November 2015

Declaration of Performance and CE-Marking of Windows and Pedestrian Doorsets with fire resistance and/or smoke control characteristics according to EN 16034

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EuroWindoor AISBL

In co-operation with: European Aluminium ift Institut für Fenstertechnik

The technical data and recommendations provided are based on the best available information on the date of publication and are not legally binding.

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EuroWindoor AISBL

40, rue Breydel, B-1040 Bruxelles

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1 Introduction

The Declaration of Performance and CE-marking enable manufacturers to make their products available on the market of the entire European Union. Both show the customer that the product conforms to the relevant harmonised EU-legislation.

CE-marking of windows and external pedestrian doorsets without fire resistance and/or smoke control characteristics has been compulsory since 1st February 2010.

The EuroWindoor Guidance Sheet CE.02 provides information regarding the obligations of the manufacturers for these products.

2 Scope

This Guidance Sheet explains for windows and pedestrian doorsets the provisions of EN 16034 regarding the Essential Characteristics for fire resistance and/or smoke control in connection with the requirements of the Construction Products Regulation. Provisions for Essential Characteristics of EN 14351-1 are explained in EuroWindoor Guidance Sheet CE.02. It is not applicable for testing and certification purposes.

The provisions of this Guidance Sheet are applicable regardless of the material used for windows (including casement doors), pedestrian doorsets (including those which lead into escape routes) and roof windows (including those having fire performance characteristics against external fires), which are hereinafter called "Fire **R**esistant **P**roducts" (FRP).

Windows and external pedestrian doorsets may be equipped with roller shutters, roller shutter boxes or blinds.

This Guidance sheet does not cover products excluded in EN 16034:

- fixed windows, glazed side panels and/or overpanels, which are not an integral part of a doorset and/or openable window;
- door assemblies produced with components from several sources where there is no single identified manufacturer or legal entity who will take responsibility for them;
- operation in environments where the electromagnetic disturbances are outside the range specified in EN 61000-6-3;
- radio operating devices fitted to doorsets and/or openable windows; where such items are fitted, the relevant ETSI standards should be applied in addition;

as well as the products excluded by EN 14351-1 (cf. CE.02).

Windows and pedestrian doorsets

Exclusions

Regarding internal pedestrian doorsets with fire resisting and/or smoke con- Internal pedestrian doorsets trol characteristics EN 16034 is also mandatory.

2.1 Modular Concept of Standards

EN 16034 supplements the provisions for fire resistance and/or smoke control characteristics to the existing product standards.



EN 16034 supplements the other product standards

Figure 1: Concurrence of product standards for windows, pedestrian doorsets and industrial, commercial and garage doors and gates

2.2 Impacts of EN 16034

EN 16034 was issued in December 2014 and harmonized by publication in the Official Journal of the EU. As from 1st September, 2016, it will thus be possible to declare fire resistance and/or smoke control characteristics with the CE-mark consistently all over Europe. From 1st September 2019 onwards, CE-marking according to EN 16034 will be compulsory.

For windows and external pedestrian doorsets with fire resistance and/or smoke control characteristics, the declaration of Essential Characteristics according to EN 14351-1 is required as well. The information given in this Guidance Sheet is supplementary to Guidance Sheet CE.02. The information and advice given on the Construction Products Regulation in CE.02 is therefore deliberately omitted in the present document.

For internal pedestrian doorsets the information given in this guidance sheet is similar, but essential characteristics according to FprEN 14351-2 shall only be declared after this standard is published in the Official Journal of the EU and the coexistence period started.

2.3 Essential Characteristics according to EN 16034

According to the requirements of the Mandate M/101 of the EU-Commission, Annex ZA of EN 16034 specifies the following Essential Characteristics for fire resistant and/or smoke control doorsets and/or openable windows:

Essential Characteristics	To be declared as
Resistance to Fire (for fire compartmentation uses)	Class
Smoke control (only for applications where limitation of smoke spread is	Class
required)	
Ability to release	Description
Self-closing (only for self-closing fire resistant and/or smoke-control	Class
doorsets and/or openable windows)	
Durability of ability to release	Description
Durability of self-closing (only for self-closing fire resistant and/or smoke-	
control doorsets and/or openable windows)	
- against degradation (cycle testing)	Class
- against ageing (corrosion)	Description

Marking of fire-resistance and/or smoke control characteristics

Link between EN 16034 and EN 14351-1

EN 16034 for internal pedestrian doorsets

Items printed in bold in the left-hand column of the above list shall be fully quoted in clause 7 of the Declaration of Performance. Values shall, however, only be declared for performance characteristics subject to legal requirements applying to the intended use.

3 Assessment and Verification of Constancy of Performance according to System 1

According to Annex ZA.2 of EN 16034, doors, gates and windows used for fire and/or smoke compartmentation and in escape routes are subject to System 1 of assessment and verification of constancy of performance (AVCP).

	AVO	CP Sys	stem	
1+	1	2+	3	4
•	٠	٠	٠	•
		٠		•
•	٠	٠	٠	•
•	٠	٠		
•	٠		٠	
•	٠	٠		
•	٠	٠		
•				
	1+ • • • • • •	AVC 1+ 1 • • • • • • • • • • • • • • •	AVCP Sys 1+ 1 2+ • • • • • • • • • • • • • • • •	AVCP System 1+ 1 2+ 3 • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • •

The manufacturer is responsible for the declaration of performance including the determination of the product type and for execution of the factory production control. Under System 1 the manufacturer is furthermore responsible for testing further samples taken from the manufacturing plant.

The Notified Product Certification body (NPC) decides on issuing, limitation, suspension or withdrawal of the certificate of constancy of performance of the construction product based on the following assessments and evaluations it has carried out:

- assessment of the performance of the construction product based on testing (including sampling), calculation, tabled values or documents used for product description;
- ii) Initial inspection of the manufacturing plant and of the factory production control;
- iii) Continuous surveillance, assessment and evaluation of the factory production control.

4 Role and Tasks of the Notified Product Certification Body

The Notified Product Certification body (NPC) has a central part to play on Notified product certification body the way to CE marking of fire resistant and/or smoke control assemblies. The manufacturer has to choose a NPC which is notified for EN 16034.

Table ZA.3 of EN 16034 describes the distribution of tasks between the manufacturer and the NPC, which bears the responsibility for testing, classification and surveillance by way of a technical "supervision" and therefore must be notified for EN 16034.

To begin with, the manufacturer will determine the scope of the system according to his wishes. On this basis, the NPC will establish a testing programme together with the manufacturer, which must be tested and proven successfully. For the establishment of such a testing programme, it is advantageous that the NPC has comprehensive product competence, in order to AVCP System 1 is applicable to fire resistant assemblies

Items required for the Declaration of

Performance

Tasks of the manufacturer

Tasks of the notified product certification body

Testing and assessment of the product – type testing (TT) ensure that the desired scope of the system can be assessed with adequate testing costs.

Actual product testing is carried out by a notified testing laboratory which must not necessarily be identical with the NPC. However, the NPC retains the responsibility for the overall assessment. It should therefore be clarified in advance which test records (existing or new) will be accepted by the NPC. Once all results as well as the classification of direct and, if applicable, extended field of application are present, these will be assessed by the NPC.

The manufacturer shall furthermore implement a factory production control, which shall be checked by an initial inspection and followed by control visits with a certain frequency (usually annually).

After successful testing and assessment of the product and initial inspection of the manufacturing plant and the factory production control of the manufacturer, the NPC may issue the certificate of constancy of performance of the construction product, which forms the basis of the Declaration of Performance and CE-marking of the manufacturer.

4.1 **Basic Principles**

Some basic principles of surveillance shall be created for the surveillance and certification of a manufacturer. This documentation shall describe the products, hereinafter called fire resistant products (FRP), their classifications and also contain production specifications. These documents will be the basis of the activities of the NPC and for the assessment of the surveillance results. The following documents would normally compose the core of the basic principles of surveillance:

- The classification report according to Annex A of EN 13501-2

This report classifies the FRP on the basis of the tests carried out, describes the components tested and defines the boundaries of the system. It represents the direct field of application. Substitution of components or deviations from the models described, the formats or configurations of the building components are either impossible or possible only to a very restricted extent.

- The EXAP-report (extended field of application)

This document will authorize the use of alternative components, profiles and formats for the FRP-system, based on further reports and evaluations of the NPC in accordance with the EN 15269 series. It represents the extended field of application.

- **System Documentation for the Manufacturing of FRP** As so far, these documents contain all information required for manufacturing the FRP (working drawings, tolerances, etc).

4.2 Certification and Surveillance

4.2.1 The Contract

The whole procedure begins with the conclusion of a surveillance and certification contract between the NPC and the manufacturer. The scope of this contract will define the object of the surveillance and certification (= FRPsystem), the costs of the surveillance / certification as well as the terms of conditions. Basis of the contract is usually a valid classification report. Surveillance, assessment and evaluation of FPC

Initial inspection of the manufacturing plant and of factory production control (FPC)

Basic documentation for surveillance

Surveillance and certification contract

4.2.2 **Initial Inspection**

The NPC carries out an audit of the manufacturing plant. In the scope of this Audit audit, the NPC and the manufacturer will agree on the basic principles of surveillance and the manufacturing of the FRP will be inspected. It is therefore necessary that there should already be a current production at this moment. Furthermore, the implementation of the Factory Production Control (FPC).

its scope and documentation are subject of this visit. The product standard identifies the FPC as an essential task of the manufacturer (clause 6.3). The FPC safeguards and records conform planning and manufacturing of the FRP. The FPC system may therefore not only be started together with the production, but it shall already be installed at the planning phase in order to avoid, resp. detect mistakes at the beginning of the process.

Furthermore, the system shall identify procedures to correct instances of non-conformity and define the classification/marking of the FRP. It shall not be forgotten that personnel qualification, servicing and maintenance of machinery and equipment as well as inspection of measuring and testing equipment also form integral parts of the FPC system.

4.2.3 Certification

After initial inspection, the NPC will assess the results of the audit and determine whether the basic principles of surveillance are complete and adequate to ensure the manufacture of conforming FRP. The manufacturer will have the possibility to take corrective actions in order to resolve detected deviations. These actions shall be documented and substantiated by appropriate evidence submitted to the NPC.

If the overall evaluation (= assessment of conformity) by the NPC is positive, it will issue the "Certificate of Constancy of Performance" to the manufacturer. Some NPC gives the certificate a limited duration of validity, which is allowed but not required according to CPR. From this moment onwards, the manufacturer may issue Declarations of Performance for his FRP and put them on the market with the affixed CE-mark.

Special feature: "Cascading" under AVCP System 1 5

Under AVCP System 3, according to which windows and external pedestrian doorsets (except external doors in escape routes) are CE-marked, an agreement between the manufacturer and his system provider (often called "system house") is sufficient in order to enable the manufacturer to use the test results of the system provider as a basis for CE-marking his products under his own responsibility.

Under AVCP System 1, the rules are different: Indeed, the manufacturer still needs the contractual agreement with his system provider in order to enable him to use the latter classification report(s). Additionally, however, each individual manufacturer has to sign a contract with a NPC of his preference, so that a "certificate of constancy of performance" may be issued in his name, according to the procedure set out in clause 4.2, which will form the basis of his own CE-marking!

FPC should be in planning phase

Special components of FPC

Assessment by NPC and certificate

Appropriate Technical Documentation for AVCP System 3

Appropriate Technical Documentation for AVCP System 1

If the manufacturer makes use of the exception (Art. 37 - 38 EU-CPR) and applies simplified procedures in comparison with the stipulations of the harmonised Product Standard, he shall establish a so-called "Specific Technical Documentation". By this he documents which procedures of the assessment and evaluation of constancy of performance he has replaced by others and substantiates that the results achieved by the adopted procedures are equal to those stipulated by the Standard. Under AVCP System 1, this so-called "Specific Technical Documentation" shall, in each case, be inspected by the NPC!

All Essential Characteristics applicable to the intended use shall be listed in the Declaration of Performance. The performance of at least one Essential Characteristic shall be declared. If individual characteristics are not required by legal regulations in reference to the intended use, then "NPD" (No Performance Determined) may be entered.

Information related to the requirements of the Member States with reference to the intended use is provided by the product contact points:

 $http://ec.europa.eu/growth/single-market/goods/free-movement-sectors/mutual-recognition/contacts-list/index_en.htm$

5.1 Ability to Release of Doorsets

Due to the original stipulations of the Mandate, there are now two characteristics applying to doorsets with the identical denomination: "Ability to release".

- A) <u>For opening</u>: For doors in escape routes, this means the ability to open (release) the doors safely by the operating devices in the direction of escape (without any key, even in the locked state) – characteristic specified by EN 14351-1.
- B) <u>For closing:</u> For **doors used for fire- resp. smoke compartmentation** in buildings, this concerns the ability to be unfastened (released), from a fixed open position to commence closing, i.e. to safely release any holding devices – characteristic specified by EN 16034.

Any doorset featuring the "ability to release" according to these standards shall be subject to the additional surveillance procedures according to AVCP System 1. A NPC shall be engaged as third-party supervision is compulsory.

Under AVCP System 1, the Specific Technical Documentation (STD) shall be inspected by the NPC!

List of all "Essential Characteristics" in the Declaration of Performance Use of "NPD" (No Performance Determined)

Doors in escape routes and doors for fire-, resp. smoke compartmentation

Annex 1 Examples

	Certifi	cate	ift	
	of Constancy of Pe	erformance	ZERTIFIZIERT CERTIFIED	
In compliance with R 9 March 2011 (the C construction product	egulation 305/2011/EU of the E onstruction Products Regulatic resisting and/or smo	European Parliament and of the Council of n or CPR), this certificate applies to the oke control doors		
	Sporcart 205 BS			
specification	See evidence no. 20-001234-F	PR01 of 10 January 2020		
Levels and classes of performance	El230-C5-S200			
Intended use(s)	intended to be used in fire and and/or escape routes	/or smoke compartmentation		
Produced by or for	Türenwerk Musterba	au KG		
Produced in the manufacturing plant	Türenwerk Musterbau H	G		
Notified body No.	0757 ift Rosenheim			
This certificate attests of performance and the under system 1 are requirements set out . This certificate was fit as long as the test . harmonised standard, do not change, and the significantly, unless su The use of this certific and surveillance control	that all provisions concerning the performances described in An EN 16034:2014 applied and that the product above. A stissued on 20 January 2020 is methods and/or factory product uset to assess the performan e product, and the manufactur aspended or withdrawn by the pate and the marking of the pro- ract with the ifft Rosenheim no.	e assessment and verification of constancy nex ZA of the harmonised standard(s) fulfils (products fulfit) all the presorbed and will remain valid until 10 January 2023. To control reguments included in the co of the declared essential characteristics, ing conditions in the plant are not modified roduct settification body. Uso's are bound by an existing certification 277 1234067.		
Prof. Ulifick Sebegath Director 20 January 2020	* William Internet William Internet Uconscionation PUZ PUZ Verenze William	Orwiticen Wire Christian Ketter Head of notified product certification body		
Iff Rosenheim GmbH Theodor-Gleb-Str, 7-9 83026 Rosenheim, German www.lft-rosenheim.de	(DAkks	No.: 0757-CPR-277-1234567-1-1 Issue: 20 January 2020		

Essential Characteristics	Performance	Hamonized technical specification
Resistance to Fire (for fire		
compartmentation uses):		
E:	60	
El ₁ :	30	
El ₂	30	
EW	60	
Smoke control (only for applications	S ₂₀₀	
where limitation of smoke spread is		
required)		
Ability to release	released	
Self-closing (only for self-closing fire	С	
resistant and/or smoke-control doorsets		EN 16034:2014
and/or openable windows)		
Durability of ability to release	Release maintained	
Durability of self-closing (only for self-		
closing fire resistant and/or smoke-control		
doorsets and/or openable windows)		1
 against degradation (cycle testing) 	5	
- against ageing (corrosion)	achieved	1

Figure 2: Example of a Certificate of Constancy of Performance as the Basis for the Specification of the Essential Characteristics in the Manufacturer's Declaration of Performance

	Declaration	of Perfo	ormance ⁰⁹⁻⁰¹	ſ	6
1.	Unique identification code of the product type:	" FD" - 160901	/238		
2.	Intended use:	Fire resisting an for use in public	nd smoke control external doorset and private locations	777	77. 8888
3.	Manufacturer	Any Co Door Ma 123 Any Street B-1234 Any Tov Belgium	anufacturing wn	Any Co Do 123	16 or Manufacturing Any Street
5.	Systems of AVCP:	1 and 3		E	3-1234 elaium
6.	Harmonized standards	EN 16034:2014	and EN 14351-1:2006+A1:2010	"FD" -	160901/238
7	Declared performance/s	,		LE/DoP-No :	001/CPR/2016-09-01
1.				LL/DOF-NO C	01/OF10/2010-09-01
	Essential Characteristics	Performance	Harmonized techn. Specification/s	Fire resisting and smo	oke control external doorset
	E: El ₁ : El ₂ :	30 30 30		EN ·	16034:2014 E: 30
	EW:	NPD			El ₁ : 30
	Smoke control	S ₂₀₀		Smoke control:	E12: 30 Sam
	Ability to release	released	EN 16034	Ability to release:	released
	Self-closing	С		Self-closing:	С
	Durability of ability to release	Release maintained		Durability of ability to release: Durability of self-closing:	release maintained
	 - against degradation (cycle testing) - against ageing (corrosion) 	5 achieved		 against degradation (cycle testin against ageing (corrosion): 	g): 5 achieved
	Water tightness	1A		EN 14351	1:2006+A1:2010
	Dangerous substances	-		Water tightness	1A
	Resistance against wind load	B2		Resistance to wind load	B2
	Impact resistance	NPD		Height	2100 mm
	Loadbearing capacity of safety devices	-	EN 14351-1	Air permeability	1,5 W/(m*K)
	Height	2.100 mm			
	Acoustic performance	NPD	1	Declaration of Perfo	rmance made available at:
	Thermal transmittance	1.5 W/(m ² K)		http://www	.Anyco.com/Dor
	Air permeability	1			
8	Appropriate technical documentation: V				
т р т	he performance of the product identified a erformance/s. his declaration is issued in accordance w	above is in confo ith regulation (El	rmity with the set of declared J) No 305/2011 under the sole		
re	sponsibility of the manufacturer identified igned for and on behalf of the manufactu	l above. rer by: Mona Muste	rmann		
	Any Town, 2016-09-01	Mong	Musterman		

Figure 3: Example of Declaration of Performance and CE-marking of a fire resisting and smoke control external pedestrian doorset

Note: The reference to the website can only be applicable, if the copy of the declaration of performance is made available on a website.

Declaratio	ON OF Pe	rformance ⁰¹⁶⁻⁰⁹⁻⁰¹		
Unique identification code				
of the product type:	" FW " - 1609	901/239		
Intended use:	Fire resisting openable window for use in public and private locations			
Manufacturer	Any Co Door Manufacturing 123 Any Street B-1234 Any Town Belgium			
Systems of AVCP:	1 and 3	1 and 3		
Harmonized standards Notified bodies:	EN 16034:: 7777, 8888	2014 and EN 14351-1:2006+A1:2010 3		
Declared performance/s				
Essential Characteristics	Performance	Harmonized techn. Specification/s		
Fire resistance:	E 30 El ₂ 30			
Smoke control	Sa			
Ability to release	NPD			
Self-closing	С	EN 16034		
Durability of ability to release	NPD			
Durability of self-closing				
- against degradation (cycle testing)	2 achieved			
Water tightness	70			
Dangerous substances	-			
Resistance against wind load	C3/B4			
Loadbearing capacity of safety devices	-			
Acoustic performance	32 dB (-1; -5)	EN 14351-1		
Thermal transmittance	1,5 W/(m ² K)			
Radiation properties:				
- Solar factor	0,55			
- Light transmittance	0,60	-		
Air permeability	4			
Appropriate technical documentation: ./. The performance of the product identified a performance/s. This declaration is issued in accordance wi of the manufacturer identified above.	above is in confo th regulation (El	rmity with the set of declared J) No 305/2011 under the sole responsibility		
Signed for and on behalf of the manufactur	er by:			
Ν	Aona Mustermar	าท		
Any Town, 2016-09-01	Mo	na Musterman		

Figure 4: Example of the Declaration of Performance and CE marking of a fire resisting openable window

Annex 2 Literature cited

- [1] EN 16034: 2014 "Pedestrian doorsets, industrial, commercial, garage doors and openable windows -Product standard, performance characteristics – Fire resistance and/or smoke control characteristics"
- [2] EN 14351-1: 2006+A1:2010 "Window and doors Product standard, performance characteristics Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke control characteristics"
- [3] Construction Products Regulation (305/2011/EU)
- [4] CE.02: 2014-12 "Guidance on Declaration of Performance and CE-marking of Windows and External Pedestrian Doorsets according to CPR"
- [5] FprEN 14351-2: 2015-09 "Windows and doors Product standard, performance characteristics Part 2: Internal pedestrian doorsets"

CE.03: 2015-11



EuroWindoor AISBL

Schuman Business Center 40, Rue Breydel 1040 Bruxelles / Belgium Phone: +32 (2) 502 3396 gs@eurowindoor.eu www.eurowindoor.eu

