

CPR GUIDELINE FOR ALUMINIUM DOORS, WINDOWS AND CURTAIN WALLS

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Introduction

This guideline was prepared by the European Aluminium Association AISBL (EAA) as well as the Federation of European Window and Curtain Walling Manufacturer's Associations (FAECF) and intends to assist manufacturers fulfilling Construction Product Regulation's (CPR) requirements.

The CPR is removing technical barriers to trade for construction products. These barriers exist due to the different rules for testing and attestation of conformity in the Member States for the same product. The CPR focuses on establishing common rules in the European market and rectifies the inconsistencies of the Construction Product Directive (CPD).

On the following table the core differences between the CPD and the CPR are given:

Table 1: Core differences/changes between CPD and the CPR

CPD	CPR
6 Essential Requirements (ERs)	7 Basic Requirements for Construction Works (BRCWs) 7 BRCWs = 6 ERs + Sustainable use of natural resources
Declaration of Conformity (DoC)	Declaration of Performance (DoP)
Attestation of Conformity (AoC)	Attestation and Verification of Constancy of Performance (AVCP) System 2 was deleted
European Organisation of Technical Approvals (EOTA)*	Group of Technical Assessment Bodies (most probably will remain the EOTA name)*
European Technical Approval Guidelines (ETAGs)* Common Understanding Approaches (CUAPs)*	European Assessment Documents (EADs)*
European Technical Approval (ETA)*	European Technical Assessment (ETA)*
Guidance Paper M describing Simplified Procedures (Sharing & Cascading)	Simplified procedures are in the CPR now

*Not applicable for window, door and curtain walling manufacturer

CPR will enter into complete force by the 1st of July 2013.

Note 1: The entire guideline has an informative role. In case additional information are needed you are requested to consult the Regulation number EU 305/2011 of the European Parliament and the Council of 9th March 2011. Download the regulation from the link:

(<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0005:0043:EN:PDF>)

Note 2: All information placed below are informative. Window, door and Curtain Walling manufacturers are able to follow the procedure they consider as the most appropriate to fulfil the requirements of this European regulation.

Note 3: Manufacturers are any natural or legal persons, who manufacture a window, door or curtain walls, or who have such products designed or manufactured, and market that products under his name or trademark.

Declaration of Performance (DoP)

One important CPR requirement for the manufacturer is to prepare a document called Declaration of Performance (DoP). By drawing up a DoP the manufacturer assumes responsibility for the declared performances. In the absence of objective indications to the contrary, Member States shall presume that information which is included to be accurate and reliable.

This document shall be prepared when the product is placed on the market in the accepted language of the Member State in which the product is intended to be placed on the market.

Products of the same batch which are supplied to a single user can be accompanied by a single DoP copy. Manufacturers can supply the customer with a copy of the DoP either in paper form or by electronic means. When requested by the customer, a paper copy must be supplied.

The conditions under which the DoP may be available on a web site will be established by the European Commission (EC) by means of legislative act.

According to the CPR a DoP has to be prepared in most cases, as Union or National provisions exist and require the declaration of essential characteristics where the product is intended to be used.

Table 2: main DoP content for doors, windows and curtain walls

DoP number, Unique identification code of the product type
Reference of the product type
Name, registered name or trade mark and contact address of the manufacturer
Assessment and Verification of Constancy of Performance (AVCP) systems (Refer to relevant Harmonised Standard)
Reference to the relevant harmonised standard code(s) dated
Intended use(s) according to hEN
For the intended use(s) a list of essential characteristics (all):
<ul style="list-style-type: none"> • The performance (level / class / description) of at least one essential characteristic • Essential characteristics with no declared performance, the letters 'NPD' (no performance determined) • Name and id number of the involved notified body(ies) if applicable
Declaration of responsibility and signature

According to the CPR the manufacturer is obliged to declare as a minimum the performance of one essential characteristic. Where the manufacturer wishes to declare a lower performance than the one reached during testing, or no performance at all (NPD – No Performance Determined), for an essential characteristic they are allowed so to do.

The DoP must be retained by the manufacturer for a period of 10 years after the construction product is placed on the market.

Obligations for manufacturers

Manufacturers shall, as the basis for the DoP, draw up a technical documentation report describing all the relevant elements related to the required system of AVCP. This report shall contain:

- The reports of test or other assessment methods (calculation) demonstrating the performance of the products for all the essential characteristics the manufacturer intends to declare, and the system of verification performed by a Notified Body (AVCP system 1 or 3) or by the manufacturer (AVCP system 4).
- The sample testing made under the initiative of the manufacturer.
- As the majority of metal window manufacturers are SMEs or microenterprises and several of them are using 'Cascading' or 'Sharing', it is important to prove within the technical documentation that the product they placed on the market is in line with the product which was tested during Type Testing or Type Calculation either by the system provider or the manufacturer accordingly. For this purpose keeping detailed Factory Production Control records according to the relevant harmonised standard(s) is highly recommended, to prove accuracy, reliability and stability of those test results. Documentation given by the system provider (Cascading) or the manufacturer who tested the product (Sharing) to the manufacturer shall be accompanied by authorisation for the documentation to be used.
- Those records are also to include: Registry of complaints, of non-conforming products, and of product recalls, and the corrective measures implemented to prevent recurrence of non-conformities.

Technical documentation shall be retained by the manufacturer to enable them to demonstrate the conformity of the construction product with the declaration of performance, should a reasoned request be received from a competent national authority responsible for market surveillance.

It is advised that the manufacturer shall develop technical documentation(s) for different product families (e.g. windows/doors for external usage without fire resisting characteristics; curtain walling, openable windows and doors for external usage with fire resisting characteristics; internal pedestrian doors without fire resisting characteristics; internal pedestrian doors with fire resisting characteristics; etc) in a generic way, which can be used as a common document for each of the product families. Within this document(s) reference to the content which was addressed earlier (see above bullets) should be Included.

Where a significant change is made in the manufacturing process(es) the manufacturer shall produce technical documentation for the new process(es) where they relate the DoP of products which are produced under the new process(es).

The relevant technical documentation must be kept by the manufacturer for a 10 year period together with the DoP, after the construction product is placed on the market.



CE marking

By affixing or having affixed the CE marking the manufacturer is indicating that they take responsibility for the conformity of the construction product with the declared performance as well as with all the applicable requirements defined in the CPR and all other additional related regulations.

The CE mark:

- Cannot be affixed if a DoP has not been drawn up.
- Shall be affixed before the product is placed on the market.
- Shall be the only marking which attests conformity of the construction product with the declared performances in relation to the essential characteristics covered by relevant harmonised standards.

The CE marking has to follow the product and can be affixed in one of the following three ways:

- On the construction product
- On the packaging
- With the accompanying documents

Table 3: main CE marking content for doors, windows and curtain walls

CE image
Last two digits of the year it was first affixed
Name, registered name or trade mark and contact address of the manufacturer
Unique identification code of the product type
Reference DoP number
Reference hEN codes dated
Intended use(s) according to the relevant hEN
The same performance for the essential characteristic(s) as declared in the relevant DoP
id number of the involved notified body(ies) if applicable

Essential characteristics with no declared performance (NPD) can be omitted from the CE mark.

The CE marking shall be offered in paper form.

Note: The CE marking shall be the only marking which states essential characteristics on a product and no other National or Voluntary Marks shall repeat these. Such marks are forbidden for characteristics which relate to the Basic Requirements of Construction Works (BRCWs) and furthermore essential characteristics described in Harmonised Standards (hEN).



DoP and CE marking: Reducing documentation

Based on the required content and manufacturer's preference, there is the option to combine the DoP and the CE marking on the same page. In such a case the document will need to fulfil the obligations of both documents and be offered for both purposes.

Knowing that on most buildings more than one door(s) and/or window(s) are offered in contracts, the manufacturer may reduce the number of documents by declaring DoP(s) and/or CE marking(s) on one document, provided all required information is declared.

For finished products, the CE marking shall accompany the product, while the DoP may be handed over separately.

Harmonised Standards (hEN's)

Harmonised standards (hENs) shall be established by the European standardisation bodies on the basis of requests issued by EC after having consulted the Standing Committee on Construction. The EC shall assess the conformity of hENs produced by the standardisation bodies with the relevant mandates and will update the list of hENs with the ones which are approved by publication in the Official Journal of the European Union (OJEU). After the publication of the hENs in the OJEU a coexistence period is identified to allow manufacturers prepare their organisations and to enable them to fulfil these new requirements accordingly.

The DoP and CE marking are possible from the moment that at least one relevant hEN is within its coexistence period. CE marking is mandatory after the end of coexistence period conflicting National Standards shall be withdrawn and Member States shall terminate the validity of all conflicting national provisions.

By the date of publication of this guideline two relevant hENs are applicable. Another two are under development (prEN) and are expected to be published soon.

hEN 14351-1: 'Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics'

hEN 14351-1 identifies material independent performance characteristics that are applicable to windows (including roof windows, roof windows with external fire resistance and French windows), external pedestrian doorsets (including unframed glass doorsets, escape route doorsets) and screens.

hEN 13830: 'Curtain walling - Product standard'

hEN 13830 specifies characteristics of curtain walling and provides technical information on the varying performance requirements which apply throughout Europe and the test criteria and sequence of testing to which the product is subjected, in order to demonstrate conformity. Reference is made to other European Standards related to the performance and testing of curtain walling and, where appropriate, attention is drawn to European Standards which relate to products incorporated into curtain walling.

prEN 14351-2: 'Windows and doors - Product standard, performance characteristics - Part 2: Internal pedestrian doorsets without resistance to fire and /or smoke leakage characteristics'

prEN 14351-2 shall identify material independent performance characteristics that are applicable to internal pedestrian doorsets without the resistance to fire and/or smoke leakage characteristics intended to be used internally in construction works.

prEN 16034: Pedestrian doorsets, industrial, commercial, garage doors and openable windows - Product standard, performance characteristics - Fire resisting and/or smoke control characteristics

prEN 16034 shall identify material independent, safety and performance requirements applicable to all fire resisting and/or smoke control products intended to be used in fire and/or smoke compartmentation and/or escape routes.

Further information are available at www.cen.eu

Other important issues

Additional elements of the CPR:

- Where applicable, information regarding REACH must be provided with the DoP. This requirement is for a "Safety data sheet" to be provided for substance/preparation(s) by the original manufacturer(s). For windows, doors, and curtain walls, which this Regulation calls "articles", the manufacturer only has to supply information if the content of a dangerous substance is more than 0,1% (mass).


Where this threshold limit will be exceeded, sufficient information must be made available from the manufacturer, to allow safe use of the article including, as a minimum, the name of that substance.

- Instructions and safety information: Manufacturers must ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned, which can be easily understood by users.
- Economic operators: The manufacturer is required to be able to provide, should a Market Surveillance inspection be carried out, a list with details of the economic operators they have supplied product to, or been supplied product by.
- Maintenance: Products will require regular cleaning and maintenance to achieve their anticipated life. The location, use and associated atmospheric conditions will have a considerable bearing on the frequency of such cleaning and maintenance inspection cycles, as will the materials and finishes inherent in the product. Failure to undertake this can considerably reduce the life of materials, components, products and finishes.

For this reason it is strongly recommended that a method statement covering specific recommendations for routine maintenance, cleaning including suitable cleaning agents, and any lubrication/adjustments to moving parts is prepared for each project taking guidance from the applicable hENs.

Annex I – Examples on Doors and Windows


Within the annex different examples can be found available covering alternative DoP and CE marking examples a manufacturer may follow.



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Declaration of Performance

No DOEGD001
External door



hEN

MWM ltd - Metal Window Manufacturer ltd / PO Box 21, B-1050, Brussels

Essential Characteristics	Performance	AVCP
Watertightness Non-shielded	6B	<p style="text-align: center;">System3</p> <p>Notified Bodies performed the determination of the product-type on the basis of type testing (based on the sampling carried out by the manufacturer), type calculation, tabulated values or descriptive documentation of the product; and issuing of the test/calculation reports under System 3</p> <p style="text-align: center;">EN 14351-1:2010</p>
Dangerous substances		
Resistance to wind load: - Test pressure P1 - Frame deflection	5 A	
Impact resistance		
Drop height	700 (mm)	
Load bearing capacity of safety devices	NPD	
Height	2.200 (mm)	
Ability to release	NPD	
Operating forces	NPD	
Acoustic performance	38 dB	
Thermal transmittance	1,2 (W/m²K)	
Radiation properties - Solar factor (g) - Light transmittance (τ _v)	0,58 0,45	
Air permeability	4	

Notified Bodies: [1] Notified Body A (9999) ; [2] Notified Body B (8888)

The performance of the products identified with the above unique identification codes are in conformity with the relevant declared performances.
This declaration of performance is issued under the sole responsibility of Metal Window Manufacturer ltd / PO Box 21, B-1050, Brussels
Signed for and on behalf of the manufacturer by:

Name and function	Signature
Place and date of issue	

Example I.1: CE & DoP of a window or identical ones



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Declaration of Performance



No DOEGD001

External door

MWM ltd - Metal Window Manufacturer ltd / PO Box 21, B-1050, Brussels

Essential Characteristics	Performance	AVCP	hEN
Watertightness Non-shielded	68	<p>System3</p> <p>Notified Bodies performed the determination of the product-type on the basis of type testing (based on sampling carried out by the manufacturer), type calculation, tabulated values or descriptive documentation of the product; and issuing of the test/calculation reports under System 3</p>	EN 14351-1:2010
Dangerous substances			
Resistance to wind load: - Test pressure P1 - Frame deflection	5 A		
Impact resistance Drop height	700 (mm)		
Load bearing capacity of safety devices	NPD		
Height	2.200 (mm)		
Ability to release	NPD		
Operating forces	NPD		
Acoustic performance	38 dB		
Thermal transmittance	1,2 (W/m ² K)		
Radiation properties - Solar factor (g) - Light transmittance (τ _v)	0,58 0,45		
Air permeability	4		

Notified Bodies: [1] Notified Body A (9999) - [2] Notified Body B (8888)

The performance of the products identified with the above unique identification codes are in conformity with the relevant declared performances.

This declaration of performance is issued under the sole responsibility of Metal Window Manufacturer ltd / PO Box 21, B-1050, Brussels

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature

Example I.2: CE & DoP of an external door or identical ones



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Declaration of Performance



No DOEEI30GD001

Fire resisting door

MWM ltd - Metal Window Manufacturer ltd / PO Box 21, B-1050, Brussels

Essential Characteristics	Performance	Notified Body	AVCP	hEN
	EN 16034:2013		System1	EN 16034:2013
Resistance to Fire:	EI 30	[3]		
Smoke leakage:	S _m	[5]		
Self-closing:	C5	[4]		
	EN 14351-1:2010		System3	EN 14351-1:2010
Watertightness Non-shielded	68	[1]		
Dangerous substances				
Resistance to wind load - Test pressure P1 - Frame deflection	5 A	[1] [1]		
Impact resistance Drop height [mm]	700	[1]		
Load bearing capacity of safety devices	NPD	-		
Height [mm]	2200	-		
Ability to release	NPD	-		
Operating forces	NPD	-		
Acoustic performance [dB]	38	-		
Thermal transmittance [W/m ² K]	1,2	-		
Radiation properties Solar factor (g) Light transmittance (τ _v)	0,58 0,45	- -		
Air permeability	4	[2]		

[1] Notified Body A (9999) - [2] Notified Body B (8888) - [3] Notified Body C (7777) - [4] Notified Body D (6666) - [5] Notified Body D (6666)

System 1: Notified Bodies performed the determination of the product type on the basis of type testing (including sampling), type calculation, tabulated values or descriptive documentation of the product; initial inspection of the manufacturing plant and of factory production control and continuous surveillance; under System 1 and issued certificate of constancy of performance

System 3: Notified Bodies performed the determination of the product-type on the basis of type testing (based on sampling carried out by the manufacturer), type calculation, tabulated values or descriptive documentation of the product; and issuing of the test/calculation reports under System 3

The performance of the products identified with the above unique identification codes are in conformity with the relevant declared performances.

This declaration of performance is issued under the sole responsibility of Metal Window Manufacturer ltd / PO Box 21, B-1050, Brussels

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature

Example I.3: CE & DoP of a single fire resisting door or identical ones

Declaration of Performance

No DOEEI30GD001

Window and Door Manufacturer ltd
PO Box 21,
B-1050, Brussels

LOGO

External Doors

EN 14351-1:2006 + A1:2010

AVCP 3

Notified Body No. 9999

Essential Characteristics:

No.	Watertightness	Dangerous substances	Resistance to wind load	Impact resistance	Load bearing capacity of safety devices	Height [mm]	Ability to release	Acoustic performance R_w (C; C _v) [dB]	Thermal transmittance U_D [W/m ² K]	Solar factor (g) [%]	Light transmittance (t _v) [%]	Air permeability
1	3A	-	B1	1	-	2200	npd	npd	1,8	60	72	1
2	3A	-	B1	1	-	2100	npd	npd	1,8	60	72	2
3	3A	-	B1	npd	-	2200	npd	npd	1,2	-	-	2
4	3A	-	B1	npd	-	2100	npd	npd	1,8	60	72	1
5	6B	-	B1	npd	-	2150	npd	npd	1,8	60	72	1

npd = no performance determined

The performance of the product identified with the above unique identification code is in conformity with the relevant declared performances.

This declaration of performance is issued under the sole responsibility of Metal Window Manufacturer ltd / PO Box 21, B-1050, Brussels

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature



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Window and Door Manufacturer ltd
PO Box 21, B-1050, Brussels

No DOEEI30GD001-4

EN 14351-1:2006+A1:2010

9999

External Door

Watertightness	3A
Resistance to wind load	B1
Height [mm]	2100
Thermal transmittance (U_D) [W/m ² K]	1,8
Solar factor (g) [%]	60
Light transmittance (t _v) [%]	72
Air permeability	1

Example I.5: One page containing all DoPs and different pages with CE marks

Annex II – Examples on Curtain Walls



Declaration of Performance

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Metal Window Manufacturer Ltd / PO Box 21, B-1050, Brussels

Essential Characteristics	No CWSH150PP Curtain Walling			hEN
	Performance	Notified Body	AVCP	
	Reaction to fire of profile	F	-	
Fire resistance	NPD	-	3	EN 13830:2003
Fire propagation	NPD	-		
Watertightness	R6	[1]		
Resistance to own dead load: [kN]	NPD	-		
Wind load resistance: [kN/m ²]	9,1	[2]		
Impact resistance	NPD	-		
Thermal shock resistance	NPD	-		
Resistance to horizontal loads: [kN at m sill height]	NPD	-		
Air permeability	A4	[3]		
Thermal transmittance U [W/(m ² K)]	1,6	-		
Airborne sound insulation [dB]	NPD	-		

[1] Notified Body A (9999) · [2] Notified Body B (8888) · [3] Notified Body C (7777)

System 3: Notified Bodies performed the determination of the product-type on the basis of type testing (based on sampling carried out by the manufacturer), type calculation, tabulated values or descriptive documentation of the product; and issuing of the test/calculation reports under System 3.

The performance of the products identified with the above unique identification codes are in conformity with the relevant declared performances.

This declaration of performance is issued under the sole responsibility of Metal Window Manufacturer Ltd / PO Box 21, B-1050, Brussels

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature

Example II.1: CE & DoP of a curtain wall



Declaration of Performance

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Metal Window Manufacturer Ltd / PO Box 21, B-1050, Brussels

Essential Characteristics	Product A No CWSH150PP Curtain Walling			Product B No CWSH1E16050PP Fire resisting Curtain Walling			hEN
	Performance	Notified Body	AVCP	Performance	Notified Body	AVCP	
	Reaction to fire of profile	NPD	-	3	A1	[4]	
Fire resistance	NPD	-	3	EI 60	[5]	3	EN 13830:2003
Fire propagation	NPD	-		EI 60	[5]		
Watertightness	R6	[1]		R6	[1]		
Resistance to own dead load: [kN]	NPD	-		NPD	-		
Wind load resistance: [kN/m ²]	9,1	[2]		9,1	[2]		
Impact resistance	NPD	-		NPD	-		
Thermal shock resistance	NPD	-		NPD	-		
Resistance to horizontal loads: [kN at m sill height]	NPD	-		NPD	-		
Air permeability	A4	[3]		A4	[3]		
Thermal transmittance U [W/(m ² K)]	1,6	-		1,6	-		
Airborne sound insulation [dB]	NPD	-		NPD	-		

[1] Notified Body A (9999) · [2] Notified Body B (8888) · [3] Notified Body C (7777) · [4] Notified Body D (6666) · [5] Notified Body D (5555)

· System 1 Notified Bodies performed the determination of the product type on the basis of type testing (including sampling), type calculation, tabulated values or descriptive documentation of the product; initial inspection of the manufacturing plant and of factory production control and continuous surveillance; under System 1 and issued certificate of constancy of performance.

· System 3 Notified Bodies performed the determination of the product-type on the basis of type testing (based on sampling carried out by the manufacturer), type calculation, tabulated values or descriptive documentation of the product; and issuing of the test/calculation reports under System 3.

The performance of the products identified with the above unique identification codes are in conformity with the relevant declared performances.

This declaration of performance is issued under the sole responsibility of Metal Window Manufacturer Ltd / PO Box 21, B-1050, Brussels

Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature

Example II.2: CE & DoP of a curtain wall with different performances in different compartments

Bibliography

- [1] CPD to CPR Quick guide, CEPMC, 2012
- [2] CE marking of curtain walling, FAECF Guidance Sheet CE.01, FAECF, 2004
- [3] CE marking of windows and pedestrian doors, Eurowindoor Guidance Sheet CE.02, in cooperation with EAA, EPW, FAECF, FEMIB, UEMV, (prepared by FAECF Technical Committee), 2007
- [4] Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

Most important Articles for door, window and curtain walling manufacturers within the Construction Products Regulation:

§ 4, 5, 6, 7 & Annex III	Declaration of Performance
§ 8, 9	CE marking
§ 11	Obligations for manufacturers
§ 17	Harmonised Standards
§ 36	Use of Appropriate Technical Documentation



European Aluminium Association EAA AISBL

www.alubuild.eu



FAECF

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