

DECLARATION OF PERFORMANCE

Nr. 210217-Oz Du-Ex_UK

1. Unique identification code of the product-typeh:

Ozeon Durable 8mm metal finish
Ozeon Xtreme 8mm metal finish

2. Intended use / es

Internal and external wall and ceiling finishes

3. Manufacturer:

Ozeon Windmolen 46 6003 BK Weert Nederland t. +31 495 453974

4. System or systems of AVCP (assessment and verification of constancy of performance of the construction product)

System 1: Fire safety (Fundamental requirement 2)

System 2+: Hygiene, health and environment (Fundamental requirement 3) and

Safety and accessibility in use (Fundamental requirement 4)

5. European Assessment Document:

EAD 090001-00-0404 for Prefabricated compressed mineral wool boards with organic or inorganic finish and with specified fastening system, edition May 2014.

European Technical Assessment:

ETA-16/0705 issued on 21-09-2016

Technical Assessment Body:

ETA-Danmark A/S Göteburg Plads 1, DK-2150 Nordhavn Tel. +45 72 24 59 00 Fax +45 72 24 59 04 Internet www.etadanmark.dk

Notified Body:

Materialprüfanstalt für das Bauwesen Nienburger Straße 3, D-30167 Hannover Aangemelde instantie 0764 Tel. +49 511 762 3104 Fax +49 511 762 4001 Internet www.mpa-bau.de/ issued

Certificate of Constancy of performance No. 0764 - CPR - 0269



6. Characteristics of the product

Ozeon panels are made of ROCKPANEL Natural panels finished with a two layer coating consisting of an adhesion layer and a liquid metal layer combined with an organic binder.

The physical properties of 8 mm Ozeon Durable and 8 mm Ozeon Xtreme are indicated below:

	Durable	Xtreme				
Thickness	8 ±	0,5 mm				
Length, max	309	3050 mm				
Width, max.	129	50 mm				
Density	nominal 1050 ± 150 kg/m ³	nominal 1200 ± 100 kg/m³				
Bending strength	length and width f ₀₅ ≥ 27 N/mm²	length and width f ₀₅ ≥ 34,5 N/mm²				
Modulus of Elasticity	4015 N/mm²	5260 N/mm²				
Thermal conductivity	0,35 W/(m • K)	0,51 W/(m • K)				

Clause 7 contains the performances of 8 mm Ozeon Durable and Xtreme panels.



7. Declared performance

Essential characteristics	Performance				Harmonised technical specification				
	Table 1 - Euro	Table 1 - Euroclass classification of different constructions with ROCKPANEL boards							
			Ozeon	panels					
Basic	Fixing method	Ventilated or non-ventilated	vertical wooden subframe	vertical aluminium subframe					
Requirements for		Non-ventilated. Cavity filled with mineral wool	B-s1,d0 closed horizontal joint						
construction works	mechanically fixed	Ventilated with EPDM gasket on the battens [a]	B-s2,d0 open 6 mm horizontal joint		ETA-16/0705 issued on 21-09-2016				
		Ventilated with 6 or 8 mm ROCKPANEL strips on the battens [b]	B-s2,d0 open 6 mm horizontal joint		EN 13501-1:2007				
BR2 - Safety in		Ventilated with 8 mm ROCKPANEL strips on the battens [b]	B-s2,d0 open 6 mm horizontal joint						
case of fire	bonded ventilated			B-s2,d0 open 6 mm horizontal joint					
		ket at both sides 15 mm wider than the batten oat both sides 15 mm wider than the batten							

Field of application

The following field of application applies.

Euroclass classification

The classification mentioned in table 1 is valid for the following end use conditions:

Mounting:

- · Mechanically fixed or adhered as described in table 1, which are attached to the subframe mentioned below
- Adhered to a wooden subframe with intermediate ROCKPANEL strips mechanically fixed
- The panels are backed with minimum 50 mm mineral wool insulation with density 51-69 kg/m³ with a cavity between the panels and the insulation (mechanically fixed)
- The panels are backed with minimum 40 mm mineral wool insulation with density 51-69 kg/m³ without an air gap between the wooden subframe (mechanically fixed non ventilated)
- The panels are backed with minimum 50 mm mineral wool insulation with density 51-69 kg/m³ with a cavity between the panels and the insulation (fixing method Adhesive ROCKPANEL Tack-S)

Substrates: • Concrete walls, masonry walls, timber framing



- Insulation: Ventilated constructions: The battens are backed with minimum 50 mm mineral wool insulation with density 51-69 kg/m³ with a cavity of minimum 28 mm between the panels and the insulation
 - Non-ventilated constructions: The panels are backed with minimum 40 mm mineral wool insulation with 51-69 kg/m³ between the battens and minimum 50 mm with density 51-69 kg/m³ behind the battens without air gap
 - Ventilated construction and fixing method adhesive ROCKPANEL Tack-S: The panels are backed with minimum 50 mm mineral wool insulation with density 51-69 kg/m³ with a cavity of minimum 36 mm between the panels and the insulation
 - Results are also valid for all greater thickness of mineral wool insulation layer with the same density and the same or better reaction to fire classification

Subframe: • Vertical softwood battens without fire retardant treatment, thickness minimum 28 mm

· Test results are also valid for the same type of panel with aluminum or steel frame

Fixings: • Results are also valid with higher density of the fixing devices

· Test results are also valid for the same type of panel fixed by rivets made of the same material of screws and vice versa

Cavity: • Unfilled or filled with insulation of stone wool with a nominal density 51-69 kg/m³

• The depth of the cavity is minimum 28 mm

· Test results are also valid for other higher thickness of air space between the back of the board and the insulation

 Vertical joints are with an EPDM foam gasket backing or ROCKPANEL strip backing as described in table 1 and horizontal joints can be open (ventilated constructions) or with an aluminum profile (ventilated and non-ventilated constructions)

• The result from a test with an open horizontal joint is also valid for the same type of panel used in applications with horizontal joints closed by steel or aluminum profiles

The classification is also valid for the following product parameters:

Thickness: • Nominal 8 mm, individual tolerances ± 0.5 mm

Density: • Ozeon Durable: Nominal 1050 kg/m3, individual tolerances ± 150 kg/m3

• Ozeon Xtreme: Nominal 1200 kg/m3, individual tolerances ± 100 kg/m3

Joints:



Essential characteristics	Table 2 - Performance - Water	Harmonised technical	
Essential Characteristics	Property	Declared values	specification
ER3 – Hygiene, health	Water vapour permeability	No performance declared	
and environment	Water permeability	No performance declared	

Essential characteristics	Table 3 - Performance - Relea	Harmonised technical	
Essential Characteristics	Property	specification	
BR3 – Hygiene, health and environment	Dangerous substances	The kit does not contain/release dangerous substances* Formaldehyde concentration 0.0105 mg/ m³. Formaldehyde class E1 The used fibres are not potential carcinogenic No biocides are used in the OZEONboards No flame retardant is used in the boards No cadmium is used in the boards.	ETA-16/0705 Issued on 21-09-2016

^{*)} According http://ec.europa.eu/enterprise/sectors/construction/cp-ds/index_en.htm In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

	Table 4a - Pei Subframe: solid		Harmonised technical specification				
Essential characteristic	For service clas	specification					
	Property	8 mm boards	Span in	mm [b]	$X_d = X_k / \gamma_M$ in N	Table in	
			a fixing	b board	Middle/ Edge/ Corner	ETA	
Design valu	Design value	screw fixing [a][e] with the use of gaskets	600	600	C18 [d] / C24 [d]: 533 / 241 / 118	6-2 [c]	FTA 40/0705
BR4 – Safety in use	of the axial load $X_d = X_k / \gamma_M$	screw fixing [a][e] with the use of 8 mm ROCKPANEL strips	600	600	C18 [d]: 233 / 233 / 118 C24 [d]: 250 / 241 / 118	6-3 [c]	ETA-16/0705 Issued on 21-09-2016 and
		nail fixing (32 mm) [e] with the use of gaskets	400	600	C18 [d]: 116 / 116 / 116 C24 [d]: 139 / 139 / 139	6-4 [c]	6-4 [c] EN 14592:2008+ A1:2012 (E)
		Rivet fixing [e]	600	600	654 / 309 / 156	6-1 [c]	
[a] with α≥30°: direction	lpha is the angle betw	een the screw axis and the grain	[d] Strength class EN 338				
[b] see Table 7			[e] for specification	s fixings see ta	ble 9		
BS EN 1995-1-1		able 3.1 – "Values of k _{mod} " according service class´ 2 [see Note] and	Note (according to BS EN 1995-1-1:2004+A1:2008 §2.3.1.3 (3)P): Service class 2 is characterised by a moisture content in the materials corresponding to a temperature of 20°C and the relative humidity of the surrounding air only exceeding 85 % for a few weeks per year. In service class 2 the average moisture content in most softwoods will not exceed 20 %.				



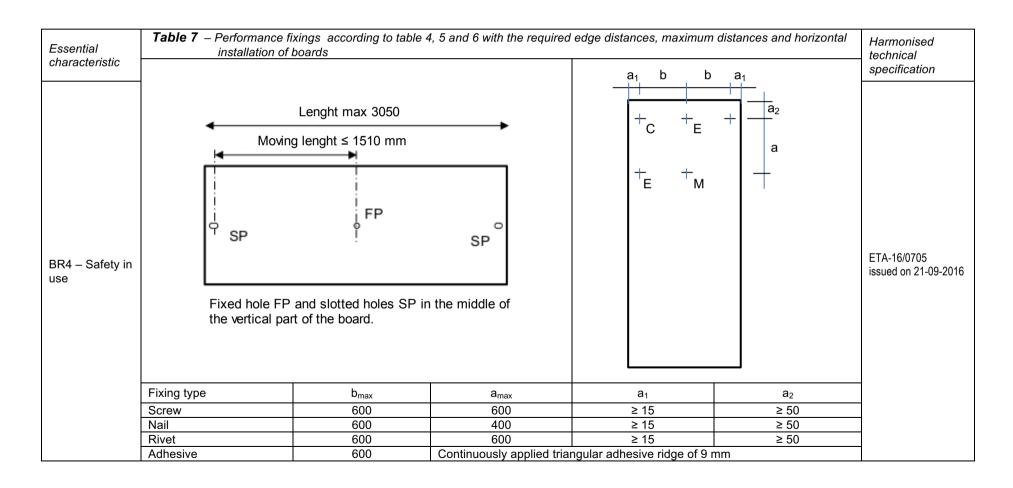
Essential characteristic	Table 4b - Per Subframe: solid For service class For hole diame	Harmonised technical specification						
onaraotonotio	Property	8 mm boards	Span in	mm [b]	$X_d = X_k / \gamma_M$ in N	Table in		
			a fixing	b board	Middle/ Edge/ Corner	ETA		
BR4 – Safety load	Design value	screw fixing [a][e] with the use of gaskets	600	600	C18 [d]: 462/241 / 118 C24 [d]: 496 / 241 / 118	6-2 [c]		
	of the axial load $X_d = X_k / \gamma_M$	screw fixing [a][e] with the use of 8 mm ROCKPANEL strips	600	600	C18 [d]: 181 / 181 / 118 C24 [d]: 194 / 194 / 118	6-3 [c]	ETA-16/0705 Issued on 21-09-2016 and	
		nail fixing (32 mm) [e] with the use of gaskets	400	600	C18 [d]: 90 / 90 / 90 C24 [d]: 108 / 108 / 108	6-4 [c]	- EN 14592:2008+ A1:2012 (E)	
		Rivet fixing [e]	600	600	654 / 309 / 156	6-1 [c]		
[a] with $\alpha \ge 30^{\circ}$: direction	[a] with $\alpha \ge 30^\circ$: α is the angle between the screw axis and the grain direction			[d] Strength class EN 338				
[b] see Table 7		[e] for specification	is fixings see ta	ble 9				
[c] k_{mod} = 0,70 in accordance with Table 3.1 – "Values of k_{mod} " according BS EN 1995-1-1+C1+A1:2011; For 'service class' 3 [see Note] and 'load-duration class' 'Instantaneous'		Note (according to BS EN 1995-1-1:2004+A1:2008 §2.3.1.3 (3)P): Service class 3 is characterised by climatic conditions leading to higher moisture contents than in service class 2 (compare 'Note' in Table 4a).						

	Table 4c - Per Subframe: solid		Harmonised technical specification					
Essential characteristic		For service class 2 (see 'Note') and load-duration class 'Permanent' [c] (application ceiling) For hole diameters fixings see table 6						
	Property	8 mm boards	Span in	mm [b]	$X_d = X_k / \gamma_M$ in N	Table in		
			a fixing	b board	Middle/ Edge/ Corner	ETA		
BR4 – Safety load	Design value	screw fixing [a][e] with the use of gaskets	600	600	C18/[d]: 396 / 241 / 118 C24 [d]: 425 / 241 / 118	6-2 [c]	FTA 40/0705	
	of the axial	screw fixing [a][e] with the use of 8 mm ROCKPANEL strips	600	600	C18 [d]: 155 / 155 / 118 C24 [d]: 167 / 167 / 118	6-3 [c]	ETA-16/0705 Issued on 21-09-2016 and	
		nail fixing (32 mm) [e] with the use of gaskets	400	600	C18 [d]: 77 / 77 / 77 C24 [d]: 93 / 93 / 93	6-4 [c]	- EN 14592:2008+ A1:2012 (E)	
		Rivet fixing [e]	600	600	654 / 309 / 156	6-1 [c]		
[a] with α≥30°: direction	lpha is the angle betw	een the screw axis and the grain	[d] Strength class EN 338					
[b] see Table 7			[e] for specification	s fixings see ta	ble 9			
[c] k_{mod} = 0,60 in accordance with Table 3.1 – "Values of k_{mod} " according BS EN 1995-1-1+C1+A1:2011; For 'service class' 2 [see Note] and 'load-duration class' 'Permanent			Note (according to BS EN 1995-1-1:2004+A1:2008 §2.3.1.3 (3)P): Service class 2 is characterised by a moisture content in the materials corresponding to a temperature of 20°C and the relative humidity of the surrounding air only exceeding 85 % for a few weeks per year. In service class 2 the average moisture content in most softwoods will not exceed 20 %.					

Essential	Table 5 - Performa									Harmonised technical specification	
characteristic		0 mm o	trips [b] in			in mm	$X_d = X_k / \gamma_M$ [c]	in N	Table in		
	Property		ation with	a ₂	a fixin	g b adhesive ridge	SE: start / end of the strip	SM: Middle of the strip	ETA	ETA-16/0705	
	Decign value of	screw to	fixing and intermediate	≥ 50	400	600	C18 [d] : 266 C24 [d] : 266	C18 [d] : 425 C24 [d] : 425	6-6 [c]	Issued on 21-09-2016	
BR4 – Safety in use $ X_d = X_k / \gamma_M [c] $	I the evial lead		ixing and end strips or ips [a][e]	≥ 50	400	600	C18 [d] : 124 C24 [d] : 124	C18 [d] : 412 C24 [d] : 412	6-5 [c]	and EN 14592:2008+	
		ng (32 mm) and diate strips [e]	≥ 50	300	600	C18 [d] : 110 C24 [d] : 131	C18 [d] : 110 C24 [d] : 131	6-8 [c]	A1:2012 (E)		
	nail fixin strips [b]		ng (32 mm) and end b][e]	≥ 50	300	600	C18 [d] : 76 C24 [d] : 76	C18 [d] : 110 C24 [d] : 131	6-7 [c]		
			Strips for a wo	oden subfr	ame :	located on vertica	l joints	located on end o	r between jo	oints	
[b] fixed points [c] $k_{mod} = 0.90$ Form Local	in the middle of the leng Table 3.1 BS EN 1995- or serviceclass 2 [NA to ember is protected from	gth of the s 1-1:2004+ BS EN 19 direct wei ntaneous'	A1:2008 95-1-1:2004+A1:2008] Exte	rnal uses wh	nere	a ₂ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SE	a ₂			
Note (according to BS EN 1995-1-1:2004+A1:2008 §2.3.1.3 (3)P): Service class 2 is characterised by a moisture content in the materials corresponding to a temperature of 20°C and the relative humidity of the surrounding air only exceeding 85 % for a few weeks per year. In service class 2 the average moisture content in most softwoods will not exceed 20 %.					for a	≥30 ≥35 	≥30 SM	≥35 1 ⊕	≥35 SM		

Essential characteristic	Table 6 – Performance mechanical fixings: hole diameters for 'Ozeon Durable en Ozeon Xtreme' panels and 'Durable' and 'Xtreme' strips in bonded applications							
Essential characteristic	Fixing type [a]	Fixed hole	Moving hole Slotted hole Board dime consider			specification		
	Screw	3.2	6.0	3.4 * 6.0	1200 * 3050	ETA-16/0705		
BR4 – Safety in use	Nail	2.5	3.8	2.6 * 3.8	1200 * 2420	issued on 21-09-		
	Rivet	5.2	8.0	5.2 * 8.0	1200 * 3050	2016		

[a] for a description of the fixings see table 9





Face which also we at a visition	Table 8 – Performance shear strer	Table 8 – Performance shear strength mechanical fixings						
Essential characteristic		Fixing	Failure load	Deformation	specification			
BR4 – Safety in use	Characteristic shear	Screws	1549 N	9 mm	ETA 40/0705 ''			
	strength mechanical fixings	Nails	1325 N	15 mm	ETA-16/0705 uitgave 22-09-2016			
	Average values	Rivets	1722 N	1.7 mm	22-09-2010			



	Table 9 Specification mechanical fixing					I la masa mia a d
Essential	Rivet AP14-50180-S	Rink-shank nail		Screw	Harmonised	
characteristic	Material EN AW-5019 (AlMg5) accordin EN 755-2	Stainless steel according	g EN 10088	Stainless steel accord	ding EN 10088	technical specification
BR4 – Safety in use	Material number mandrel 1.4541 according EN 10088 Pull-out strength $Z_b = 3920 \text{ N}$ $d^1 = 5$ $d^2 = 14$ $d^3 = 2.75$ $I = 18$ $k = 1.5$	Material number 1.4401 of 1.4578 dn = 2.6 - 2.8 d1 = 2.8 - 3.0 ln = 31 - 32.5 lg = 24 - 26 D = 5.8 - 6.3 H = 0.8 - 1.0		Material number 1.4401 of 1.4578 $d_s = 3.3 - 3.4$ $d_g = 4.3 - 4.6$ $I = 35 - 1.25$ $b = 26.25 - 28.5$ $D = 9.6 - 0.4$		ETA-16/0705 issued on 22-09-2016

F	Table 10 – Performance Ta	ck - S adhesive and FoamTa	pe - Initial tensile strength			Harmonised	
Essential characteristic	Tack-S adhesive [a] Partial	Conditions:	Contact surfaces - Rear of the board onto	Characteristic N/mm ¹	Design N/mm ¹	technical specification	
	factor for material property	-40°C, -20°C, +23°C en	'ProtectPlus'	X _k = 6,94 N/mm ¹	X _d = 1,735 N/mm ¹		
	$\gamma_{\rm M} = 4$ (tensile caused by	+80°C	'Colours' code 7Y of 9Y	X _k = 8,30 N/mm ¹	$X_d = 2,075 \text{ N/mm}^1$	ETA-16/0705	
BR4 – Safety	wind load)	-20°C, +23°C en +80°C	aluminium	X _k = 5,92 N/mm ¹	$X_d = 1,48 \text{ N/mm}^1$	issued on	
in use				$X_k = X_d = 0.73 \text{ N/mm}^1$		22-09-2016	
Foar	FoamTape	+23°C	'Colours' code 7Y of 9Y	$X_k = X_d =$	$X_k = X_d = 1,17 \text{ N/mm}^1$		
			aluminium	$X_k = X_d =$	0,47 N/mm ¹		

[a] For the partial load factor: $\gamma_F = 1.5$ shall be taken



Faccation	Table 11 – Performance Tack-S adhesive and FoamTape - Initial shear strength					Harmonised	
Essential characteristic		Partial factor for material property γ_M	Conditions	Contact surfaces - Rear of the board onto	Characteristic N/mm ¹	Design N/mm¹	technical specification
	Tack-S adhesive [a]	40	-40°C, -20°C,	'ProtectPlus'	X _k = 7,00 N/mm ¹	X _d = 0,175 N/mm ¹	ETA-16/0705 issued on 22-09-2016
		(snear caused by +23°	+23°C and	'Colours' code 7Y of 9Y			
BR4 – Safety in			+80°C	aluminium	$X_k = 8,58 \text{ N/mm}^1$	$X_d = 0,214 \text{ N/mm}^1$	
use	20 FoamTape (shear caused by	20		'ProtectPlus'	$X_k = 1,00 \text{ N/mm}^1$	X _d = 0,05 N/mm ¹	
		(shear caused by	+23°C	'Colours' code 7Y of 9Y	A _k - 1,00 N/IIIII		
	·	temporary load)		aluminium	$X_k = 0.99 \text{ N/mm}^1$	$X_d = 0.05 \text{ N/mm}^1$	

[a] For the partial load factor: $\gamma_F = 1.5$ shall be taken

Essential characteristic	Table 12 - Performance Tack-S adhesive-	Harmonised technical		
	Contact surfaces - Rear of the board onto De		Deformation mm	specification
DD4 Cofety in use	Tack-S adhesive Conditions: -20°C,	'ProtectPlus' en 'Colours' code 7Y of 9Y	3,9 tot 6,1 mm	ETA-16/0705 issued on
BR4 – Safety in use	+23°C and +80°C	aluminium	4,5 tot 6,0 mm	22-09-2016

Essential characteristic	Table 13 – Performance In	Harmonised technical			
Essential characteristic	Impactor		Energy	Category	specification
DD4	Hard body	Steel ball 0.5 kg	3 J	III, II and I	ETA-16/0705 issued on 22-09-2016
BR4 – Safety in use	Soft body	Ball 3 kg	10 J	IV and III	
Salety III use	Soft body	Bag 50 kg	300 J	II	

Essential characteristic	Table 14 – Performance dimensional stability	Harmonised technical specification			
		Length	Width		
BR4 – Safety in use	Cumulative dimensional change [a]	0,088%	0,094%		
	Coefficient of thermal expansion 10 ⁻⁶ K ⁻¹	10,9 . 10 ⁻⁶	11,0 . 10 ⁻⁶	ETA-16/0705 issued on 22-09-2016	
	Coefficient of moisture expansion 42% RH difference after 4 days mm/m	0,293	0,310	22-09-2010	

[a] As a consequence the minimum joint width shall be 3 mm, preferably 5 mm.



Essential	Table 15 – Resistance to hygro-thermal cyc	Harmonised technical		
characteristic	teristic Performance		specification	
	Weerstand tegen hygro- thermische cycli	Pass		
	Resistance to Xenon Arc exposure	NPD (no performace declared) Explanation:	ETA-16/0705 issued on 22-09-2016	
Aspects of durability and serviceability	EOTA TR010 climate class S (Technical Report 010) 5000 hours artificial weathering	The texture and color of metals will change over time due to an oxidation and patination process. Color variation that can occur within the panels are a normal phenomenon in metal, and therefore also at Ozeon cladding panels This is a natural process which characterizes metals. The coloration varies in different climatic conditions.		

Essential	Essential Table 16 – Performance Tack-S adhesive: Characteristic tensile strength					
characteristic		L Confact surfaces - Rear of the L Performance N/mm ¹		Harmonised technical specification		
		board onto	21 days	42 daYS	specification	
Aspects of		'ProtectPlus'	X _k = 2,80 N/mm ¹	$X_k = 2,22 \text{ N/mm}^1$		
durability and	Immersion in water without UV	'Colours' code 7Y of 9Y	A _k = 2,00 N/IIIII	7k - 2,22 N/IIIII	ETA-16/0705 issued on	
serviceability		aluminium	X _k = 3,12 N/mm ¹	X _k = 2,58 N/mm ¹	22-09-2016	

[[]a] For the partial load factor: $\gamma_F = 1.5$ shall be taken

Essential	Table 17 – Performance Tack-S adhesive	Harmonised technical		
characteristic		Contact surfaces - Rear of the board onto	Performance N/mm¹	specification
Aspects of durability and	Humidity and NaCl	aluminium	X _k = 6,03 N/mm ¹	ETA-16/0705 issued on
serviceability	Humidity and SO ₂	aluminium	X _k = 6,67 N/mm ¹	22-09-2016



8. The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Ozeon BV

Frank Smolenaers, director

Weert, The Netherlands 21-02-2017

DOP in accordance with Commission Delegated Regulation (EU) No 574/2014 of 21 February 2014 amending Annex III to Regulation (EU) No 305/2011 of the European Parliament and of the Council on the model to be used for drawing up a declaration of performance on construction products, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0574, OJ L 159, 28.5.2014, p. 41–46