPa	≥ 1500 kPa·ms
	EPR4	≥ 200 kPa	≥ 2200 kPa·ms

22. EXPLOSION RESISTANCE - ARENA TEST - SMALL CHARGES

The classes of performance applicable to the essential characteristic *explosion resistance - arena test - small charges* shall follow the indications provided in Table 46.

Table 46: Classes of performance explosion resistance - arena test - small charges

essential characteristic	declaration	peak pressure	positive impulsion
explosion resistance - arena test - small charges	PXR1	≥ 70 kPa	≥ 150 kPa·ms
	PXR2	≥ 110 kPa	≥ 200 kPa·ms
	PXR3	≥ 250 kPa	≥ 300 kPa·ms
	PXR4	≥ 800 kPa	≥ 500 kPa·ms
	PXR5	≥ 700 kPa	≥ 700 kPa·ms
	PXR6	≥ 1600 kPa	≥ 1000 kPa·ms
	PXR7	≥ 2800 kPa	≥ 1500 kPa·ms

23. EXPLOSION RESISTANCE - ARENA TEST - LARGE CHARGES

The classes of performance applicable to the essential characteristic *explosion resistance - arena test - small charges* shall follow the indications provided in Table 47.

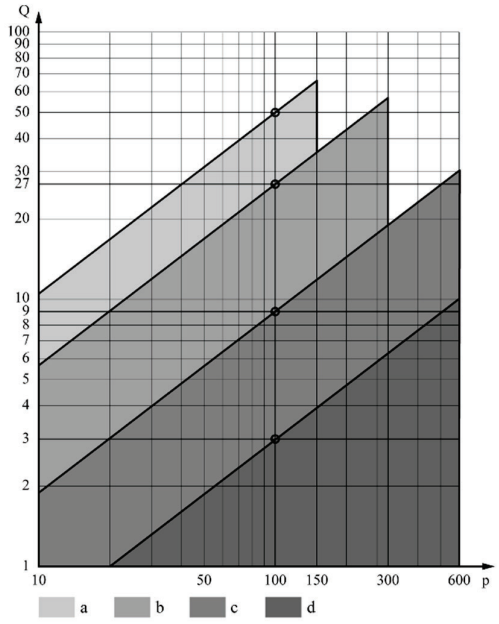
Table 47: Classes of performance explosion resistance - arena test - large charges

essential characteristic	declaration	peak pressure	positive impulsion
explosion resistance - arena test - large charges	VXR1	≥ 50 kPa	≥ 370 kPa·ms
	VXR2	≥ 65 kPa	≥ 440 kPa·ms
	VXR3	≥ 90 kPa	≥ 540 kPa·ms
	VXR4	≥ 140 kPa	≥ 690 kPa·ms
	VXR5	≥ 275 kPa	≥ 960 kPa·ms
	VXR6	≥ 185 kPa	≥ 1370 kPa·ms
	VXR7	≥ 295 kPa	≥ 1690 kPa·ms

24. AIR PERMEABILITY RELATED TO OVERALL AREA - WINDOWS AND EXTERNAL DOORSETS

The classes of performance applicable to the essential characteristic *air permeability related to overall area - windows and external doorsets* shall follow the indications provided in Figure 1.

Figure 1: Classes of performance air permeability related to overall area - windows and external doorsets



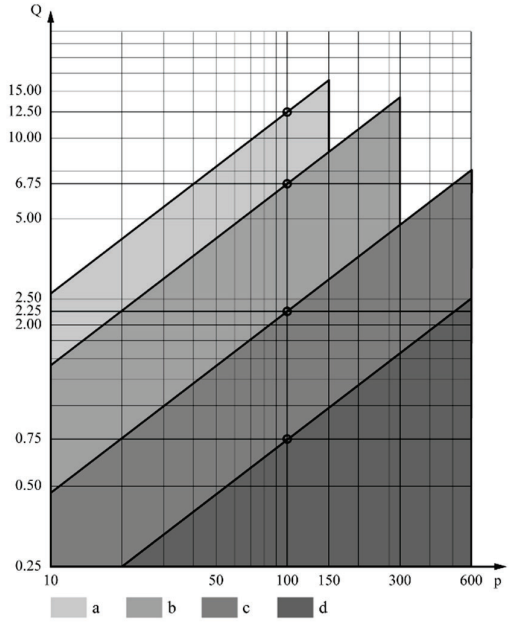
Legend:

Q	air permeability in $m^3/h \cdot m^2$
p	pressure in Pa
a	class 1
b	class 2
c	class 3
d	class 4

25. AIR PERMEABILITY RELATED TO OPENING JOINT LENGTH - WINDOWS AND EXTERNAL DOORSETS

The classes of performance applicable to the essential characteristic *air permeability related to opening joint length - windows and external doorsets* shall follow the indications provided in Figure 2.

Figure 2: Classes of performance air permeability related to opening joint length - windows and external doorsets



Legend:

Q air permeability in $m^3/h \cdot m^2$

p pressure in Pa

a class 1

b class 2

c class 3

d class 4

26. RELEASE OF HOLD-OPEN DEVICE

The classes of performance applicable to the essential characteristic *release of hold-open device* shall follow the indications provided in Table 48.

Table 48: Classes of performance release of hold-open device

essential characteristic	declaration	number of cycles
release of hold-open device	REL	< 500
	0	≥ 500
	1	≥ 2500
	3	≥ 10000
	4	≥ 50000
	5	≥ 100000
	6	≥ 200000
	7	≥ 500000

27. MANUAL OPERATING FORCES - PEDESTRIAN DOORSETS

The classes of performance applicable to the essential characteristics *manual operating forces - pedestrian doorsets* shall follow the indications provided in Table 49 to Table 51.

Table 49: Classes of performance manual operating forces - pedestrian doorsets - closing or commence motion force

essential characteristic	declaration	closing force or force to commence motion
manual operating forces - pedestrian doorsets - closing or commence motion force	1	≤ 75 N
	2	≤ 50 N
	3	≤ 25 N
	4	≤ 10 N
	5	≤ 50 N

Table 50: Classes of performance manual operating forces - pedestrian doorsets - force for hand operated hardware

essential characteristic	declaration	force for hand operated hardware
manual operating forces - pedestrian	1	≤ 100 N

doorsets - force for hand operated hardware	2	≤ 50 N
	3	≤ 25 N
	4	≤ 10 N
	5	≤ 50 N

Table 51: Classes of performance manual operating forces - pedestrian doorsets - force for finger operated hardware

essential characteristic	declaration	force for finger operated hardware
manual operating forces - pedestrian doorsets - force for finger operated hardware	1	≤ 20 N
	2	≤ 10 N
	3	≤ 6 N
	4	≤ 4 N
	5	≤ 6 N

28. CLIMATE RELATED DEFORMATION

The classes of performance applicable to the essential characteristic *climate related deformation* shall follow the indications provided in Table 52.

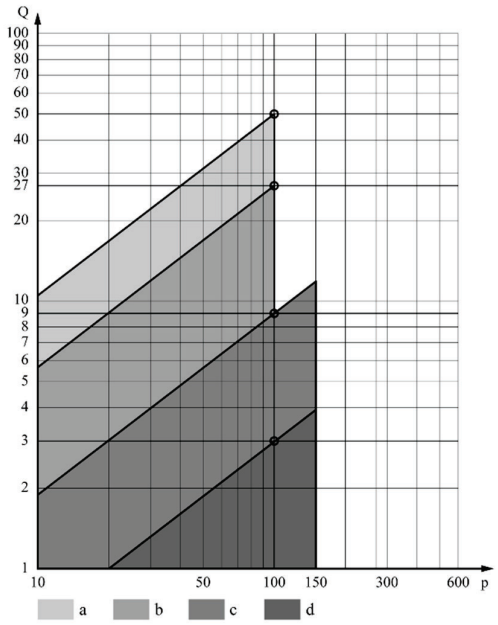
Table 52: Classes of performance climate related deformation

essential characteristic	declaration	twist	bow	cup
climate related deformation	0	> 8.0 mm	-	-
		-	> 8.0 mm	-
		-	-	> 4.0 mm
	1	≤ 8.0 mm	≤ 8.0 mm	≤ 4.0 mm
	2	≤ 4.0 mm	≤ 4.0 mm	≤ 2.0 mm
	3	≤ 2.0 mm	≤ 2.0 mm	≤ 1.0 mm

29. AIR PERMEABILITY RELATED TO OVERALL AREA - INTERNAL PEDESTRIAN DOORSETS

The classes of performance applicable to the essential characteristic *air permeability related to overall area - internal pedestrian doorsets* shall follow the indications provided in Figure 3.

Figure 3: Classes of performance air permeability related to overall area - internal pedestrian doorsets



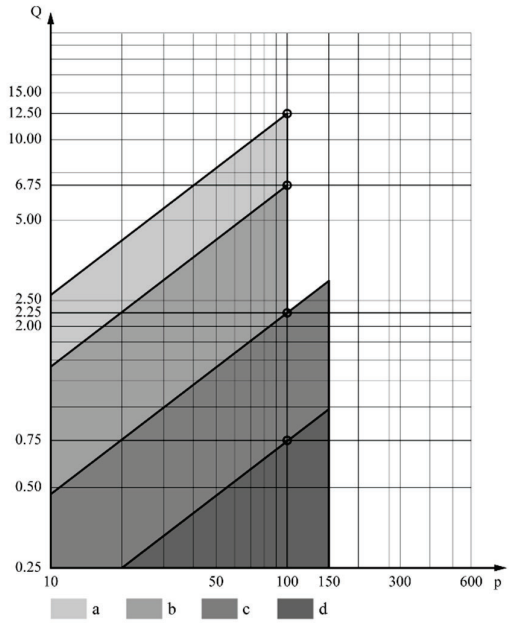
Legend:

Q	air permeability in $m^3/h \cdot m^2$
p	pressure in Pa
a	class A
b	class B
c	class C
d	class D

30. AIR PERMEABILITY RELATED TO OPENING JOINT LENGTH - INTERNAL PEDESTRIAN DOORSETS

The classes of performance applicable to the essential characteristic *air permeability related to* opening joint length - *internal pedestrian doorsets* shall follow the indications provided in Figure 4.

Figure 4: Classes of performance air permeability related to opening joint length - internal pedestrian doorsets



Legend:

Q	air permeability in $m^3/h \cdot m^2$
p	pressure in Pa
a	class A
b	class B
c	class C
d	class D

31. WATERTIGHTNESS - INDUSTRIAL, COMMERCIAL AND GARAGE DOORS

The classes of performance applicable to the essential characteristic *watertightness - industrial, commercial and garage doors* shall follow the indications provided in Table 53.

Table 53: Classes of performance watertightness - industrial, commercial and garage doors

essential characteristic	declaration	test pressure
watertightness - industrial, commercial and garage doors	1	30 Pa
	2	50 Pa
	3	60 Pa
	4	70 Pa
	5	80 Pa
	6	90 Pa

32. RESISTANCE TO WIND LOAD - PRESSURE - INDUSTRIAL, COMMERCIAL AND GARAGE DOORS, GATES AND BARRIERS

The classes of performance applicable to the essential characteristics *resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - testing* and *resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - calculation* shall follow the indications provided in Table 54.

Table 54: Classes of performance resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers

essential characteristic	declaration	pressure
resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - testing/calculation	1	≥ 300 Pa
	2	≥ 450 Pa
	3	≥ 700 Pa
	4	≥ 1000 Pa
	5	≥ 1200 Pa

33. RESISTANCE TO WIND LOAD - SUCTION - INDUSTRIAL, COMMERCIAL AND GARAGE DOORS, GATES AND BARRIERS

The classes of performance applicable to the essential characteristic *resistance to wind load - suction - industrial, commercial and garage doors, gates and barriers - testing* and *resistance to wind load - suction - industrial, commercial and garage doors, gates and barriers - calculation* shall follow the indications provided in Table 55.

Table 55: Classes of performance resistance to wind load - suction - industrial, commercial and garage doors, gates and barriers

essential characteristic	declaration	pressure
resistance to wind load - pressure - industrial, commercial and garage doors, gates and barriers - testing/calculation	-1	≥ 300 Pa
	-2	≥ 450 Pa
	-3	≥ 700 Pa
	-4	≥ 1000 Pa
	-5	≥ 1200 Pa

34. AIR PERMEABILITY POSITIVE - INDUSTRIAL, COMMERCIAL AND GARAGE DOORS AND GATES

The classes of performance applicable to the essential characteristic *air permeability positive - industrial, commercial and garage doors and gates* shall follow the indications provided in Table 56.

Table 56: Classes of performance air permeability positive - industrial, commercial and garage doors and gates

essential characteristic	declaration	air permeability at 50 Pa positive pressure
air permeability positive - industrial, commercial and garage doors and gates	1	≥ 24.0 $m^3/h \cdot m^2$
	2	≥ 12.0 $m^3/h \cdot m^2$
	3	≥ 6.0 $m^3/h \cdot m^2$
	4	≥ 3.0 $m^3/h \cdot m^2$
	5	≥ 1.5 $m^3/h \cdot m^2$
	6	≥ 0.0 $m^3/h \cdot m^2$

35. AIR PERMEABILITY NEGATIVE - INDUSTRIAL, COMMERCIAL AND GARAGE DOORS AND GATES

The classes of performance applicable to the essential characteristic *air permeability negative - industrial, commercial and garage doors and gates* shall follow the indications provided in Table 57.

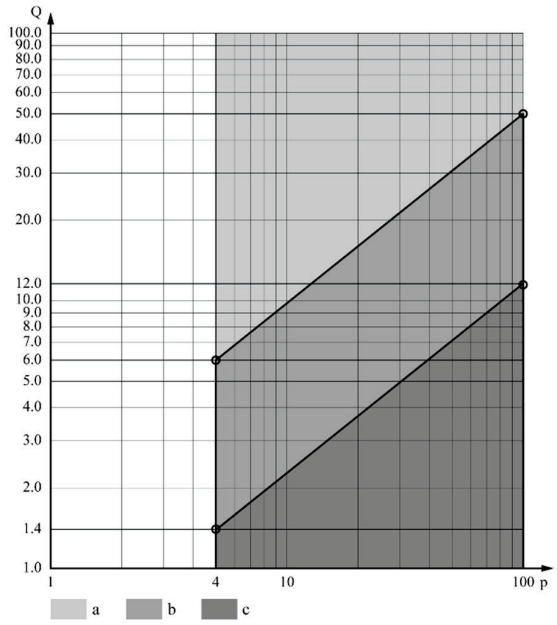
Table 57: Classes of performance air permeability negative - industrial, commercial and garage doors and gates

essential characteristic	declaration	air permeability at 50 Pa negative pressure
air permeability negative - industrial, commercial and garage doors and gates	-1	≥ 24.0 $m^3/h \cdot m^2$
	-2	≥ 12.0 $m^3/h \cdot m^2$
	-3	≥ 6.0 $m^3/h \cdot m^2$
	-4	≥ 3.0 $m^3/h \cdot m^2$
	-5	≥ 1.5 $m^3/h \cdot m^2$
	-6	≥ 0.0 $m^3/h \cdot m^2$

36. AIR PERMEABILITY - ROOFLIGHTS OF PLASTIC AND GLASS AND ROOF HATCHES

The classes of performance applicable to the essential characteristic *air permeability - rooflights of plastic and glass and roof hatches* shall follow the indications provided in Figure 5.

Figure 5: Classes of performance air permeability - rooflights of plastic and glass and roof hatches



Legend:

Q air permeability in $m^3/(h \cdot m)$

p pressure in Pa

a class A

b class B

c class C

37. BAR PROJECTION

The classes of performance applicable to the essential characteristic *bar projection* shall follow the indications provided in Table 58.

Table 58: Classes of performance bar projection

essential characteristic	declaration	projection
bar projection	2	≤ 100 mm
	1	≤ 150 mm

38. RELEASE FORCE WITHOUT LOAD OF 1000N

The classes of performance applicable to the essential characteristic *release force without load of 1000N* shall follow the indications provided in Table 59.

Table 59: Classes of performance release force without load of 1000N

essential characteristic	declaration	force
release force without load of 1000N	1	≤ 50 N
	2	≤ 80 N

39. RELEASE FORCE WITH LOAD OF 1000N

The classes of performance applicable to the essential characteristic *release force with load of 1000N* shall follow the indications provided in Table 60.

Table 60: Classes of performance release force with load of 1000N

essential characteristic	declaration	force
release force with load of 1000N	1	≤ 100 N
	2	≤ 220 N

40. SELF-CLOSING - DOOR CLOSING FORCE - PANIC AND EMERGENCY EXIT DEVICES

The classes of performance applicable to the essential characteristic *self-closing - door closing force - panic and emergency exit devices* shall follow the indications provided in Table 61.

Table 61: Classes of performance self-closing - door closing force - panic and emergency exit devices

essential characteristic	declaration	force
self-closing - door closing force - panic and emergency exit devices	1	≤ 0 N
	2	≤ 25 N
	3	≥ 50 N

41. CORROSION RESISTANCE

The classes of performance applicable to the essential characteristic *corrosion resistance* shall follow the indications provided in Table 62.

Table 62: Classes of performance corrosion resistance

essential characteristic	declaration	resistance
corrosion resistance	1	≥ 24 h
	2	≥ 48 h
	3	≥ 96 h
	4	≥ 240 h
	5	≥ 480 h

42. DURABILITY OF SELF-CLOSING - PANIC AND EMERGENCY EXIT DEVICES

The classes of performance applicable to the essential characteristic *durability of self-closing - panic and emergency exit devices* shall follow the indications provided in Table 63.

Table 63: Classes of performance durability of self-closing - panic and emergency exit devices

essential characteristic	declaration	test cycles	sealing force
durability of self-closing - panic and emergency exit devices	B	≥ 100000	0 N
	C	≥ 200000	0 N
	G	≥ 100000	12.5 N
	H	≥ 200000	12.5 N
	L	≥ 100000	25 N
	M	≥ 200000	25 N
	R	≥ 100000	50 N
	S	≥ 200000	50 N
	W	≥ 100000	120 N
	X	≥ 200000	120 N

43. DURABILITY OF EMERGENCY RELEASE

The classes of performance applicable to the essential characteristic *durability of emergency release* shall follow the indications provided in Table 64.

Table 64: Classes of performance durability of emergency release

essential characteristic	declaration	test cycles	sealing force
durability of emergency release	B	≥ 100000	0 N
	C	≥ 200000	0 N
	G	≥ 100000	12.5 N
	H	≥ 200000	12.5 N
	L	≥ 100000	25 N
	M	≥ 200000	25 N

	R	≥ 100000	50 N
	S	≥ 200000	50 N
	W	≥ 100000	120 N
	X	≥ 200000	120 N

44. RELEASE FORCE - LEVER HANDLE OR TOUCH PAD

The classes of performance applicable to the essential characteristic *release force - lever handle or touch pad* shall follow the indications provided in Table 65.

Table 65: Classes of performance release force - lever handle or touch pad

essential characteristic	declaration	force
release force - lever handle or touch pad	1	≤ 50 N
	2	≤ 70 N

45. RELEASE FORCE - PUSH PAD

The classes of performance applicable to the essential characteristic *release force - push pad* shall follow the indications provided in Table 66.

Table 66: Classes of performance release force - push pad

essential characteristic	declaration	force
release force - push pad	1	≤ 100 N
	3	≤ 150 N

46. SELF-CLOSING - DOOR CLOSING FORCE - LOCKCASES AND LOCKS

The classes of performance applicable to the essential characteristic *self-closing - door closing force - lockcases and locks* shall follow the indications provided in Table 67.

Table 67: Classes of performance self-closing - door closing force - lockcases and locks

essential characteristic	declaration	closing force	door mass
self-closing - door closing force - lockcases and locks	1	≤ 50 N	≤ 100 kg
	2	≤ 50 N	≤ 200 kg
	3	≤ 50 N	> 200 kg
	4	≤ 25 N	≤ 100 kg
	5	≤ 25 N	≤ 200 kg
	6	≤ 25 N	> 200 kg
	7	≤ 15 N	≤ 100 kg
	8	≤ 15 N	≤ 200 kg
	9	≤ 15 N	> 200 kg

47. DURABILITY OF SELF-CLOSING - MECHANICAL LOCKCASES

The classes of performance applicable to the essential characteristics *durability of self-closing - mechanical lockcases* shall follow the indications provided in Table 68 to

essential characteristic	declaration	number of shared latch actions handle	applied load
durability of self-closing - mechanical lockcases - number of shared latch actions handle	0	< 37500	0 N
	A	≥ 37500	0 N
	B	≥ 75000	
	C	≥ 150000	
	L	≥ 75000	25 N
	M	≥ 150000	
	R	≥ 75000	50 N
	S	≥ 150000	
	W	≥ 75000	120 N
	X	≥ 150000	

Table 71.

Table 68: Classes of performance durability of self-closing - mechanical lockcases - number of latch actions

essential characteristic	declaration	number of latch actions	applied load
durability of self-closing - mechanical lockcases - number of latch actions	0	< 50000	0 N
	A	≥ 50000	0 N
	B	≥ 100000	
	C	≥ 200000	
	L	≥ 100000	25 N
	M	≥ 200000	
	R	≥ 100000	50 N
	S	≥ 200000	
	W	≥ 100000	120 N
	X	≥ 200000	

Table 69: Classes of performance durability of self-closing - mechanical lockcases - number of shared latch actions key

essential characteristic	declaration	number of shared latch actions key	applied load
durability of self-closing - mechanical lockcases - number of shared latch actions key	0	< 12500	0 N
	A	≥ 12500	0 N
	B	≥ 25000	
	C	≥ 50000	
	L	≥ 25000	25 N
	M	≥ 50000	
	R	≥ 25000	50 N
	S	≥ 50000	
	W	≥ 25000	120 N
	X	≥ 50000	

Table 70: Classes of performance durability of self-closing - mechanical lockcases - number of shared latch actions handle

essential characteristic	declaration	number of shared latch actions handle	applied load
durability of self-closing - mechanical lockcases - number of shared latch actions handle	0	< 37500	0 N
	A	≥ 37500	0 N
	B	≥ 75000	
	C	≥ 150000	
	L	≥ 75000	25 N
	M	≥ 150000	
	R	≥ 75000	50 N
	S	≥ 150000	
	W	≥ 75000	120 N
	X	≥ 150000	

Table 71: Classes of performance durability of self-closing - mechanical lockcases - number of cycles of an automatically locking deadbolt

essential characteristic	declaration	number of cycles of an automatically locking deadbolt	applied load
durability of self-closing - mechanical lockcases - number of cycles of an automatically locking deadbolt	0	< 50000	0 N
	A	≥ 50000	0 N
	B	≥ 100000	
	C	≥ 200000	
	L	≥ 100000	25 N
	M	≥ 200000	
	R	≥ 100000	50 N
	S	≥ 200000	
	W	≥ 100000	120 N
	X	≥ 200000	

48. DURABILITY OF SELF-CLOSING - ELECTROMECHANICAL LOCKCASES

The classes of performance applicable to the essential characteristic *durability of self-closing - electromechanical lockcases* shall follow the indications provided in Table 72.

Table 72: Classes of performance durability of self-closing - electromechanical lockcases

essential characteristic	declaration	number of latch actions	applied load
durability of self-closing - electromechanical lockcases	0	< 50000	0 N
	A	≥ 50000	0 N
	B	≥ 100000	
	C	≥ 200000	
	L	≥ 100000	25 N
	M	≥ 200000	
	R	≥ 100000	50 N
	S	≥ 200000	
	W	≥ 100000	120 N

49. DURABILITY OF SELF-CLOSING - MULTIPOINT LOCKS

The classes of performance applicable to the essential characteristic *durability of self-closing - multipoint locks* shall follow the indications provided in Table 73.

Table 73: Classes of performance durability of self-closing - multipoint locks - number of latch actions

essential characteristic	declaration	number of latch actions	applied load
durability of self-closing - multipoint locks	0	< 50000	0 N
	A	≥ 50000	0 N
	B	≥ 100000	
	C	≥ 200000	
	L	≥ 100000	25 N
	M	≥ 200000	
	R	≥ 100000	50 N
	S	≥ 200000	
	W	≥ 100000	120 N
	X	≥ 200000	
	X	≥ 200000	

50. INITIAL FRICTION TORQUE

The classes of performance applicable to the essential characteristic *initial friction torque* shall follow the indications provided in Table 74.

Table 74: Classes of performance initial friction torque

essential characteristic	declaration	initial friction torque	door mass	
initial friction torque	1	≤ 2.0 N·m	-	≤ 40 kg
	2	≤ 3.0 N·m	> 40 kg	≤ 80 kg
	3	≤ 2.0 N·m	> 80 kg	≤ 160 kg
	4	≤ 3.0 N·m	> 160 kg	≤ 200 kg
	5	≤ 3.0 N·m	> 200 kg	≤ 250 kg
	6	≤ 4.0 N·m	> 250 kg	≤ 300 kg
	7	≤ 4.0 N·m	> 300 kg	≤ 350 kg
	8	≤ 4.0 N·m	> 350 kg	≤ 400 kg
	9	≤ 6.0 N·m	> 400 kg	≤ 450 kg
	10	≤ 7.5 N·m	> 450 kg	≤ 500 kg
	11	≤ 9.0 N·m	> 500 kg	-

51. STATIC LOAD - LOAD DEFORMATION - VERTICAL RESIDUAL DISPLACEMENT

The thresholds applicable to the essential characteristic *static load - load deformation - vertical residual displacement after unloading* shall follow the indications provided in Table 75.

Table 75: Thresholds static load - load deformation - vertical residual displacement

essential characteristic	static load - load deformation - lateral residual displacement after unloading	vertical residual displacement after unloading
static load - load deformation - vertical residual displacement	0.6 mm	≤ 0.10 mm
	0.5 mm	≤ 0.15 mm
	0.4 mm	≤ 0.20 mm
	0.3 mm	≤ 0.25 mm
	0.2 mm	≤ 0.30 mm
	0.1 mm	≤ 0.30 mm
	0.0 mm	≤ 0.30 mm

52. STATIC LOAD - OVERLOAD CRITERIA

The classes of performance applicable to the essential characteristic *static load - overload criteria* shall follow the indications provided in Table 76.

Table 76: Classes of performance static load - overload criteria

essential characteristic	declaration	cycles after test
static load - overload criteria	1	≤ 2
	2	≤ 4
	3	≤ 6

53. DURABILITY - VERTICAL DISPLACEMENT (WEAR) UNDER LOAD

The thresholds applicable to the essential characteristic *durability - vertical displacement (wear) under load* shall follow the indications provided in Table 77.

Table 77: Thresholds durability - vertical displacement (wear) under load

essential characteristic	durability - lateral displacement (wear) under load	vertical residual displacement after unloading
static load - load deformation - vertical residual displacement	0.5 mm	≤ 0.3 mm
	0.4 mm	≤ 0.5 mm
	0.3 mm	≤ 0.8 mm
	0.2 mm	≤ 1.0 mm
	0.1 mm	≤ 1.0 mm
	0.0 mm	≤ 1.0 mm

54. DURABILITY - MAXIMUM FRICTION TORQUE

The classes of performance applicable to the essential characteristic *durability - maximum friction torque* shall follow the indications provided in Table 78 .

Table 78: Classes of performance durability - maximum friction torque

essential characteristic	declaration	friction torque	door mass	
durability - maximum friction torque	1	≤ 2.0 N·m	-	≤ 40 kg
	2	≤ 3.0 N·m	> 40 kg	≤ 80 kg
	3	≤ 4.0 N·m	> 80 kg	≤ 160 kg
	4	≤ 6.0 N·m	> 160 kg	≤ 200 kg
	5	≤ 7.5 N·m	> 200 kg	≤ 250 kg
	6	≤ 9.0 N·m	> 250 kg	≤ 300 kg
	7	≤ 10.5 N·m	> 300 kg	≤ 350 kg
	8	≤ 12.0 N·m	> 350 kg	≤ 400 kg

essential characteristic	declaration	friction torque	door mass	
	9	≤ 13.5 N·m	> 400 kg	≤ 450 kg
	10	≤ 15.0 N·m	> 450 kg	≤ 500 kg
	11	≤ 15.0 N·m	> 500 kg	-

55. DURABILITY - CYCLES

The classes of performance applicable to the essential characteristic *durability - cycles* shall follow the indications provided in Table 79.

Table 79: Classes of performance durability cycles - hinges on doors or windows

essential characteristic	declaration	cycles
durability - cycles	7	≥ 200000
	8	≥ 250000

56. DURABILITY - OVERLOAD CRITERIA

The classes of performance applicable to the essential characteristic *durability - overload criteria* shall follow the indications provided in Table 80.

Table 80: Classes of performance durability - overload criteria

essential characteristic	declaration	cycles after test
durability - overload criteria	1	≤ 2
	2	≤ 4

57. DOOR CLOSER POWER SIZE

The classes of performance applicable to the essential characteristic *door closer power size* shall follow the indications provided in Table 81.

Table 81: Classes of performance door closer power size

essential characteristic	declaration	efficiency	closing torque 0°-4° opening angle		closing torque 88°- 92° opening angle	closing torque any other opening angle	opening torque 0°-60° opening angle
door closer power size	3	≥ 55%	≥ 18 N·m	<26 N·m	≥ 6 N·m	≥ 4 N·m	≤ 47 N·m
	4	≥ 60%	≥ 26 N·m	<37 N·m	≥ 9 N·m	≥ 6 N·m	≤ 62 N·m
	5	≥ 65%	≥ 37 N·m	<54 N·m	≥ 12 N·m	≥ 8 N·m	≤ 83 N·m
	6	≥ 65%	≥ 54 N·m	<87 N·m	≥ 18 N·m	≥ 11 N·m	≤ 134 N·m
	7	≥ 65%	≥ 87 N·m	<140 N·m	≥ 29 N·m	≥ 18 N·m	≤ 215 N·m

58. CONTROLLED CLOSING

The classes of performance applicable to the essential characteristic *controlled closing* shall follow the indications provided in Table 82.

Table 82: Classes of performance controlled closing

essential characteristic	declaration	cycles
controlled closing	1	≥ 70°
	2	≥ 90°

59. DELAYED CLOSING

The classes of performance applicable to the essential characteristic *delayed closing* shall follow the indications provided in Table 83.

Table 83: Classes of performance delayed closing

essential characteristic	declaration	time	
controlled closing	1	> 0 s	≤ 5 s
	2	> 5 s	≤ 15 s
	3	> 15 s	≤ 25 s

60. ANGLES OF OPERATION

The classes of performance applicable to the essential characteristic *angles of operation* shall follow the indications provided in Table 84.

Table 84: Classes of performance angles of operation

essential characteristic	declaration	time
angles of operation	1	≥ 105°
	2	≥ 185°

61. TEMPERATURE DEPENDENCE OF CLOSING TIME - MINIMUM TEMPERATURE

The classes of performance applicable to the essential characteristic *temperature dependence of closing time - minimum temperature* shall follow the indications provided in Table 85.

Table 85: Classes of performance temperature dependence of closing time - minimum temperature

essential characteristic	declaration	time
temperature dependence of closing time - minimum temperature	-1	≥ 3 s
	-2	≥ 5 s
	-3	≥ 15 s

62. TEMPERATURE DEPENDENCE OF CLOSING TIME - MAXIMUM TEMPERATURE

The classes of performance applicable to the essential characteristic *temperature dependence of closing time - maximum temperature* shall follow the indications provided in Table 86.

Table 86: Classes of performance temperature dependence of closing time - maximum temperature

essential characteristic	declaration	time
temperature dependence of closing time - maximum temperature	1	≥ 3 s
	2	≥ 5 s
	3	≥ 15 s

63. DURABILITY OF SELF-CLOSING - CONTROLLED DOOR CLOSING DEVICES

The classes of performance applicable to the essential characteristic *durability of self-closing - controlled door closing devices* shall follow the indications provided in Table 87.

Table 87: Classes of performance durability of self-closing - controlled door closing devices

essential characteristic	declaration	cycles
durability of self-closing - controlled door closing devices	7	≥ 200000
	8	≥ 500000

64. MANUAL RELEASE OF HOLD-OPEN DEVICE

The classes of performance applicable to the essential characteristic *manual release of hold-open device* shall follow the indications provided in **Error! Reference source not found.**.

Table 88: Classes of performance manual release of hold-open device

essential characteristic	declaration	time
manual release of hold-open device	1	≥ 15 N·m
	2	≥ 40 N·m
	3	≥ 120 N·m

65. DURABILITY OF SELF-CLOSING - DOOR COORDINATOR DEVICES

The classes of performance applicable to the essential characteristic *durability of self-closing - door coordinator devices* shall follow the indications provided in Table 89.

Table 89: Classes of performance durability of self-closing - door coordinator devices

essential characteristic	declaration	cycles
durability of self-closing - door coordinator devices	5	≥ 50000
	6	≥ 100000
	7	≥ 200000
	8	≥ 500000

66. RESISTANCE TO WIND LOAD - EXTERNAL BLINDS, AWNINGS AND EXTERNAL VENETIAN BLINDS

The classes of performance applicable to the essential characteristic *resistance to wind load - external blinds, awnings and external venetian blinds* shall follow the indications provided in Table 90.

Table 90: Classes of performance resistance to wind load - external blinds, awnings and external venetian blinds

essential characteristic	declaration	nominal wind pressure	safety wind pressure
resistance to wind load - external blinds, awnings and external venetian blinds	1	≥ 40 N/m^2	≥ 48 N/m^2
	2	≥ 70 N/m^2	≥ 84 N/m^2
	3	≥ 110 N/m^2	≥ 132 N/m^2
	4	≥ 170 N/m^2	≥ 204 N/m^2
	5	≥ 270 N/m^2	≥ 324 N/m^2
	6	≥ 400 N/m^2	≥ 480 N/m^2

67. RESISTANCE TO WATER POCKET LOAD

The classes of performance applicable to the essential characteristic *resistance to water pocked load* shall follow the indications provided in Table 91.

Table 91: Classes of performance resistance to water pocked load

essential characteristic	declaration	flow
resistance to water pocked load	0	< 17 l/h·m^2
	1	≥ 17 l/h·m^2
	2	≥ 56 l/h·m^2

68. REFERENCE TOTAL SOLAR ENERGY TRANSMITTANCE INCLUDING REFERENCE GLAZING

The classes of performance applicable to the essential characteristic *reference total solar energy transmittance including reference glazing* shall follow the indications provided in Table 92.

Table 92: Classes of performance reference total solar energy transmittance including reference glazing

essential characteristic	declaration	reference total solar energy transmittance
reference total solar energy transmittance including reference	0	≥ 0.50
	1	≥ 0.35

glazing	2	≥ 0.15
	3	≥ 0.10
	4	< 0.10

69. RESISTANCE TO WIND LOAD - SHUTTERS

The classes of performance applicable to the essential characteristic *resistance to wind load - shutters* shall follow the indications provided in Table 93.

Table 93: Classes of performance resistance to wind load - shutters

essential characteristic	declaration	nominal wind pressure	safety wind pressure
resistance to wind load - shutters	1	≥ 50 N/m^2	≥ 75 N/m^2
	2	≥ 70 N/m^2	≥ 100 N/m^2
	3	≥ 100 N/m^2	≥ 150 N/m^2
	4	≥ 170 N/m^2	≥ 250 N/m^2
	5	≥ 270 N/m^2	≥ 400 N/m^2
	6	≥ 400 N/m^2	≥ 600 N/m^2

PART H ASSESSMENT AND VERIFICATION

1. GENERAL

As part of the technical details necessary for the implementation of the assessment and verification system or systems, the harmonised standards are requested to define provisions for the Factory Production Control (FPC) for the purpose of ensuring that the products will conform to the product type determined by the manufacturer.

The provisions for the FPC shall cover the production process from the reception of raw materials and components to the dispatch of the product.

FPC shall include the appropriate activities to ensure the conformity of the product with the product type. Such FPC activities may include tests, inspections, measurements, assessments, including method descriptions, criteria for the conformity evaluation, and minimum frequencies.

FPC shall cover all essential characteristics and shall be defined. A given FPC activity may be relevant for two or more essential characteristics.

Products may be grouped for FPC purposes when the relevant FPC activities are common.

Standards shall specify any component or spare part of a product that is essential for the product's characterisation, safety or performance.

PART I GUIDELINES FOR THE DRAWING UP OF GENERAL PRODUCT INFORMATION, INSTRUCTIONS FOR USE AND SAFETY INFORMATION

1. GENERAL PRODUCT INFORMATION

The following points included in point 1 of Annex IV to Regulation (EU) 2024/3110 are relevant to the harmonised standards requested (references to Annex IV to that regulation included in brackets):

– **Product identification: unique identification code of the product type** (point 1.1);

– **Product description** (point 1.2). Guidelines shall include for all products the product designation code applicable to them, if any;

– **Contact details of the manufacturer or the authorised representative** (point 1.3);

– **Contact details of the manufacturer or the authorised representative when different from the previous point** (point 1.4); and

– **Contact details of the product contact point for construction in the Member State in which the product is made available** (point 1.5).

2. INSTRUCTIONS FOR USE AND SAFETY INFORMATION

The following points included in point 2 of Annex IV to Regulation (EU) 2024/3110 are relevant to the harmonised standards requested. Information already provided in accordance with Article 15(6) of Regulation (EU) 2024/3110 is not required to be included (references to Annex IV to Regulation (EU) 2024/3110):

– **Safety during transport, installation, deinstallation, maintenance, deconstruction and demolition** (point 2.1). In case the product requires specific instruction for installation, they should be provided. For product declared to be used outdoor, information about the content of substances relevant for the protection of soil and ground water may be provided.

– **Compatibility and integration in systems or kits** (point 2.2). Description of potential incompatibilities with other products such as window-shutter compatibility, automation devices or others.

– **Recommendations for a product's repair, deinstallation, reuse, remanufacturing, recycling and safe deposit** (point 2.7). Description of the limitations for recycling and other end of life processes, if any.

– **Climate change effects - total** (point 2.8). All products must include information as regards the performance of the essential characteristic climate change effects - total for each module. This information shall be provided in the same document including the other instructions for use and safety information.

– **Human toxicity, cancer** (point 2.8). When the essential characteristic human toxicity, cancer is declared, the performance for each module shall also be displayed following the same guidelines included in the previous point.