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European Technical Assessment



English translation prepared by IETcc. Original version in Spanish language

General part

Technical Assessment Body issuing the European Technical Assessment: Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc)				
Trade name of the construction product	NATURCLAD-W exposed fixing and hidden fixing			
Product family to which the construction product belongs	Kits for external wall claddings mechanically fixed			
Manufacturer	PARKLEX PRODEMA INT. S.L.U. B° de San Miguel, 9. 20250 LEGORRETA (Guipuzkoa) España website: <u>www.parklexprodema.com</u>			
Manufacturing plant(s)	PARKLEX PRODEMA INT. S.L.U. B° de San Miguel, 9. 20250 LEGORRETA (Guipuzkoa) España			
This European Technical Assessment contains	23 pages including 4 Annexes, which form an integral part of this assessment. Annex D contains confidential information and is not included in the ETA when is publicly available			
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 090062-00-0404. Ed. July 2018. Kits for external wall claddings mechanically fixed			

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SPECIFIC PART

1. Technical description of the product

The assessed kits for ventilated external wall claddings mechanically fixed "NATURCLAD-W exposed fixing and hidden fixing" are-classified as family A (exposed fixing) and B (hidden fixing), according to table 1.1 of EAD 090062-00-0404: Kit for external wall claddings mechanically fixed, edition July 2018 (hereinafter EAD 090062-00-0404).

Kits components are defined in table 1; they are factory produced by the ETA holder or a supplier.

	TABLE 1 – DEFINITION OF THE KITS COMPONENTS					
	Components		M	aterial		Sizes [mm]
Cladding element	HPL compact panels for exterior NATURCLAD-W S and NATURCLAD-W F ⁽¹⁾ produced by PARKLEX PRODEMA INT. S.L.U. Respectly EDS ⁽²⁾ and EDF ⁽³⁾ quality and CE marking ⁽⁴⁾ according to Annex ZA of the EN 438- 7:2005 ⁽⁵⁾	High-density, no porous and homogeneous stratified timber panels (figure 4) for external use.			2440 x 1220	6 ⁽⁶⁾ 8 0 x 10 12 14
			Timber subfr.	Stainless steel A2 self-drilling screw	TW-S-D12 Ø 4.8	L=38 (e _{panel} ≤10mm)
		EXPOSED FIXINGS	Alum.	Aluminium AlMg5/ Stainless steel A2 rivet	AP 16 Ø 5	L= epan+eperf+Øcuerpo
			subfr.	Stainless steel	SX3-L12 Ø	L= 28 (e _{panel} ≤10mm)
				self-drilling screw	5,5	L= 38 (e _{panel} >10mm)
Cladding	Elements used to secure the			Stainless steel A2	TB A2	L=11.5 (e _{panel} = 10)
fixings (7)	cladding elements to the			self-drilling screws	1X30 Ø 6	L=14.5 (e _{panel} >10mm)
	subtrame	HIDDEN FIXINGS (10)	Alum. subfr.	Extr. alum. AW 6063 T5 Hanging hook	68.50 x 38 x 50 (th=5)	
				Extr. alum. AW 6063 T5 Horiz. rail	31 x 60 x L (th=3.3)	
				Stainless steel A2 adjustment screw	Ø 8 L=25	
				Stainless steel A2 self- drilling screws (for fix point)	Ø 5.5 L=19.25	
	Vertical elements ⁽¹¹⁾ used to fasten on the cladding elements by cladding fixings	EXPOSED FIXINGS	Timber subfr.	Wood ⁽¹²⁾ batten	Between 2 panels	80 x 40
					Intermed. support	40 x 40
		EXPOSED/ HIDDEN FIXINGS	Alum. subfr.	Extruded Aluminium AW 6063 T5 ⁽¹³⁾ profile	Between 2 panels	"T" 80 x 60 (t= 2.5)
Subframe					Intermed. support	"L" 40 x 60 (t= 2.5)
	Metallic elements (wall	EXPOSED FIXINGS	Timber subfr.	Bended Galvanized steel DX51D – Z275 brackets	L x 50 x 60 (L= 40-160	(t= 2.5)
	transmission between the kit for	EXPOSED/	Alum	Extr. alum. AW 6060 T5 Supporting bracket	150 x 40 x L	. (t= 3)
	external wall claddings and the	HIDDEN	subfr	Extr. alum AW 6060 T5	80 x 40 x L ((t= 3)
		FIAINGS		Retention bracket	L= 40-160	
Subframe	Screws between brackets and	EXPOSED FIXINGS	Timber subfr	Hot galvanized hardened steel self-drilling screw	HEX 13 SH	Ø 7 L=50
fixings ⁽⁷⁾	vertical elements and horizontal profiles and vertical element ⁽¹⁵⁾	EXPOSED/ HIDDEN FIXINGS	Alum. subfr	Stainless steel A2 self-drilling screw	Ø 5.5 L=25	
Ancillary components ⁽⁷⁾	Tape used to form the joints	EXPOSED FIXINGS	Timber subfr.	Ethylene propylene diene monomer (<i>EPDM</i>)	W=60-100	
Auxiliary components ⁽⁷⁾	Anchorage to substrate ⁽¹⁶⁾	-			-	

⁽¹⁾ Dimensional features, physical - mechanical and weather resistance properties in Annex 1

- (11) Geometric and mechanical features in Annex B and figure 6.
- (12) Technical specifications in Annex B.

(16) See Annex C.

⁽²⁾ Panels for exterior use, severe conditions, standard.

⁽³⁾ Panels for exterior use, severe conditions, fire-retardant

 ⁽⁴⁾ EDS panels – Declaration of Performance 2013071201; EDF panels – Declaration of Performance 2013071202; Certificate of Constancy of Performance 1239/CPR/0801106

⁽⁵⁾ EN 438-7:2005 "High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (Usually called Laminates) - Part 7: Compact laminate and HPL composite panels for internal and external wall and ceiling finishes"

⁶ mm thickness is available only for NATURCLAD W S (EDS) (6) (7) Not manufactured by PARKLEX PRODEMA INT. S.L.U.

⁽⁸⁾ See Annex 2

⁽⁹⁾ All the thickness (6 mm to 14 mm) of panels are allowed with exposed fixings (10) Only 10mm, 12mm and 14mm thickness of panels are allowed with hidden fixings

⁽¹³⁾ Physical and mechanical properties in Annex B.

⁽¹⁴⁾ Geometric and mechanical features in Annex B and figure 5.

⁽¹⁵⁾ Geometric and mechanical features in Annex B.

When referring to NATURCLAD W in this document it should be understood that both, Standard (S) and Fire Retardant (F) grade are meant.

2. Specification of the intended use in accordance with the applicable EAD

2.1 Intended use

"NATURCLAD-W" kits (exposed and hidden fixing) are intended to be used for ventilated external wall claddings which can be fixed to the external wall of new or existing buildings.

The substrate walls are made of masonry (bricks or blocks), concrete (cast on site or as prefabricated panels), timber or metal frame. Insulation material is defined in accordance with an EN standard or an ETA and is not manufactured by PARKLEX PRODEMA INT. S.L.U.

Kit for ventilated external wall claddings is non-load-bearing construction system. It does not contribute to the stability of the wall on which is installed, neither to ensure the air tightness of the building structure but it can contribute to durability of the works by providing enhanced protection from the effect of weathering.

2.2 Relevant general conditions for the use of the kit

The provisions made in this European Technical Assessment, according to the EAD, are based on an assumed working life of 25 years as minimum, provided that the conditions lay down for the installation, packaging, transport and storage as well as appropriate use, maintenance and repair are met.

The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

2.3 Design of kit

The design of the external wall cladding system for ventilated façade using "NATURCLAD-W exposed fixing and hidden fixing" kits should take into account:

- The substrate material to define the suitable anchorages, assuming that the substrate meets the mechanical requirements (resistance to static and dynamic actions) and ensures airtightness, watertightness and water vapour permeability.

- The mechanical characteristic values of the kit components (e.g. cladding elements, cladding fixings and subframe) and the cladding or external wall elements in order to resist the actions (dead loads, wind loads, etc.) applying on the specific work. National safety factor must be used.

- The possible movements of the substrate and the position of the building expansion joints.
- The dilatation of the kit components and of the panels.
- The category of corrosivity of the atmosphere of the works ⁽¹⁷⁾.

- Because joints are not watertight, materials with low water absorption must be used as first layer behind ventilated air space.

- Insulation layer, usually fixed on the external wall should be defined in accordance with a harmonized standard or a European technical assessment.

- The construction of façade specific parts (e.g. base, top, corners, windows etc.)

- If the entire building must comply with the specific building regulations, particularly concerning fire and wind-load resistances, of the Member State where the work is to be built.

2.4 Installation of kit in works

Installation has to be carried out according to the ETA holder's specifications and using the specific kit components, manufactured by the ETA holder or by suppliers recognized by the ETA holder. Installation should be carried out by professional, trained staff and under the supervision of the technical responsible of the site.

2.5 Use, maintenance and repair of the works

Maintenance of the assembled systems or kit components includes inspections on site, taking into account the following aspects:

⁽¹⁷⁾ E.g. see table 1 of Standard EN ISO 12944-2: 2018. Paints and varnishes. Corrosion protection of steel structures by protective paint systems. Part 2: Classification of environments.

- Regarding the cladding elements appearance of any damage such as cracking or detachment due to permanent and irreversible deformation.
- Regarding metallic components: presence of corrosion or water accumulation.

Necessary repairs should be done rapidly, using the same kit components and following the repair instructions given by ETA holder.

3. Performance of the product and references to the methods used for its assessment

The assessment of "NATURCLAD-W exposed fixing and hidden fixing" kits according to the Basic Work Requirements (BWR) was carried out in compliance with the EAD 090062-00-0404. The characteristics of the components shall correspond to the respective values laid down in the technical documentation of this ETA, checked by IETcc.

TABLE 2 – SUMMARY OF NATURCLAD-W KITS PERFORMANCE						
Basic Works Requirement	N٥	Essential characteristic		ETA section	Performance	ce
		Described to fine	Describes to fin		NATURCLAD-W S C-s1, d0 (t ≥ 6 mm)	
BWR 2	1	Reaction to fire		3.1	NATURCLAD-W F B-s	1, d0 (t ≥ 8 mm)
Safety in case of	2	Façade fire performa	ince		Not asses	sed
	3	Propensity to underg smouldering	jo continuous		Not asses	sed
	4	Watertightness of joi driving rain)	nts (protection against	3.2	Not watertight (o	pen joints)
BWR 3	5	Water absorption			Not relevant (use in ver	ntilated façades)
Hygiene, health and	6	Water vapour perme	ability		Not relevant (use in ver	ntilated façades)
the environment	7	Drainability		3.3	See § 3.3 and figu	res 13 to 19
	8	Content and/or relea substances	se of dangerous		Not asses	sed
	9	Wind load resistance)	3.4	Exposed f. / wood subframe	3000 Pa
					Exposed f. / aluminium subframe	4000 Pa
					Hidden fixing	3400 Pa
	10 Resistance to horizontal point loads			Not assessed		
	11	Impact resistance		3.5	Exposed f. / wood subframe	Category I
					Exposed f. / aluminium subframe	Category I
					Hidden fixing	Category I
BWR 4	12	Mechanical resistance of cladding elements	Bending strength of cladding element	3.6	See § 3.6	
Safety and accessibility in use	15		Pull-through resistance	3.7	Exposed fixing	See table 5
	16	Mechanical resistance of connection between	Pull-through resistance under shear loads	3.8	Exposed f. / wood subframe Exposed f. / aluminium subframe	See table 6
	17	the cladding	Axial tension resistance	3.9	Hidden fixing	See table 7
	18	cladding fixing	Shear load resistance	3.10	Hidden fixing	See table 8
	19		Combined tension and shear load resistance	3.11	Hidden fixing	See table 9
	24	Resistance of profile	esistance of profile ubframe fixings Tension/pull out resistance		See § 3.12 and annex B	
	25	Subframe fixings			Not assessed	
	26	Due elucto un cisto uno	Shear load resistance		Not assessed	
	21	Airborno cound incul	(norizontal and vertical)	3.13	See tables 10	
BWR 5 Protection against noise	20	Airbonne sound insui	all011		NOT ASSES	seu
BWR 6 Energy economy and heat retention	29	Thermal resistance	hermal resistance		Thermal insulatior compone	n is not a kit ent

In table 2 a summary of "NATURCLAD-W exposed fixing and hidden fixing" kits performance.

	30	Hygrothermal behaviour	3.14	Exposed f. / aluminium subframe and Hidden fixing	None of the defects specified in EAD were observed
	31	Behaviour after pulsating load	3.15	Hidden fixing	See table 12
	32	Freeze-thaw resistance of cladding element	3.16	Exposed f. / aluminium subframe	See table 13
D				Hidden fixing	See table 14
Durability 33 Beha		Behaviour after immersion in water of cladding element	3.17	Exposed f. / aluminium subframe	See table 15
				Hidden fixing	See table 16
	34	Dimensional stability	3.18	See table	: 17
	35	Chemical and biological resistance of the cladding elements		Not assessed	
	36	UV radiation resistance of the cladding elements	3.19	See § 3.	19
	37	Corrosion of metal components	3.20	See § 3.	20

3.1 Reaction to fire – BWR 2

The Euro class of NATURCLAD-W panels according to standard EN 13501-1:2018⁽¹⁸⁾ is:

NATURCLAD-W S (EDS)	C-s1, d0	(thickness≥ 6 mm)
NATURCLAD-W F (EDF)	B-s1, d0	(thickness≥ 8 mm)

This classification is valid for the NATURCLAD-W S and F. Mentioned products are high pressure compact laminates available in thicknesses from 6 mm to 14 mm (EDS grade) and 8 mm to 14 mm (EDF grade). The products are produced and tested in accordance with EN 438-7:2005. The reaction to fire declaration is valid as long as the insulation layer placed in the ventilated air space is made of a non-combustible material (e.g. mineral wool) or there is no insulation in the cavity and the substrate are wood based substrates or are substrates of Euro classes A1 and A2-s1,d0.

In other cases, the class of reaction to fire is NPA (No performance assessed).

A European reference fire scenario has not been laid down for facades. In some Member States, the classification of external wall cladding kits according to Standard EN 13501-1 might not be sufficient for the use in facades. An additional assessment of the system according to the national provision (e.g. based on a large-scale test) might be necessary to comply with Member State Regulations, until the existing European classification system has been completed.

3.2 Watertightness of joints (protection against driving rain) – BWR 3

Joints between the cladding elements in the external wall claddings for ventilated façades are open, therefore NATURCLAD-W kits are not watertight⁽¹⁹⁾.

3.3 Drainability – BWR 3

On the basis of the construction details (see figures 13 to 19), the available technical knowledge, experience and the installation criteria, it is considered that the water which penetrates into the air space or the condensation water can be drained out from the cladding kit without accumulation of water, moisture damage or leakage into the substrate.

3.4 Wind load resistance – BWR 4

Wind load resistance has been tested according to § 2.2.9 and the method specified in Annex E of EAD. The kit behaviour exposed to wind pressure is most favourable than when exposed to wind suction. Therefore, wind pressure tests have been avoided and wind pressure resistance of kit can be considered as equal to wind suction resistance.

⁽¹⁸⁾ EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests (19) Even if the joint are open the ventilated façade does not decrease the protection against rain, because the ventilation gap functions as a compensation room, which ensures that, in a worst-case scenario, driving rain is drained over the back of the cladding, protecting the thermal insulation from wetness. So any moisture that might enter the ventilated space between insulating material and cladding can easily be removed.

The worst case has been tested⁽²⁰⁾: minimum thickness admitted for the kit, maximum span between cladding fixings and subframe components.

a. NATURCLAD-W exposed fixing (family A)

Cladding elements 6 mm (minimum thickness allowable for exposed fixing NATURCLAD-W kit) Fixings Maximum distance between cladding fixings in horizontal direction H=400mm. Maximum distance between cladding fixings in vertical direction V=400mm in panel with 2 vertical fixings and V=600 mm in panel with 3 vertical fixings.

The test results for the tested specimens are indicated in table 3.

TABLE 3 – WIND SUCTION TEST RESULT					
TEST SPECIMEN	MAXIMUM LOAD Q (Pa)	TYPE OF FAILURE	DISPLACEMENT UNDER MAXIMUM LOAD (mm)		
NATURCLAD-W exposed fixing Wood subframe Brackets distance: 800mm Vertical profile distance 400mm	3200 ⁽²¹⁾	No failure	13.11		
NATURCLAD-W exposed fixing Aluminum subframe Brackets distance: 800mm Vertical profile distance 400mm	4000 ⁽²²⁾	No failure	19.45		

b. NATURCLAD-W hidden fixing (family B)

Cladding elements 10 mm (minimum thickness allowable for hidden fixing NATURCLAD-W kit) Fixings Maximum distance between cladding fixings in horizontal direction H=600mm. Maximum distance between cladding fixings in vertical direction V=600mm.

The test results for the tested specimen are indicated in table 4.

TABLE 4 – WIND SUCTION TEST RESULT					
TEST SPECIMEN	MAXIMUM LOAD Q (Pa)	TYPE OF FAILURE	DISPLACEMENT UNDER MAXIMUM LOAD (mm)		
NATURCLAD-W hidden fixing Aluminum subframe Brackets distance: 800mm Vertical profile distance 1000mm	3600 ⁽²³⁾	No failure	18.17		

3.5 Impact resistance – BWR 4

Impact resistance has been assessed according to § 2.2.11 and the method specified in Annex G of EAD.

According with the test results the use category ⁽²⁴⁾ of "NATURCLAD-W exposed fixing and hidden fixing" kits for vertical exterior wall claddings is the Category I

3.6 Bending strength of cladding element – BWR 4

Bending strength of the cladding element, tested according to EN ISO 178: 2019, is included in DoP:

- 2013071201 EDS panels
- 2013071202 EDF panels (CCP 1239/CPR/0801106)

NATURCLAD-W panels satisfy the requirements defined in table 3 § 5.4.1 of EN 438-6: 2016⁽²⁵⁾.

(22) Maximum load allowed by the test equipment.

(24) The definition of use categories is given in table G.2, annex G of EAD. These categories correspond to the degrees of exposure in use.

	Table G.2 – Impact use categories
Category	Use
Ι	A zone readily accessible at ground level to the public and vulnerable to hard body impacts but not subjected to abnormally rough use (e.g.: façade bases in buildings sited in public locations, such as squares, schoolyards or parks. Cleaning gondolas may be used on the façade).
Ш	A zone liable to impacts from thrown or kicked objects, but in public locations where the height of the kit will limit the size of the impact; or at lower levels where access to the building is primarily to those with some incentive to exercise care (e.g.: Façade bases in buildings not sited in public locations – e.g. squares, schoolyards, parks. – or upper façade levels in buildings sited in public locations that occasionally can be hit by a thrown object – e.g. ball, stone, etc Cleaning gondola may be used on the façade).
III	A zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects (e.g.: Upper façade levels in buildings – not including base – not sited in public locations, that occasionally can be hit by a thrown object – e.g. ball, stone, etc Cleaning gondola may be used on the façade).
IV	A zone out of reach from ground level (e.g. High façade levels that cannot be hit by a thrown object. Cleaning gondola may be used on the façade).

(25) EN 438-6: 2016 "High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (Usually called Laminates) - Part 6: Classification and specifications for Exterior-grade compact laminates of thickness 2 mm and greater".

⁽²⁰⁾ Characteristics of component are indicated in Annex 1 and 2

⁽²¹⁾ The test had to be stopped at 3200Pa because the equipment did not achieve stabilization. No failure occurs.

⁽²³⁾ The test had to be stopped at 3600Pa because the equipment did not achieve stabilization. No failure occurs.

3.7 Pull-through resistance – BWR 4

Pull-through resistance for NATURCLAD-W exposed fixing kits (Family A) has been assessed according to § 2.2.12.4 and the method specified in section I.1.1 of Annex I of EAD. Tests was carried out used rivet as cladding fixings.

TABLE 5 - PULL-THROUGH RESISTANCE OF NATURCLAD-W EXPOSED FIXING						
		FIXING	FAILURE L	.OAD (N)		
PANEL THICKNESS (mm)	SUPPORT Ø (mm)	POSITION (Aluminum rivet)	Fm	Fu,5	FAILURE MODE	
		Centre	2054	1938	Panel	
	180	Border	1139	951	Rivet	
		Corner	666	605	Panel	
		Centre	1537	1322	Panel	
6	270	Border	925	848	Rivet	
		Corner	341	263	Panel	
	350	Centre	1582	1260	Panel	
		Border	767	682	Panel	
		Corner	232	201	Panel	
		Centre	2548	948	Rivet deformation	
	180	Border	3218	1930	Rivet	
		Corner	1242	848	Panel	
		Centre	3194	1685	Rivet	
12	270	Border	3549	2842	Rivet	
		Corner	799	501	Panel	
		Centre	3312	2918	Rivet	
	350	Border	3035	1746	Rivet	
		Corner	718	558	Panel	

Mean and characteristic values are indicated in table 5.

3.8 Pull-through resistance under shear loads – BWR 4

Pull-through resistance under shear loads for NATURCLAD-W exposed fixing kits (Family A) has been assessed according to § 2.2.12.5 and the method specified in section I.2 of Annex I of EAD.

Mean and characteristic values are indicated in table 6.

TABLE 6 - PULL-THROUGH RESISTANCE UNDER SHEAR LOAD OF NATURCLAD-W EXPOSED FIXING					
PANEL THICKNESS (mm)	FAILURE LOAI	D (N)			
(mechanically weakest case)	Fm	Fu,5	FAILURE MODE		
6 Wood subframe	3950.20	3815.83	Screw deformation		
6 Aluminium subframe + Aluminium rivet	3415.76	3220.90	Rivet		

3.9 Axial tension resistance – BWR 4

Axial tension resistance for NATURCLAD-W hidden fixing kit (Family B) has been assessed according to § 2.2.12.6 and the method specified in section I.3 of Annex I of EAD.

Mean and characteristic values of test are indicated in table 7.

TABLE 7 – AXIAL TENSION RESISTANCE OF NATURCLAD-W HIDDEN FIXING							
SUPPORT Ø FIXING FAILURE LOAD (N)							
PANEL I HICKNESS (MM)	(mm)	POSITION	Fm	F _{u,5}			
10	180	Centre	2723.5	1098.3			
(mechanically weakest case)	270	Centre	2802.2	2399.1	Cladding element		
(incentationally weakest case)	350	Centre	2886.2	2069.8			

3.10 Shear load resistance – BWR 4

Shear load resistance for NATURCLAD-W hidden fixing kit (Family B) has been assessed according to § 2.2.12.7 and the method specified in section I.4 of Annex I of EAD.

Mean and characteristic values of test are indicated in table 8.

TABLE 8 - SHEAR LOAD RESISTANCE OF NATURCLAD-W HIDDEN FIXING					
PANEL THICKNESS (mm)	FAILUR	E LOAD (N)	FAILURE MODE		
(mechanically weakest case)	Fm	F _{u,5}			
10	4826	4216.5	Cladding element		

3.11 Combined tension and shear load resistance – BWR 4

Combined tension and shear load resistance for NATURCLAD-W hidden fixing kit (Family B) has been assessed according to § 2.2.12.8 and the method specified in section I.5 of Annex I of EAD.

TABLE 9 – COMBINED TENSION AND SHEAR LOAD RESISTANCE OF NATURCLAD-W HIDDEN FIXING						
PANEL THICKNESS (mm)	ANGLE	SUPPORT	FIXING	FAILURE L	.OAD (N)	FAILURE MODE
(mechanically weakest case)	7	Ø (mm)	POSITION	Fm	F _{u,5}	
10	30°	350	Centre	1160	933	Cladding clament
10	60°	350	Centre	975.9	372.0	Cladding element

Mean and characteristic values of test are indicated in table 9.

3.12 Resistance of profiles – BWR 4

Resistance of kit profiles has been assessed according to section 2.2.10 of EAD.

The following characteristics of the profiles and the subframe profiles are given in the relevant tables of Annex B:

- Form and dimensions of the profile section.
- Inertia of the profile section.

3.13 Brackets resistance (vertical and horizontal) – BWR 4

Brackets load bearing capacity and deformation under loading (vertical and horizontal load) have been assessed according to § 2.2.12.16 and the method specified in Annex L.

	TABLE 10: RESISTANCE TO VERTICAL LOAD OF BRACKETS – CALCULATION RESULT					
	BRACKETS DIMENSIONS	F _r (N) ΔL=0.2% de L Residual distortion	F₁d(N) ΔL=1mm Displacement	F₃₀(N) ΔL=3mm Displacement	F₅(N) Failure	
NIUM	(60+40) x 80 x 3	1200	950	1800	Purposeless	
ALUM	(100+40) x 80 x 3	1000	620	1410	Purposeless	

Calculation results of brackets resistance to horizontal load are indicated in table 11.

	TABLE 11: RESISTANCE TO HORIZONTAL LOAD OF BRACKETS – CALCULATION RESULT				
BR	ACKETS DIMENSIONS	F _m (N) ΔL=1mm Residual distortion	F _t (N) Failure		
NIUM	(60+40) x 80 x 3	3760	Purposeless		
ALUM	(100+40) x 80 x 3	4050	Purposeless		

3.14 Hygrothermal behaviour – Durability

The hygrothermal behaviour for NATURCLAD-W fixing kits has been tested according to § 2.2.15.1 and the method specified in section M.1 of Annex M of EAD.

During the test cycles, none of the following defects occurs:

- deterioration such as cracking or delamination of the cladding element that allows water penetration to the insulation
- detachment of the cladding element
- Irreversible deformation
 - This system is therefore assessed as resistant to hygrothermal cycles.

The joint in NATURCLAD-W fixing kits are not watertight so the insulation layer should be composed by materials with low water absorption (such as insulation products made of MW according to EN 13162).

3.15 Behaviour after pulsating load – Durability

Behaviour after pulsating load for NATURCLAD-W hidden fixing kit (Family B) has been assessed according to § 2.2.15.2 and the method specified in section M.2 of Annex M of EAD.

TABLE 12 – AXIAL TENSION RESISTANCE OF NATURCLAD-W HIDDEN FIXING AFTER PULSATING LOAD					
	SUPPORT Ø	FIXING	FAILURE	E LOAD (N)	
PANEL THICKNESS	(mm)	POSITION	Fm	Fu,5	FAILURE MODE
10 (mechanically weakest case)	350	Centre	2750.5	1521.7	Cladding element

Mean and characteristic values of test are indicated in table 12.

3.16 Freeze-thaw resistance – Durability

Freeze-thaw resistance for NATURCLAD-W exposed and hidden fixing kit (Family A and B) has been assessed, according to § 2.2.15.3, by means of the following mechanical resistance tests after completion of the freeze-thaw cycles, according to EN 494:2012+A1.

TABLE 13 –PULL-THROUGH RESISTANCE OF NATURCLAD-W EXPOSED FIXING AFTER FREEZE-THAW CYCLES					
PANEL THICKNESS	SUPPORT Ø	FIXING	FAILURE L	OAD (N)	
(mm)	(mm)	POSITION (Aluminum rivet)	Fm	Fu,5	FAILURE MODE
	190	Border	1139.65	1084.25	
	100	Corner	612.80	480.15	Panel
6	270	Border	754	680.40	Panel
0	270	Corner	331.30	306.82	
	250	Border	637.85	580.20	
	330	Corner	226.10	190.60	
	100	Border	3574.65	2963.55	Rivet
12	100	Corner	1088.15	660	Rivet Panel
	270	Border	3482.65	2720.55	Panel/Rivet
	270	Corner	979.65	751	EZE-THAW CYCLES FAILURE MODE Panel Rivet Panel Panel/Rivet Panel Panel/Rivet Rivet Rivet Rivet
	250	Border	2986.05	2440.25	Panel/Rivet
	330	Corner	712.65	445.95	Panel Rivet Panel Panel/Rivet Panel Panel/Rivet Rivet

Mean and characteristic values of test are indicated in tables 13 and 14.

TABLE 14 – AXIAL TENSION RESISTANCE OF NATURCLAD-W HIDDEN FIXING AFTER FREEZE-THAW CYCLES					
PANEL THICKNESS (mm)	SUPPORT Ø	FIXING	FAILURE	LOAD (N)	
PANEL THICKNESS (IIIII)	(mm)	POSITION	Fm	Fu,5	FAILORE WODE
10 (mechanically weakest case)	350	Centre	2671.3	1616.4	Cladding element

3.17 Behaviour after immersion in water – Durability

Behaviour after immersion in water for NATURCLAD-W exposed and hidden fixing kit (Family A and B) has been assessed, according to § 2.2.15.4, by means of the following mechanical resistance tests after immersion in water, according to EN 494:2012+A1.

Mean and characteristic values of test are indicated in tables 15 and 16.

		FIXING	FAILURE	LOAD (N)	
PANEL THICKNESS (mm)	SUPPORT Ø F (mm) (/	POSITION (Aluminum rivet)	Fm	Fu,5	FAILURE MODE
	100	Border	1144	918.30	
	100	Corner	628.75	472.50	Panel
6	270	Border	833	706,45	
6	270	Corner	323.75	260.70	
	250	Border	644.50	567.75	
	350	Corner	254.06	206.45	
12	100	Border	3534	2941	
	100	Corner	1495	707,40	FAILURE MODE Panel Rivet
	070	Border	2903.45	2477.61	
	270	Corner	872.4	473.30	
	250	Border	2966.85	2762.20	
	300	Corner	671.3	580.55	7

TABLE 16 – AXIAL TENSION RESISTANCE OF NATURCLAD-W HIDDEN FIXING AFTER IMMERSION IN WATER					
PANEL THICKNESS (mm)	SUPPORT Ø	FIXING	FAILURE	LOAD (N)	
PANEL THICKNESS (IIIII)	(mm)	POSITION	Fm	Fu,5	FAILURE MODE
10 (mechanically weakest case)	350	Centre	2367.2	1764.9	Cladding element

3.18 Dimensional stability – Durability

Dimensional stability at elevated temperature of NATURCLAD-W panels has been determined according to EN 438-2: 2016⁽²⁶⁾ (section 17).

NATURCLAD-W panels satisfy the requirements defined in table 3 § 5.4.1 of EN 438-6:2016. The test results are indicated in table 17.

	TABLE 17 – ACCUMULATED DIMENSIONAL VARIATION				
PANEL THICKNESS (mm)	DIRECTION	ACCUMULATED DIMENSIONAL VARIATION (%)			
6	Longitudinal	0.136			
	Transverse	0.218			
12	Longitudinal	0.033			
	Transverse	0.043			
14	Longitudinal	0.043			
	Transverse	0.088			

3.19 UV radiation resistance of the cladding elements – Durability

The UV radiation resistance has been tested according to EN 438-2 section 28 on NATURCLAD-W samples with the following references: PALE, AMBAR, ONIX, ANTRA, RUSTIK, RUBI, SILVER, QUARTZ, NUX, BOREAL, CHESNUT, COFFEE, HAZEL, COCOA.

Based on the test results after accelerating ageing from UV radiation the colour stability is satisfactory for the reference of colour tested.

3.20 Corrosion of metal components

Fixings and subframe components are made of:

- Aluminium alloy AW-6060 and 6063 according to EN 573, EN 755 and EN 1999-1-1 and their minimum thickness is 2mm.

The durability class is B according to EN 1999-1-1:2007/A1:2009⁽²⁷⁾ (Table 3.1a and Table.C.1 in Annex C). Therefore, these components may be used in the following external atmospheric exposure: rural environment, moderate industrial/urban environment, but excluding industrial marine environment. These components may be used in other external atmospheric conditions exposure if the components are protected as indicated in EN 1999-1-1.

- A2 (AISI 304) stainless steel according to EN ISO 3506-1.

The category of corrosivity is C4 (High) according to EN 1993-1-4:2006⁽²⁸⁾ (Table A.1 in Annex A) and EN ISO 9223: 2012⁽²⁹⁾ (Table C.1 in Annex C). Therefore, these components may be used in indoor environments with high frequency of condensation and high pollution from production process (e.g. industrial processing plants, swimming pools) and in outdoor environments, temperate zone, with high pollution (e.g. polluted urban areas, industrial areas, coastal areas without spray of salt water) or, subtropical and tropical zone, with medium pollution.

- Galvanized steel DX51D with Z275 treatment according to EN 10346⁽³⁰⁾.

⁽²⁶⁾ EN 438-2:2016+A1:2019 "High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called Laminates) - Part 2: Determination of properties"

⁽²⁷⁾ EN 1999-1-1:2007+A1:2009 "Eurocode 9. Design of aluminium structures - Part 1-1: General structural rules".

⁽²⁸⁾ EN 1993-1-4:2006 "Eurocode 3 Design of steel structures - Part 1-4: General rules - Supplementary rules for stainless steels".

⁽²⁹⁾ EN ISO 9223:2012 "Corrosion of metals and alloys - Corrosivity of atmospheres - Classification, determination and estimation".

⁽³⁰⁾ EN 10346: 2015 "Continuously hot-dip coated steel flat products for cold forming - Technical delivery conditions".

The category of corrosivity is C3 (Medium) and the durability class is H (High) according to EN ISO 14713-1: 2017⁽³¹⁾ (Table 2). Therefore, these components may be used in outdoor environments, temperate zone, atmospheric environment with medium pollution or some effect of chloride, e.g. urban areas, coastal areas with low deposition of chlorides, subtropical and tropical zones with atmosphere with low pollution.

4. Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the decision 2003/640/EC of the European Commission ⁽³²⁾ the system of assessment and verification of constancy of performances (see Annex V to Regulation (EU) N° 305/2011) given in the following table applies:

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Kits for external wall claddings mechanically fixed "NATURCLAD-W S exposed fixing and hidden fixing"	Ventilated external wall claddings	-	2+
Kits for external wall claddings mechanically fixed "NATURCLAD-W F exposed fixing and hidden fixing"	Ventilated external wall claddings	-	1

5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the quality plan deposited at the Instituto de Ciencias de la Construcción Eduardo Torroja.



Instituto de Ciencias de la Construcción Eduardo Torroja CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

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On behalf of the Instituto de Ciencias de la Construcción Eduardo Torroja Madrid, 03rd May 2022



⁽³¹⁾ EN ISO 14713-1: 2017 "Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures - Part 1: General principles of design and corrosion resistance".

Note: The details shown in figures on this page and on the following pages are approximate and must be defined for each project depending on the site of the building.

These details concern the kit for ventilated external wall claddings and may not be used as justification for compliance with the National requirements.

FIGURE 1: NATURCLAD-W EXPOSED FIXING KIT- GENERAL CONFIGURATION

A. TIMBER SUBFRAME

B. ALUMINIUM SUBFRAME



FIGURE 2: NATURCLAD-W HIDDEN FIXING KIT- GENERAL CONFIGURATION

ALUMINIUM SUBFRAME



NATURCLAD-W EXPOSED FIXING KIT

NATURCLAD-W HIDDEN FIXING KIT



A y C according to panel thickness B max = 1000 mm



A, C y D according to panel thickness B max = 1000 mm

SYSTEM COMPONENTS

FIGURE 4: CLADDING ELEMENTS - LAYERS OF HPL COMPACT PANEL FOR EXTERIOR NATURCLAD-W

 PVDF Antigraffiti overlay
 Pigmented Melaminic overlay
 Natural timber veneer (Okume or Ayous)
 One-color barrier
HPL core: Kraft paper impregnated with phenol/formaldehyde resins (The layer number depends on the required thickness)
 Natural timber veneer (Okume or Ayous)
 One-color barrier
 Balancing film

FIGURE 5: SUBFRAME - BRACKETS

BENDED GALVANIZED STEEL BRACKETS (TIMBER SUBFRAME)

ALUMINIUM BRACKETS (ALUMINIUM SUBFRAME)



FIGURE 6: SUBFRAME – ALUMINIUM VERTICAL PROFILES



FIGURE 7: NATURCLAD-W EXPOSED FIXING KIT ---CLADDING FIXINGS

 TIMBER SUBFRAME
STAINLESS STEEL SCREW
 ALUMINIUM SUBFRAME
ALUMINIUM RIVET

 TW-S-D12
 SX3-L12

 AP16

L=28mm

FIGURE 8: NATURCLAD-W EXPOSED FIXING KIT --- FIXED POINT AND FLOATING POINT POSITION

D=16



FIGURE 9. NATURCLAD-W EXPOSED FIXING KIT — FIXED POINT AND FLOATING POINT FIGURE 9.1. TIMBER SUBFRAME (TW-S-D12)



D=12

D=12

L=38mm







FIGURE 10: NATURCLAD-W HIDDEN FIXING KIT - FIXING ELEMENTS



FIGURE 12: NATURCLAD-W HIDDEN FIXING KIT - FIXED POINT AND HEIGHT ADJUSTMENT POINT







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FIGURE 13. DETAIL OF CROWN AND BASE

FIGURE 14. EXTERNAL CORNER











FIGURE 16. DETAIL OF CROWN AND BASE

FIGURE 17. EXTERNAL CORNER

FIGURE 19. AIR SPACE SECTORIZATION

19.1 EXPOSED FIXING KIT TIMBER SUBFRAME

19.2 EXPOSED FIXING KIT ALUMINIUM SUBFRAME

19.3 HIDDEN FIXING KIT



STANDARD DIMENSIONS ⁽³³⁾				
Length Width		Tolerance	Thickness	Tolerance
(mm)	(mm)	(mm)	(mm)	(mm)
			6*	± 0.40
		0	8	+ 0.50
2440 x	1220	- 0 + 10	10	± 0.50
		. 10	12	+ 0.60
			14	± 0.00
*available only for EDS grade				

Annex A: Cladding	element s	pecifications
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GEOMETRY ⁽³⁴⁾				
Thickness	Flatness	Straightness	Squareness	Weight
Nominal (mm)	Tolerance (mm/m)	Deviation (mm/m)	Deviation (mm/m)	Nominal (kg/m²)
6*		≤ 1,5 mm/m		8,1
8	≤ 5.0 mm/m			10,8
10			≤ 1,5 mm/m	13,5
12	≤ 3.0 mm/m			16,2
14				18,9
*available o	nly for EDS gra	ade		

PHYSICAL AND MECHANICAL PROPERTIES					
Property Attribute		Value	Unit	Test	
Density Density		≥ 1,35	g/cm ³	EN ISO 1183-1 ⁽³⁵⁾	
Elastic modulus	Stress	≥ 9.000	MPa	EN ISO 178 ⁽³⁶⁾	
Flexural stregth	Stress	≥ 80	MPa	EN ISO 178	
Tensil stregth	Stress	≥ 60	MPa	EN ISO 527-2 ⁽³⁷⁾	
Posistanco to humidity	Mass increase	≤ 8	%	EN 428 2 ⁽³⁸⁾ 15	
Resistance to numberly	Appearance	≥ 4	1 to 5	EIN 430-2-10	
Dimensional stability at high temp.	Cumulative dimensional change	L ≤ 0,30 T ≤ 0,60	%	EN 438-2-17	
Impact resistance	Mean failure height	≥ 1800	mm e ≥ 6	EN 438-2-21	
	6 mm	2.000			
	8 mm	3.000			
Resistance to fixings	10 mm		Ν	EN 438-7	
	12 mm	4.000			
	14 mm				
PCP contents (pe	Not contain	-	EN 438-7		
Formaldehyde	E1 Class	-	EN 438-7		

WEATHER RESISTANCE PROPERTIES

Property	Attribute Value		Value	Unit	Test	
	Appearance		≥4	1 to 5		
Resistance to climatic shock	Flexural strength index (Ds)		≥ 0,95		EN 438-2 (19)	
SHOOK	Flexural modulus index (Dm)		≥ 0,95			
UV resistance	Contrast		≥ 3	Grey scale	EN 400 0 (00)	
	Appearance ≥		≥4	1 to 5	EN 438-2 (28)	
Artificial climate	Contrast		≥3	Grey scale		
resistance	Appearance	≥ 4		1 to 5	EN 430-2 (20)	
Described to fire		S	C-s1, d0		EN 42504 4(39)	
Reaction to fire	-		B-s1, d0	-	EN 13501-1(00)	

Γ

 ⁽³³⁾ Available smaller dimensions with the same thickness
 (34) Properties according to EN 438-6:2016
 (35) EN ISO 1183-1:2019 "Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pyknometer method and titration method".

⁽³⁶⁾ EN ISO 178:2019 "Plastics - Determination of flexural properties".
(37) EN ISO 527-2:2012 "Plastics. Determination of tensile properties. Part 2: test conditions for moulding and extrusion plastics".
(38) EN 438-2:2016+A1:2018 "High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called Laminates) - Part 2: Determination of properties".

⁽³⁹⁾ EN 13501-1:2018 "Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests".

Annex B: Cladding fixings and subframe specifications

B.1: Cladding fixings specifications

EXPOSED FIXING KIT

STAINLESS STEEL SCREW TO ALUMINIUM SUBSFRAME		
Designation	SX3-L12 Ø 5.5 x L	
Diameter	Ø _{body} = 5.5 mm	
Head screw	Ø _{head} = 12 mm	
Length	L= 28 mm (e _{panel} ≤10mm) L= 38 mm (e _{panel} >10mm)	
Tensile strength (mean value)	14.000 N	
Shear strength (mean value)	9.500 N	
Pull- out breaking load (mean value on steel sheet - t=1.5mm)	2.700 N	

ALUMINIUM RIVET TO ALUMINIUM SUBSFRAME		
Designation	AP16 Ø 5.0 x L	
Diameter	Ø _{body} = 5 mm	
Head screw	Ø _{head} = 16 mm	
Length	e _{panel} + e _{perfil} + Ø _{body}	
Tensile strength (mean value)	3.700 N	
Shear strength (mean value)	2.400 N	
Pull- out breaking load (mean value on aluminium sheet – t=1.8mm)	2.410 N	
Shear breaking load (mean value on aluminium)	2.800 N	

STAINLESS STEEL SCREW TO TIMBER SUBSFRAME		
Designation	TW-S-D12 Ø 4,8 x L	
Diameter	Ø _{body} = 4,8 mm	
Head screw	Ø _{head} = 12 mm	
Length	L=38(e _{panel} ≤10mm)	
	L=44 (e _{panel} >10mm)	
Tensile strength (mean value)	7.100 N	
Shear strength (mean value)	5.400 N	
Pull- out breaking load (mean value on wood t=26mm)	3.000 N	
Shear breaking load (mean value on wood)	1.100 N	

HIDDEN FIXING KIT

Horizontal rail Geometrical and mechanical features

HORIZONTAL GUIDE RAIL	Material	Dimensions (mm)	Thickness (mm)	l _{xc} (cm ⁴)	l _{yc} (cm ⁴)
Aluminium profile to hung the panel with hidden fastening	Aluminium Al 6063 T5	31 x 60 x 3000	3.3	13.76	2.26

Hanging hook

HANGING HOOK	Material	Dimensions (mm)	Thickness (mm)	l _{xc} (cm ⁴)	l _{yc} (cm ⁴)
Aluminium bracket screw to the rear of the panel	Aluminium Al 6063 T5	68.5 x 38 x 50	5	25.69	7.93

Screws hanging hook - panel

Designation	TB A2 TX30
Diameter	Ø _{body} = 6 mm
Head screw	Ø _{head} = 12 mm
Langth	L=11.5 (e _{panel} = 10)
Length	L=14.5 (e _{panel} >10mm)
Diameter panel hole	Ø = 5.5mm ± 0.1mm
Panel perforated depth	L= 7.5 mm
Pull – out breaking load	170 daN

Screws fixed points

Designation	PERFIX 3 TH8 INA2
Diameter (mm)	5.5
Length (mm)	25
Material	Stainless steel A2 (1.4301)
Standard	EN ISO 3506-4:2009

Screws adjustment points

Designation	TH13 INA2
Diameter (mm)	8
Length (mm)	25
Material	Stainless steel A2 (1.4567)
Standard	EN ISO 3506-4:2009

B.2: Subframe specifications

Wood requirements

Resistance class	≥ C 18 ⁽⁴⁰⁾
Durability	Class 3 ⁽⁴¹⁾
Processing	Autoclave level 5
Damp control	≤ 18%

Aluminium Physical and mechanical properties

Symbolic designation	EN AW-Al MgSi					
Numeric designation	AW 6060/ AW 6063 ⁽⁴²⁾					
Treatment	T5					
	Anodic oxidation	Class 15 or 20 ⁽⁴³⁾				
	Lacquered (thickness 0.1 mm and 0.15 mm)	Class SEASIDE ⁽⁴⁴⁾				
PI	HYSICAL PROPERTIES					
Specific weight	2,70 g/cm ³					
Coefficient of linear thermal expansion	23,5·10 ⁻⁶ K ⁻¹	23,5 · 10 ⁻⁶ K ⁻¹				
	(20/100 °C)					
Elastic modulus	70.000 MPa					
Poisson coefficient	0,33					
ME	CHANICAL PROPERTIES					
Tensile strength (R _m)	≥ 160/175 N/mm ²					
Elastic limit (R _{p0,2})	≥ 120/130 N/mm ²					
Elongation (A)	≥8 %					
Elongation (A _{50mm})	≥6 %					
Brinell hardness	60 HB					
According	to EN 755-2 ⁽⁴⁵⁾ and EN 12020-1 ⁽⁴⁶⁾					

⁽⁴⁰⁾ EN 338:2016 "Structural timber - Strength classes".
(41) EN 335-2:2013 "Durability of wood and wood-based products - Definition of use classes - Part 2: Application to solid Wood"

It may use wood battens with treatment for risk category 2, provided that they are protected in the joint between panels with an EPDM elastomeric belt of a thickness exceeding 10/20 mm the width of the strips. In this case, it is necessary verify that the strips are protected from damp in other points as the start of them. (42) Aluminium alloy 6063 T5 is classified as class A (No known instance of failure in service or in laboratory tests) according to "Aluminium standards and data"

⁽Aluminium association edition)

⁽⁴³⁾ Mean thickness 15μ or 20μ according to the quality mark QUALANOD

⁽⁴⁴⁾ According to the quality mark QUALICOAT

⁽⁴⁵⁾ EN 755-2 Aluminium and aluminium alloys. Extruded rod/bar, tube and profiles. Part 2: Mechanical properties.

⁽⁴⁶⁾ EN 12020-1 Aluminium and aluminium alloys. Extruded precision profiles in alloys en aw-6060 and en aw-6063. Part 1: technical conditions for inspection and delivery.

BRACKET	Material	Dimensions (mm)	Thickness (mm)	Section (mm ²)	x _c (mm)	I _{xc} (cm ⁴)	y₀ (mm)	l _{yc} (cm⁴)
	Aluminium	40 x 80 x 40 - 160	3.0	231	11	3,5	11	3,5
ISOLALO KOO DY LIANCO	AI 6060 T5	40 x 150 x 40 - 160	3,0	591	5	157,9	65	4,9

Brackets Geometrical and mechanical features

Vertical elements Geometrical and mechanical features

VERTICAL ELEMENT	Dimensiones (mm)	Espesor (mm)	Sección (mm²)	Peso (kg/m)	x₀ (mm)	I _{xc} (cm ⁴)	y₀ (mm)	I _{yc} (cm ⁴)
Wooden strip two panels fixing	≥ 80 x 40	-	3.000	1,6	40	42,67	20	170,67
Wooden strip One panel fixing	≥ 40 x 40	-	1.600	0,8	20	21,33	20	21,33
Aluminium strip (L) Al 6063 T5	L 40 x 60	2,5	244	0,659	8,91	9,27	41,20	3,40
Aluminium strip (T) Al 6063 T5	T 80 x 60	2,5	345	0,932	40,00	11,58	46,29	10,64

Stainless steel screw between vertical elements and brackets

Description	PERCINOX special head self-drilling screw
Diameter	5.5 mm
Length	25 mm
Material	Stainless steel
Standard	EN ISO 3506-1: 2010
Pull-out resistance (mean value on aluminium sheet – t=3mm)	3790 N

Annex C: Auxiliary components

Anchorage to substrate

The fixings between the subframe and the substrate are not part of the kit. Therefore have not been assessed. Even so, it is important to define type, position and number of the anchorages according to the substrate material and the resistance required due to the envisaged actions. When it is possible, CE marking according to the EAD 330232-00-0601, 330499-00-0601, 330747-00-0601, 330076-00-0604, etc. is recommended.

Annex D: Confidential information

Quality control of components of kits manufactured by suppliers or ETA holder.

This information is confidential and it is not included in the European Technical Assessment when that assessment is publicly available.