

DECLARATION OF PERFORMANCE

Nr. 210217-Oz Du_UK

1. *Unique identification code of the product-typeh:*

Ozeon Durable 8mm metal finish

2. *Intended use / es*

Internal and external wall and ceiling finishes

3. *Manufacturer:*

Ozeon BV
Buizerdweg 10
6374 BS Landgraaf
The Netherlands
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
Göteborg Plads 1, DK-2150 Nordhavn
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Notified Body:

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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 are indicated below:

	Durable
Thickness	8 ± 0,5 mm
Length, max	3050 mm
Width, max.	1250 mm
Density	nominal 1050 ± 150 kg/m ³
Bending strength	length and width $f_{05} \geq 27$ N/mm ²
Modulus of Elasticity	4015 N/mm ²
Thermal conductivity	0,35 W/(m • K)

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

7. Declared performance

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

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

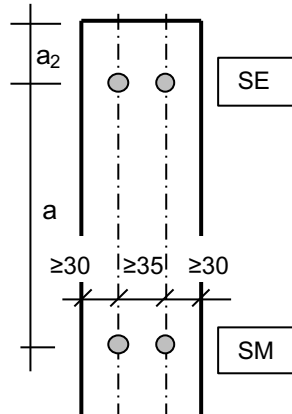
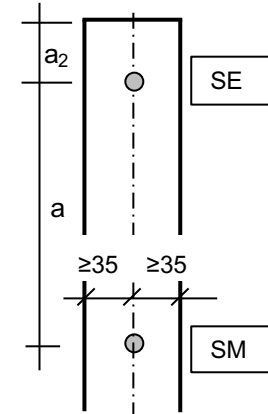
Essential characteristics	Table 3 - Performance - Release of dangerous substances		Harmonised technical specification
	Property	Product specification	
BR3 – Hygiene, health and environment	Dangerous substances	<p>The kit does not contain/release dangerous substances*</p> <p>Formaldehyde concentration 0.0105 mg/ m³. Formaldehyde class E1</p> <p>The used fibres are not potential carcinogenic</p> <p>No biocides are used in the OZEONboards</p> <p>No flame retardant is used in the boards</p> <p>No cadmium is used in the boards.</p>	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.

Essential characteristic	Table 4a - Performance – Design value of the axial load for mechanical fixing ‘Ozeon Durable’ panels Subframe: solid wood					Harmonised technical specification	
	For service class 2 (see ‘Note’) and load-duration class ‘Instantaneous’ [c] (windsuction) For hole diameters fixings see table 6						
	Property	8 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N Middle/ Edge/ Corner	Table in ETA	ETA-16/0705 Issued on 21-09-2016 and EN 14592:2008+ A1:2012 (E)
BR4 – Safety in use	Design value of the axial load $X_d = X_k / \gamma_M$		a fixing	b board			
		screw fixing [a][e] with the use of gaskets	600	600	C18 [d] / C24 [d] : 533 / 241 / 118	6-2 [c]	
		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]	
		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]	
		Rivet fixing [e]	600	600	654 / 309 / 156	6-1 [c]	
[a] with $\alpha \geq 30^\circ$: α is the angle between the screw axis and the grain direction			[d] Strength class EN 338				
[b] see Table 7			[e] for specifications fixings see table 9				
[c] $k_{mod} = 0,90$ 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’ ‘Instantaneous’			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 %.				

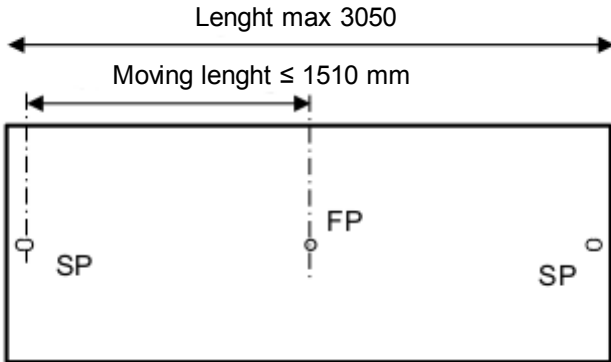
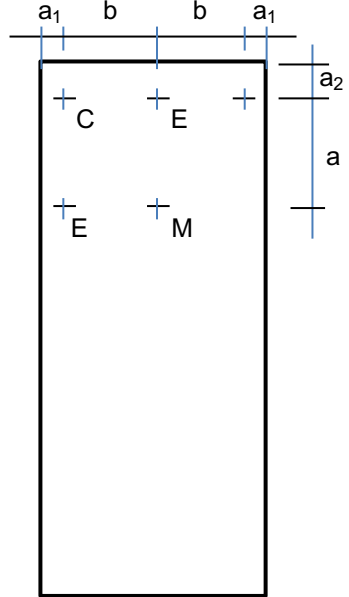
Essential characteristic	Table 4b - Performance – Design value of the axial load for mechanical fixing ‘Ozeon Durable’ panels Subframe: solid wood					Harmonised technical specification	
	For service class 3 (see ‘Note’) and load-duration class ‘Instantaneous’ [c] (windsuction) For hole diameters fixings see table 6						
	Property	8 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N Middle/ Edge/ Corner	Table in ETA	ETA-16/0705 Issued on 21-09-2016 and EN 14592:2008+ A1:2012 (E)
BR4 – Safety in use	Design value of the axial load $X_d = X_k / \gamma_M$		a fixing	b board			
		screw fixing [a][e] with the use of gaskets	600	600	C18 [d] : 462/ 241 / 118 C24 [d] : 496 / 241 / 118	6-2 [c]	
		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]	
		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]	
		Rivet fixing [e]	600	600	654 / 309 / 156	6-1 [c]	
[a] with $\alpha \geq 30^\circ$: α is the angle between the screw axis and the grain direction			[d] Strength class EN 338				
[b] see Table 7			[e] for specifications fixings see table 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).				

Essential characteristic	Table 4c – Performance – Design value of the axial load for mechanical fixing ‘Ozeon Durable’ panels Subframe: solid wood					Harmonised technical specification		
	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 Middle/ Edge/ Corner	Table in ETA	ETA-16/0705 Issued on 21-09-2016 and EN 14592:2008+ A1:2012 (E)	
BR4 – Safety in use	Design value of the axial load $X_d = X_k / \gamma_M$		a fixing	b board				
		screw fixing [a][e] with the use of gaskets	600	600	C18/[d] : 396 / 241 / 118 C24 [d] : 425 / 241 / 118	6-2 [c]		
		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]		
		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]		
		Rivet fixing [e]	600	600	654 / 309 / 156	6-1 [c]		
[a] with $\alpha \geq 30^\circ$: α is the angle between the screw axis and the grain direction			[d] Strength class EN 338					
[b] see Table 7			[e] for specifications fixings see table 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 characteristic	Table 5 - Performance -		Design value of the axial load for mechanical fixing 8 mm 'Durable' strips for bonding purposes For service class 2 (see 'Note') and load-duration class 'Instantaneous' [c] For hole diameters fixings see table 6					Harmonised technical specification	
	Property	8 mm strips [b] in combination with	Span in mm			$X_d = X_k / \gamma_M$ [c] in N		Table in ETA	ETA-16/0705 Issued on 21-09-2016 and EN 14592:2008+ A1:2012 (E)
			a ₂	a fixing	b adhesive ridge	SE: start / end of the strip	SM: Middle of the strip		
BR4 – Safety in use	Design value of the axial load $X_d = X_k / \gamma_M$ [c]	screw fixing and intermediate strips [a][e]	≥ 50	400	600	C18 [d] : 266 C24 [d] : 266	C18 [d] : 425 C24 [d] : 425	6-6 [c]	
		screw fixing and end strips or joint strips [a][e]	≥ 50	400	600	C18 [d] : 124 C24 [d] : 124	C18 [d] : 412 C24 [d] : 412	6-5 [c]	
		nail fixing (32 mm) and intermediate strips [e]	≥ 50	300	600	C18 [d] : 110 C24 [d] : 131	C18 [d] : 110 C24 [d] : 131	6-8 [c]	
		nail fixing (32 mm) and end strips [b][e]	≥ 50	300	600	C18 [d] : 76 C24 [d] : 76	C18 [d] : 110 C24 [d] : 131	6-7 [c]	
	Strips for a wooden subframe :			located on vertical joints			located on end or between joints		
<p>[a] with $\alpha \geq 30^\circ$: α is the angle between the screw axis and the grain direction</p> <p>[b] fixed points in the middle of the length of the strip</p> <p>[c] $k_{mod} = 0,90$ Table 3.1 BS EN 1995-1-1:2004+A1:2008 For serviceclass 2 [NA to BS EN 1995-1-1:2004+A1:2008] External uses where member is protected from direct wetting] and Load-duration class 'Instantaneous' [Table NA.1 NA to BS EN 1995-1-1:2004+A1:2008]</p> <p>[d] Strength class BS EN 338</p> <p>[e] for specifications fixings see table 9</p>									
<p>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 %.</p>									

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

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

Essential characteristic	Table 7 – Performance fixings according to table 4, 5 and 6 with the required edge distances, maximum distances and horizontal installation of boards				Harmonised technical specification
BR4 – Safety in use					
	Fixing type	b _{max}	a _{max}	a ₁	a ₂
	Screw	600	600	≥ 15	≥ 50
	Nail	600	400	≥ 15	≥ 50
	Rivet	600	600	≥ 15	≥ 50
	Adhesive	600	Continuously applied triangular adhesive ridge of 9 mm		
	ETA-16/0705 issued on 21-09-2016				

Essential characteristic	Table 8 – Performance shear strength mechanical fixings				Harmonised technical specification
		Fixing	Failure load	Deformation	
BR4 – Safety in use	Characteristic shear strength mechanical fixings	Screws	1549 N	9 mm	ETA-16/0705 uitgave 22-09-2016
	Average values	Nails	1325 N	15 mm	
		Rivets	1722 N	1.7 mm	

Essential characteristic	Table 9 Specification mechanical fixing			Harmonised technical specification
	Rivet AP14-50180-S	Rink-shank nail	Screw	
	Material EN AW-5019 (AlMg5) according EN 755-2	Stainless steel according EN 10088	Stainless steel according EN 10088	
BR4 – Safety in use	Material number mandrel 1.4541 according EN 10088 Pull-out strength $Z_b = 3920 \text{ N}$ $d^1 = 5$ $d^2 = 14$ $d^3 = 2.75$ $l = 18$ $k = 1.5$	Material number 1.4401 of 1.4578 $d_n = 2.6 - 2.8$ $d_1 = 2.8 - 3.0$ $l_n = 31 - 32.5$ $l_g = 24 - 26$ $D = 5.8 - 6.3$ $H = 0.8 - 1.0$	Material number 1.4401 of 1.4578 $d_s = 3.3 - 3.4$ $d_g = 4.3 - 4.6$ $l = 35 - 1.25$ $b = 26.25 - 28.5$ $D = 9.6 - 0.4$	ETA-16/0705 issued on 22-09-2016

Essential characteristic	Table 10 – Performance Tack - S adhesive and FoamTape - Initial tensile strength					Harmonised technical specification
		Conditions:	Contact surfaces - Rear of the board onto	Characteristic N/mm ¹	Design N/mm ¹	
BR4 – Safety in use	Tack-S adhesive [a] Partial factor for material property $\gamma_M = 4$ (tensile caused by wind load)	-40°C, -20°C, +23°C en +80°C	'ProtectPlus'	$X_k = 6,94 \text{ N/mm}^1$	$X_d = 1,735 \text{ N/mm}^1$	ETA-16/0705 issued on 22-09-2016
			'Colours' code 7Y of 9Y	$X_k = 8,30 \text{ N/mm}^1$	$X_d = 2,075 \text{ N/mm}^1$	
		-20°C, +23°C en +80°C	aluminium	$X_k = 5,92 \text{ N/mm}^1$	$X_d = 1,48 \text{ N/mm}^1$	
	FoamTape	+23°C	'ProtectPlus'	$X_k = X_d = 0,73 \text{ N/mm}^1$		
			'Colours' code 7Y of 9Y	$X_k = X_d = 1,17 \text{ N/mm}^1$		
			aluminium	$X_k = X_d = 0.47 \text{ N/mm}^1$		

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

Essential characteristic	Table 11 – Performance Tack-S adhesive and FoamTape - Initial shear strength						Harmonised technical specification
		Partial factor for material property γ_M	Conditions	Contact surfaces - Rear of the board onto	Characteristic N/mm ¹	Design N/mm ¹	
BR4 – Safety in use	Tack-S adhesive [a]	40 (shear caused by permanent load)	-40°C, -20°C, +23°C and +80°C	'ProtectPlus'	X _k = 7,00 N/mm ¹	X _d = 0,175 N/mm ¹	ETA-16/0705 issued on 22-09-2016
				'Colours' code 7Y of 9Y			
				aluminium			
	FoamTape	20 (shear caused by temporary load)	+23°C	'ProtectPlus'	X _k = 1,00 N/mm ¹	X _d = 0,05 N/mm ¹	
				'Colours' code 7Y of 9Y			
				aluminium			
				X _k = 0,99 N/mm ¹	X _d = 0,05 N/mm ¹		

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

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

Essential characteristic	Table 13 – Performance Impact resistance				Harmonised technical specification
	Impactor		Energy	Category	
BR4 – Safety in use	Hard body	Steel ball 0.5 kg	3 J	III, II and I	ETA-16/0705 issued on 22-09-2016
	Soft body	Ball 3 kg	10 J	IV and III	
	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%	ETA-16/0705 issued on 22-09-2016
	Coefficient of thermal expansion 10^{-6} K^{-1}	$10,9 \cdot 10^{-6}$	$11,0 \cdot 10^{-6}$	
	Coefficient of moisture expansion 42% RH difference after 4 days mm/m	0,293	0,310	

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

Essential characteristic	Table 15 – Resistance to hygro-thermal cycles and Xenon Arc exposure		Harmonised technical specification
		Performance	
Aspects of durability and serviceability	Weerstand tegen hygro-thermische cycli	Pass	ETA-16/0705 issued on 22-09-2016
	Resistance to Xenon Arc exposure EOTA TR010 climate class S (Technical Report 010) 5000 hours artificial weathering	NPD (no performance declared) <i>Explanation:</i> 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 characteristic	Table 16 – Performance Tack-S adhesive: Characteristic tensile strength				Harmonised technical specification
Aspects of durability and serviceability	Immersion in water without UV	Contact surfaces - Rear of the board onto	Performance N/mm ¹		
			21 days	42 daYS	
		'ProtectPlus'	X _k = 2,80 N/mm ¹	X _k = 2,22 N/mm ¹	ETA-16/0705 issued on 22-09-2016
		'Colours' code 7Y of 9Y			
		aluminium	X _k = 3,12 N/mm ¹	X _k = 2,58 N/mm ¹	

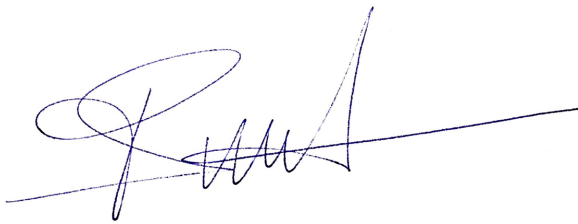
[a] For the partial load factor: $\gamma_F = 1.5$ shall be taken

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

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



Landgraaf, The Netherlands
23-05-2023

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