ROCKWOOL B.V. / ROCKPANEL Group
Konstruktieweg 2
NL-6045 JD Roermond
Netherlands
www.rockpanel.com

DECLARATION OF PERFORMANCE

No. ***0764-CPR-0249 – DK - english – vs01***

1. Unique identification code of the product-type:

ROCKPANEL PLY 6 mm, 8 mm and 10 mm supplied with a primer coating

2. Intended use / es:

External cladding for walls, fascias, soffits and ceilings

3. Manufacturer:

ROCKWOOL B.V. / ROCKPANEL Group
Konstruktieweg 2
NL-6045 JD Roermond, Netherlands
Tel. +31 475 353 000
Fax +31 475 353 550

4. System or systems of AVCP (assessment and verification of constancy of performance of the construction product) as set out in Annex V (amended by : OJ L 157, 27.5.2014, p. 76–79)

System 1

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 2015.

European Technical Assessment: ETA-13/0019 of 2015-11-03

Technical Assessment Body: ETA-Danmark A/S
Göteburg Plads 1, DK-2150 Nordhavn, Denmark
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, Germany
Notified Body 0764
Tel. +49 511 762 3104
Fax +49 511 762 4001
Internet www.mpa-bau.de/

and issued: **Certificate of Constancy of performance No. 0764 - CPR – 0249**

6. Characteristics of the product

The ROCKPANEL PLY panels are surface treated with a four-layer water-borne polymer emulsion primer on one side, in a grey colour.

The physical properties of **ROCKPANEL PLY** 6 mm, 8 mm and 10 mm are indicated below:

- thickness 6 ± 0,3 mm, 8 ± 0,5 mm, 10 ± 0,5 mm
- length, max 3050 mm
- width, max 1250 mm
- density nominal 1000 kg/m³
- bending strength length and width f_{05} ≥ 15 N/mm²
- Modulus of Elasticity m(E) = 3065 N/mm²
- Thermal conductivity 0,35 W/(m·K)

Clause 7 contains the performances of ROCKPANEL PLY 6 mm, 8 mm and 10 mm.

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 PLY boards					ETA-13/0019 issued 2015-11-03 EN 13501-1:2007+A1:2009
	Fixing method	Ventilated or non-ventilated	vertical wooden subframe PLY in the thicknesses			
			6 mm	8 mm	10 mm	
	mechanically fixed	Non-ventilated. Cavity filled with mineral wool	**B-s2,d0** closed 6 mm horizontal joint			
		Ventilated with EPDM gasket on the battens [a]		**B-s2,d0** open 6 mm horizontal joint		
		Ventilated with 6 mm ROCKPANEL PLY strips on the battens [b]	**B-s2,d0** open 6 mm horizontal joint			
	[a] width of the gasket 15 mm at both sides wider than the batten [b] width of the strip 15 mm at both sides 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 to a wooden sub-frame
- The panels are backed with min. 50 mm mineral wool insulation with density 30-70 kg/m³ according to EN 13162 with a cavity between the panels and the insulation (mechanically fixed)
- The boards are backed with min. 40 mm mineral wool insulation with density 30-70 kg/m³ according to EN 13162 without a cavity between the back of the board and the insulation behind the sub-frame (mechanically fixed – non ventilated)

Substrates:
- Concrete walls, masonry walls

Insulation:
- Ventilated constructions: The battens are backed with min. 50 mm mineral wool insulation with density 30-70 kg/m³ according to EN 13162 with a cavity of min. 28 mm between the panels and the insulation
- Non-ventilated constructions: The panels are backed with min. 40 mm mineral wool with density 30-70 kg/m³ according to EN 13162 between the battens and min. 50 mm with density 30-70 kg/m³ behind the battens without a cavity
- 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
- The test result of a test with mineral wool insulation shall be valid, without test, for the same type of panel used without insulation, if the substrate chosen according to EN 13238 is made of panel with Euro-class A1 or A2 (e.g. fibres-cement panel).

Sub-frame:
- 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
- Test results are also valid for the same type of panel with vertical LVL battens, without fire retardant treatment, thickness minimum 27 mm

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 nominal density of 30-70 kg/m^3
- 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 of the subframe

Joints:
- Vertical joints are with an EPDM foam gasket backing *(Celdex EPDM Soft EP-4530)* 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)
- Test results are also valid for higher thicknesses of ROCKPANEL strips
- Test results are also valid in the case of using ROCKPANEL strips instead of EPDM foam gaskets
- 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 6 mm, individual tolerances ± 0.3 mm
- Nominal 8 mm, individual tolerances ± 0.5 mm
- Nominal 19 mm, individual tolerances ± 0.5 mm

Density:
- Nominal 1000 kg/m^3

Essential characteristics	***Table 2*** *- Performance - Water vapour permeability and water permeability*		*Harmonised technical specification*
	Property	*Declared values*	
BR3 – Hygiene, health and environment	Water vapour permeability	PLY 6, 8 and 10 mm: s_d = 1,2 m at 23°C and 85 %RH The designer shall consider the relevant needs for ventilation, heating and insulation to minimise condensation in service.	ETA-13/0019 issued 2015-11-03 EN ISO 12572 test condition B
	Water tightness of joints	NPD No performance determined	ETA-13/0019 issued 2015-11-03

Essential characteristics	***Table 3*** *- Performance - Release of dangerous substances*		*Harmonised technical specification*
	Property	*Product specification*	
BR 3 – Hygiene, health and environment	Content, emission and/or release of dangerous substances	Use category: Outdoor S/W2 The kit does not contain/release dangerous substances specified in TR 034, dated April 2013*), except Formaldehyde concentration 0,0105 mg/m^3 Formaldehyde class E1 The used fibres are not potential carcinogenic No biocides are used in the ROCKPANEL boards No flame retardant is used in the boards No cadmium is used in the boards.	ETA-13/0019 issued 2015-11-03

*) 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* ***6 mm*** *'PLY' boards* *For service class* ***2*** *(see 'Note') and load-duration class* ***'Instantaneous'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*	
	Property	6 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N		*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner			
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	400	400	C18 / C24 [d]: 204 / 104 / 58		A1 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		screw fixing [a][e] with the use of 6 mm ROCKPANEL strips	400	400	C18 / C24 [d] : 204 / 104 / 58		A2 [c]	
		nail fixing (32 mm) [e] with the use of gaskets	300	400	C18 / C24 [d] : 100 / 67 / 64		B1 [c]	
		nail fixing (40 mm) [e] with the use of ROCKPANEL strips 6 mm	300	400	C18 / C24 [d] : 100 / 67 / 64		B2 [c]	

[a] with $\alpha \geq 30°$: α *is the angle between the screw axis and the grain direction*	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 1,10 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1 DK NA:2010; For 'service class' ***2*** *["ventilated structures protected against precipitation"] and 'load-duration class'* ***'Instantaneous'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §2.3.1.3 (3)P):* ***Service class 2 -*** *"ventilated structures protected against precipitation, e.g. ventilated roof structures". EN 1991-1-1: 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* ***6 mm*** *'PLY' boards* *For service class* ***3*** *(see 'Note') and load-duration class* ***'Instantaneous'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	6 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	400	400	C18 / C24 [d] : 204 / 104 / 58	A1 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		screw fixing [a][e] with the use of 6 mm ROCKPANEL strips	400	400	C18 / C24 [d] : 204 / 104 / 58	A2 [c]	
		nail fixing (32 mm) [e] with the use of gaskets	300	400	C18 / C24 [d] : 100 / 67 / 64	B1 [c]	
		nail fixing (40 mm) [e] with the use of ROCKPANEL strips 6 mm	300	400	C18 / C24 [d] : 100 / 67 / 64	B2 [c]	

[a] with $\alpha \geq 30°$: α *is the angle between the screw axis and the grain direction*	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 0,90 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1DK NA:2010; For 'service class' ***3*** *["External uses fully exposed"] and 'load-duration class'* ***'Instantaneous'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §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* ***6 mm*** *'PLY' boards* *For service class* ***2*** *(see 'Note') and load-duration class* ***'Permanent'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	6 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	400	400	C18 / C24 [d] : 204 / 104 / 58	A1 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		screw fixing [a][e] with the use of 6 mm ROCKPANEL strips	400	400	C18 / C24 [d] : 204 / 104 / 58	A2 [c]	
		nail fixing (32 mm) [e] with the use of gaskets	300	400	C18 / C24 [d] : 100 / 67 / 64	B1 [c]	
		nail fixing (40 mm) [e] with the use of ROCKPANEL strips 6 mm	300	400	C18 / C24 [d] : 100 / 67 / 64	B2 [c]	

[a] with $\alpha \geq 30°$: α *is the angle between the screw axis and the grain direction*	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 0,60 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1 DK NA: 2010; For 'service class' ***2*** *["Ventilated structures protected against precipitation"] and 'load-duration class'* ***'Permanent'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §2.3.1.3 (3)P):* ***Service class 2*** *– "ventilated structures protected against precipitation, e.g. ventilated roof structures". EN 1995-1-1: In service class 2 the average moisture content in most softwoods will not exceed 20 %.*

Essential characteristic	***Table 4d*** *- Performance - Design value of the axial load for mechanical fixing* ***8 mm*** *'PLY' boards* *For service class* ***2*** *(see 'Note') and load-duration class* ***'Instantaneous'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	8 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	500	500	C18/C24[d]: 321 / 215 / 111	A3 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		nail fixing (32 mm) [e] with the use of gaskets	400	500	C18/C24[d]: 88 / 106 / 97	B3 [c]	

[a] with $\alpha \geq 30°$: α is the angle between the screw axis and the grain direction	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 1,10 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1 DK NA:2010; For 'service class' ***2*** *["ventilated structures protected against precipitation"] and 'load-duration class'* ***'Instantaneous'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §2.3.1.3 (3)P):* ***Service class 2 -*** *"ventilated structures protected against precipitation, e.g. ventilated roof structures". EN 1991-1-1: In service class 2 the average moisture content in most softwoods will not exceed 20 %.*

Essential characteristic	***Table 4e*** *- Performance - Design value of the axial load for mechanical fixing* ***8 mm*** *'PLY' boards* *For service class* ***3*** *(see 'Note') and load-duration class* ***'Instantaneous'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	8 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	500	500	C18/C24 [d] : 321 / 215 / 111	A3 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		nail fixing (32 mm) [e] with the use of gaskets	400	500	C18/C24 [d] : 88 / 106 / 97	B3 [c]	

[a] with $\alpha \geq 30°$: α is the angle between the screw axis and the grain direction	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 0,90 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1DK NA:2010; For 'service class' ***3*** *["External uses fully exposed"] and 'load-duration class'* ***'Instantaneous'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §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 4d).*

Essential characteristic	***Table 4f*** *- Performance - Design value of the axial load for mechanical fixing* ***8 mm*** *'PLY' boards* *For service class* ***2*** *(see 'Note') and load-duration class* ***'Permanent'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	8 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	500	500	C18/C24 [d] : 321 / 215 / 111	A3 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		nail fixing (32 mm) [e] with the use of gaskets	400	500	C18 [d] : 77 / 77 / 77 C24 [d] : 88 / 93 / 93	B3 [c]	

[a] with $\alpha \geq 30°$: α *is the angle between the screw axis and the grain direction*	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 0,60 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1 DK NA: 2010; For 'service class' ***2*** *["Ventilated structures protected against precipitation"] and 'load-duration class'* ***'Permanent'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §2.3.1.3 (3)P):* ***Service class 2*** *– "ventilated structures protected against precipitation, e.g. ventilated roof structures". EN 1995-1-1: In service class 2 the average moisture content in most softwoods will not exceed 20 %.*

Essential characteristic	***Table 4g*** *- Performance - Design value of the axial load for mechanical fixing* ***10 mm*** *'PLY' boards* *For service class* ***2*** *(see 'Note') and load-duration class* ***'Instantaneous'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	10 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	600	600	C18/C24 [d]: 249 / 223 / 119	A4 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		nail fixing (40 mm) [e] with the use of gaskets	500	600	C18/C24 [d] : 78 / 66 / 64	B4 [c]	

[a] with $\alpha \geq 30°$: α *is the angle between the screw axis and the grain direction*	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 1,10 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1 DK NA:2010; For 'service class' ***2*** *["ventilated structures protected against precipitation"] and 'load-duration class'* ***'Instantaneous'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §2.3.1.3 (3)P):* ***Service class 2 -*** *"ventilated structures protected against precipitation, e.g. ventilated roof structures". EN 1991-1-1: In service class 2 the average moisture content in most softwoods will not exceed 20 %.*

Essential characteristic	***Table 4h*** *- Performance - Design value of the axial load for mechanical fixing* ***10 mm*** *'PLY' boards* *For service class* ***3*** *(see 'Note') and load-duration class* ***'Instantaneous'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	10 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	600	600	C18/C24 [d] : 249 / 223 / 119	A4 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		nail fixing (40 mm) [e] with the use of gaskets	500	600	C18/C24 [d] : 78 / 66 / 64	B4 [c]	

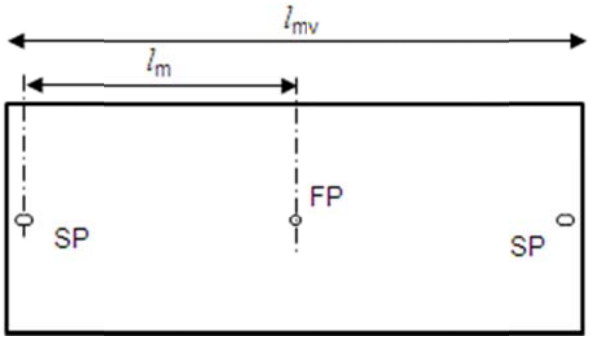
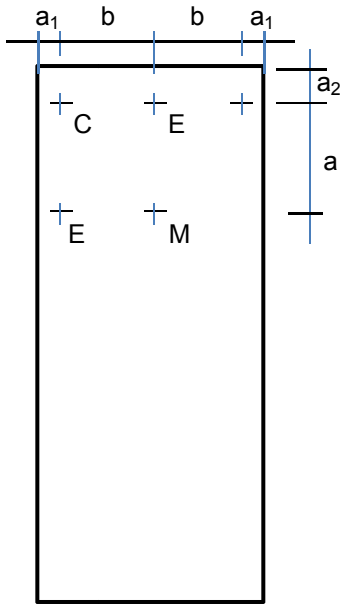
[a] with $\alpha \geq 30°$: α is the angle between the screw axis and the grain direction	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 0,90 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1DK NA:2010; For 'service class' ***3*** *["External uses fully exposed"] and 'load-duration class'* ***'Instantaneous'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §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 4g).*

Essential characteristic	***Table 4i*** *- Performance - Design value of the axial load for mechanical fixing* ***10 mm*** *'PLY' boards* *For service class* ***2*** *(see 'Note') and load-duration class* ***'Permanent'*** *[c]* *For hole diameters fixings see Table 5*						*Harmonised technical specification*
	Property	10 mm boards	Span in mm [b]		$X_d = X_k / \gamma_M$ in N	*Table in ETA*	
			a fixing	b board	Middle / Edge / Corner		
BR 4 – Safety in use	**Design** value of the axial load $X_d = X_k / \gamma_M$	**screw** fixing [a][e] with the use of gaskets	600	600	C18/C24 [d] : 249 / 223 / 119	A4 [c]	ETA-13/0019 issued 2015-11-03 EN 14592:2008+A1:2012 (E)
		nail fixing (40 mm) [e] with the use of gaskets	500	600	C18/C24 [d] : 78 / 66 / 64	B4 [c]	

[a] with $\alpha \geq 30°$: α is the angle between the screw axis and the grain direction	*[d] Strength class EN 338*
[b] see Table 6	*[e] for specifications fixings see Table 8*
[c] k_{mod} = 0,60 in accordance with Table 3.1 – 'Values of k_{mod} ' DS/ EN 1995-1-1 DK NA: 2010; For 'service class' ***2*** *["Ventilated structures protected against precipitation"] and 'load-duration class'* ***'Permanent'*** *[Table 2.2 DS/ EN 1995-1-1 DK NA:2010-05]*	*Note (according to DS/ EN 1995-1-1 NA:2010-05 §2.3.1.3 (3)P):* ***Service class 2*** *– "ventilated structures protected against precipitation, e.g. ventilated roof structures". EN 1995-1-1: In service class 2 the average moisture content in most softwoods will not exceed 20 %.*

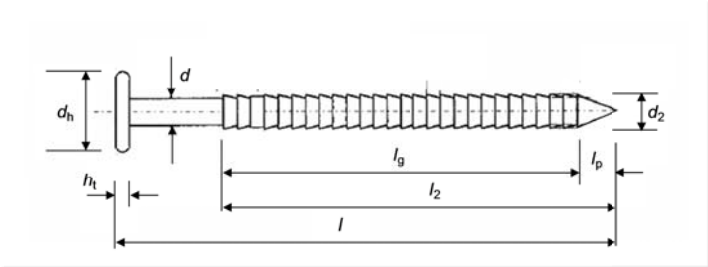
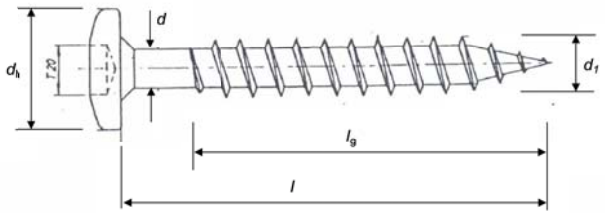
Essential characteristic	***Table 5** – Performance mechanical fixings : hole diameters for 'Durable' boards*					*Harmonised technical specification*
	Fixing type [a]	Fixed hole	Moving hole	Slotted hole	Board dimension considered	
BR4 – Safety in use	Screw	3,2	5,5	4,4 * 5,5	1200 * 3050	ETA-13/0019 issued 2015-11-03, Table 10
	Nail	2,5	4,0	2,8 * 4,0	1200 * 2300 [b]	

[a] for specifications fixings see table 8
[b] a larger panel length requires a larger hole and head diameter

Essential characteristic	***Table 6** – Performance fixings according to table 4 and 5 with the required edge distances, maximum distances and fixing method*	*Harmonised technical specification*
BR4 – Safety in use	 l_{mv} : 'moving length' ⩽ 1510 mm l_m : length max 3050 mm fixed hole FP and slotted holes SP in the middle of the vertical part of the board. All other positions: moving points Fixing positions concerning loads M: fixing in intermediate position E: edge fixing C: corner fixing 	ETA-13/0019 issued 2015-11-03, Table 9, 10 and 11

Fixing type	b_{max}			a_{max}			a_1		a_2
	6	8	10	6	8	10	6 / 8	10	6/8/10
Screw	400	500	600	400	500	600	≥ 15	20	≥ 50
Nail	400	500	600	300	400	500	≥ 15	20	≥ 50

Essential characteristic	***Table 7** – Performance shear strength mechanical fixings*					*Harmonised technical specification*
		Fixing	Failure load			
			6 mm	8 mm	10 mm	
BR4 – Safety in use	Characteristic shear strength mechanical fixings - Average values	Screw	1160 N	1162 N	1406 N	ETA-13/0019 issued 2015-11-03
		Nail	900 N	863 N	935 N	

Essential characteristic	***Table 8** - Specifications mechanical fixings*		*Harmonised technical specification*
	Ring-shank nail 2,7/2,9 x 32 and 2,7/2,9 x 40 mm Stainless steel in accordance with EN 10088 Material number 1.4401 or 1.4578	Torx screws 4,5 x 35 mm Stainless steel in accordance with EN 10088 Material number 1.4401 or 1.4578	
BR4 – Safety in used			ETA-13/0019 issued 2015-11-03, Table 3 and 4
	l for nail 32 = 31 – 32,5 l for nail 40 = 39 – 40,5 l_2 for nail 32 = 24 – 26 l_2 for nail 40 = 32 – 34 d = 2,6 – 2,8 d_2 = 2,8 – 3,0 l_p ≤ 4,8 l_g = l_2 - l_p d_h = 5,8 – 6,3 h_t = 0,8 – 1,0	l = 35 -1,25 l_g = 26,25 – 28,5 d = 3,3 – 3,4 d_1 = 4,3 – 4,6 d_h = 9,6 - 0,4	

Essential characteristic	***Table 9** – Performance Impact resistance*				*Harmonised technical specification*
	Impactor		Energy	Category	
BR4 – Safety in use	Hard body	Steel ball 0,5 kg	1 J	IV	ETA-13/0019 issued 2015-11-03 , Table 5
			3 J	III, II and I	

Essential characteristic	***Table 10** – Performance dimensional stability*			*Harmonised technical specification*
		Length	Width	
BR4 – Safety in use	Cumulative dimensional change *[a]*	0,068%	0,065%	ETA-13/0019 issued 2015-11-03
	Dry heat 23°C / 50% to 23°C / 0% (mm/m)	-0,284	-0,239	
	Coefficient of thermal expansion (10^{-6} °K^{-1})	9,4	10,1	
	Coefficient of moisture expansion 42% RH (mm/m) 50% to 92% RH after 4 days	0,237	0,244	

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

Essential characteristic	***Table 11** – Resistance to hygro-thermal cycles and Xenon Arc exposure*		*Performance*	*Harmonised technical specification*
Aspects of durability and serviceability	Resistance to Hygro-thermal cycles		Pass	ETA-13/0019 issued 2015-11-03
	Resistance to Xenon Arc exposure *EOTA TR010 climate class S (Technical Report 010)* 5000 hours artificial weathering	Finish primer coating	Not relevant (NPD)	

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:

ROCKWOOL B.V.
W.J.E. Dumoulin
Technical Director Operations DE-NL

At Roermond, The Netherlands on 25th January 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*