

## DECLARATION OF PERFORMANCE

No. 0001/2018

1. Unique identification code of the product-type: **Prefabricated timber building kits made of SE structural insulation panels “SE SIP”**

2. Intended use/es:

**Building kits are mainly intended to be used as a residential buildings and cottages. Other possible uses are as shops, hotels, restaurants and other types of buildings when the performance requirements are applicable. Intended use of the building kit shall be individually considered according to legislation in the county of use. The number of the full storeys shall be in accordance with local regulations valid for construction site.**

**The kits are intended to be placed on all types of substructure ended by concrete slab, reinforced concrete slab or other construction suitable for this purpose.**

**The limitations of intended use include regions where the heavy rain or snow with combination of extreme wind conditions may occur. Such areas might be for example high mountains or coastal areas.**

**The wood components are not chemically treated for use in regions with possible termite attacks. The chemical treatment shall be done according to local regulations for such use. ETA 18/0312 does not involve methods of chemical treatment of the kit.**

**Seismic loads shall be taken in account if the kit will be used in region where the seismic activity may occur.**

**The modifications of the kit might be necessary according to special customer demands, specific climate conditions, national regulations or other regulation valid for construction site. The modifications shall be described in design documentation of the kit.**

**Provisions made in ETA 18/0312 are based on an assumed intended working life of the building kit for the intended use of:**

**– 50 years for the load-bearing structure and for non-accessible components and materials;**

**– 25 years for repairable or replaceable components and materials like cladding, roofing materials and integrated components, e.g. doors and windows.**

**The kits should be maintained according to manufacturer recommendations to reach intended working life**

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

3. Manufacturer: **SIPEUROPE s.r.o., Novozámocká 353, 951 12 Ivanka pri Nitre, Slovak Republic, <http://sipdom.sk/>**

Manufacturing plant: **SIPEUROPE s.r.o., Nitrianska cesta 1948/154, 951 31 Močenok, Slovak Republic**

4. System/s of AVCP: **1**

5. European Assessment Document: **ETAG 007, Guideline for European technical approval of timber building kits, Edition November 2012**  
 European Technical Assessment: **ETA 18/0312 – version 01 of 17/09/2018**  
 Technical Assessment Body: **Technical Assessment Body (TAB) - Technický a skúšobný ústav stavebný, n. o. (TSÚS), Studená 3, 821 04 Bratislava, Slovak Republic**  
 Notified body/ies: **Notified body 1301, Technický a skúšobný ústav stavebný, n. o. (TSÚS), Studená 3, 821 04 Bratislava, Slovak republic**  
**Certificate of constancy of performance 1301 – CPR – 1415 (date of issue: 21.09.2018)**

6. Declared performance/s:

Essential characteristics <sup>1)</sup>	Performance <sup>1)</sup>	Harmonised technical specification, test report, calculation, assessment, laboratory ordinal number, link to document, annex <sup>2*)</sup>
<b>Mechanical resistance and stability (BWR 1)</b>	ETA 18/0312 and ER to ETA 18/0312, cl. 2.1	<sup>1)</sup> ER to ETA 18/0312, cl. 2.1 Mentioned in Annexes 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
<b>Safety in case of fire (BWR 2)</b>		
-Reaction to fire of materials and components	ETA 18/0312 and ER to ETA 18/0312, cl. 2.2	<sup>2)</sup> Mentioned in Annex 3 Table 1
-Resistance to fire	ETA 18/0312 and ER to ETA 18/0312, cl. 2.3	<sup>3)</sup> Mentioned in Annex 5 Table 1~3, in Annexes 18~28
-External fire performance of the roof covering	ETA 18/0312 and ER to ETA 18/0312, cl. 2.4	No performance assessed
<b>Hygiene, health and environment (BWR 3)</b>		
-Vapour permeability and moisture resistance	ETA 18/0312 and ER to ETA 18/0312, cl. 2.5	<sup>4)</sup> Mentioned in Annex 3 Table 1, Annex 29
-Watertightness - External envelope	ETA 18/0312 and ER to ETA 18/0312, cl. 2.6.1	<sup>5)</sup> Mentioned in Annexes 2, 3, 7
-Watertightness - Internal surfaces	ETA 18/0312 and ER to ETA 18/0312, cl. 2.6.2	No performance assessed
-Release of dangerous substances	ETA 18/0312 and ER to ETA 18/0312, cl. 2.7	<sup>6)</sup> Mentioned in Annexes 30, 33
<b>Safety in use (BWR 4)</b>		
-Slipperiness of floor finishes	ETA 18/0312 and ER to ETA 18/0312, cl. 2.8	No performance assessed
-Impact resistance of the walls	ETA 18/0312 and ER to ETA 18/0312, cl. 2.9	<sup>7)</sup> ER to ETA 18/0312, cl. 2.9
-Impact resistance of the floors	ETA 18/0312 and ER to ETA 18/0312, cl. 2.9	No performance assessed

**Protection against noise (BWR 5)**

**-Airborne sound insulation**

ETA 18/0312 and ER to ETA 18/0312, cl. 2.10

No performance assessed

**-Impact sound insulation of floors**

ETA 18/0312 and ER to ETA 18/0312, cl. 2.11

No performance assessed

**-Sound absorption**

ETA 18/0312 and ER to ETA 18/0312, cl. 2.12

No performance assessed

Essential characteristics <sup>1)</sup>	Performance <sup>1)</sup>	Harmonised technical specification, test report, calculation, assessment, laboratory ordinal number, link to document, annex <sup>2)</sup>
<b>Energy economy and heat retention (BWR 6)</b>		
<b>-Thermal resistance</b>	ETA 18/0312 and ER to ETA 18/0312, cl. 2.13	<sup>8)</sup> Mentioned in Annex 3 Table 1, Annex 6 Table 1, Annex 29
<b>-Air permeability</b>	ETA 18/0312 and ER to ETA 18/0312, cl. 2.14	<sup>9)</sup> Mentioned in Annexes 2, 7
<b>-Thermal inertia</b>	ETA 18/0312 and ER to ETA 18/0312, cl. 2.15	No performance assessed
<b>Sustainable use of natural resources (BWR 7)</b>		
	ETA 18/0312 and ER to ETA 18/0312, cl. 2.16	No performance assessed
<b>Durability, serviceability and identification</b>		
<b>-Aspects of durability</b>	ETA 18/0312 and ER to ETA 18/0312, cl. 2.17	<sup>10)</sup> Mentioned in Annexes 31, 32
<b>-Aspects of serviceability</b>	ETA 18/0312 and ER to ETA 18/0312, cl. 2.18	<sup>11)</sup> ER to ETA 18/0312, cl. 2.18
<b>-Identification</b>	ETA 18/0312 and ER to ETA 18/0312, cl. 2.19	<sup>12)</sup> Mentioned in Annex 3 Table 1
Notes:		
<sup>1)</sup> The methods 3a and 3b according to Guidance Paper L are used to verify the characteristics of each building kit. Specifications of load-bearing parts of construction, and materials and components characteristics with references to respective product specification are given in Annex 2 and Annex 3. Description and specification of the product ensure that aspects of load capacity and other aspects, including aspects of durability and serviceability of load-bearing constructions used in the building can be determined according to EN 1995-1-1 or according to other standards and regulations valid in country of use. Standard construction details of the kits are given in Annex 7. An individual mechanical resistance and stability report shall be prepared for each building kit and shall contain assessment of all load-bearing components of the kit. Components of the kit shall be assessed according to EN 1995-1-1, EN 1990, as well as relevant parts of EN 1991 supported by relevant standards and harmonized product standards. Calculation shall contain assessment of all loadbearing components of the kit. The resistance to seismic loads shall be taken in to account if it is necessary. The load-bearing components with references to their technical specifications and relevant parameters are given in ETA 18/0312, Clause 3.1, Annex 2 and Annex 3. Loadbearing capacities of walls, floors and roofs given in Annex 4 were determined by calculations (Annexes 8~14) according to EN 1990, EN 1995-1-1 and relevant parts of EN 1991-1. Assessment of tolerances and maximum moisture content was done by testing (Annexes 15, 16) according to EN 13183-2, EN 1309-1 and Slovak national standard STN 73 0280. Assessment of OSB skin adhesion to insulation core was done by testing (Annex 17) according to Slovak national standard STN 73 2577.		
<sup>2)</sup> The assessment of reaction to fire of materials of the kits is based on Commission Decisions, harmonised standards and available ETAs. The classification of reaction to fire according to EN 13501-1 is given in Annex 3, Table 1, with reference to the related Commission Decision. Materials and components used in the kits are classified without need of further testing. This method of verification refers to option 3 given in ETAG 007, Clause 2.4.2.1.		
<sup>3)</sup> Resistance to fire of the walls, floors and roofs was determined by classification reports (Annexes 18~28) according to EN 1995-1-2 and the test result of cladding and panelling components (e.g. gypsum plasterboards and Vidiwall boards introduced by Knauf company). Resistance to fire of the building constructions is given Annex 5, Table 1~3.		
<sup>4)</sup> Vapour permeability and resistance to moisture of building elements were determined by calculation (Annex 29) according to EN ISO 13788. Reaction of the kit according to vapour permeability and moisture content is given in ETA 18/0312 as a form of intended use. Building elements shall be assessed with regard to vapour condensation taking in account specific conditions in summer and winter season. Limitations of intended use according to vapour permeability and moisture content are given in ETA 18/0312, Clauses 2.1 and 3.3.1. The values of diffusion resistance factor of materials are given in Annex 3, Table 1.		
<sup>5)</sup> The assessment of the water tightness of building kits external envelope is based on assessment of construction details and joints designed for the kits according to intended use. Limitations of intended use are given for regions where heavy rain or snow in combination with extreme wind condition may occur. Such areas might be for example high mountains or coastal areas. Limitations to intended use are given		

in ETA 18/0312, Clauses 2.1 and 3.8.1. The assessment includes whole external envelope of building kits. The water cannot penetrate to the floor construction. Description and specification of materials and components of the kits are given in Annexes 2 and 3. Construction details of the kits are given in Annex 7.

<sup>6)</sup> The manufacturer issued statement (Annex 30) of content of dangerous substances in building kits taking in to account Guidance Paper H, Regulation (EC) No 1907/2006 and release scenarios according to EOTA TR 034. Manufacturer submitted safety data sheet (Annex 33) for glue PU 4682/12 UNPIGMENTED MOISTURE CURING ADHESIVE.

Formaldehyde release of OSB boards, structural finger joined solid timber, glued laminated timber and glued massive timber is classified as E1. Content of Pentachlorophenol (PCP) is less than 5 ppm in these components. Chemically treated wood with fire retardants or wood preservatives is not part of the building kits. No recycled materials or recycled wood are used in kits.

<sup>7)</sup> The performance of the walls was classified as acceptable according to ETAG 007, Clause 2.4.4.2.1 for intended use given in ETA 18/0312, Clause 2.1.

<sup>8)</sup> Heat transfer resistance  $R_{tot}$  and thermal transmittance  $U$  were determined for building elements by calculation (Annex 29) according to EN ISO 6946. Thermal bridges were taken into account.

Design value of thermal conductivity for wood and all loadbearing wood components  $\lambda = 0,18$  (W/m·K) was used in calculations, according to Slovak standard STN 73 0540-3.

Design value of thermal conductivity for expanded polystyrene boards  $\lambda = 0,041$  (W/m·K) was used in calculations.

Design value of thermal conductivity for expanded polystyrene boards with graphite  $\lambda = 0,033$  (W/m·K) was used in calculations.

Design value of thermal conductivity for rigid polyurethane foam  $\lambda = 0,030$  (W/m·K) was used in calculations.

Design values of thermal conductivity according to EN ISO 10456 were used for other materials.

Materials properties are given in Annex 3, Table 1. The heat transfer resistance  $R_{tot}$  and thermal transmittance  $U$  of the perimeter walls are given in Annex 6, Table 1.

<sup>9)</sup> Air permeability of building kits according to construction details given in Annex 2 and Annex 7 was determined as an acceptable for intended use.

<sup>10)</sup> The natural durability of wood and wood based products is identified according to EN 350. The durability of components of prefabricated wood frame building kits is given in Annex 32. The requirements of wood durability with regard of the use classes were verified according to EN 460. The use classes of wood components were identified according to EN 335. The suitability of the fasteners use was identified according to EN 1995-1-1. The use classes of the kits components are given in Annex 32.

The exterior surface of the envelope walls is assigned to use class 3.1 according to EN 335 (use in exterior, exposed to water for short period). The components assigned to use class 3.1 can be used without chemical treatment according to EN 460. The kits shall be chemically treated if they will be used in regions where termite attacks may occur. Any chemical treatment that may be used shall follow national and European provisions (e. g. biocide directive). Chemically treated wood is not part of the prefabricated wood frame building kits.

Maximum moisture content of wood components of the kit cannot exceed 18 %. The moisture content of glued laminated timber cannot exceed 16 %. Moisture content of other timber components and wood-based components shall meet requirements according to corresponding technical specification. The moisture content of kit components is monitored during manufacturing process according to manufacturer control plan (Annex 31).

<sup>11)</sup> The serviceability of the building kit is understood as ability of load-bearing constructions to resist loads without causing undue deformations. Deformations of load-bearing constructions and components have to be evaluated according to requirements for mechanical resistance and stability. For each kit, an individual mechanical resistance and stability report shall contain evaluation of deformations of the kit components caused by loads.

Stiffness against vibrations of suspended floors has not been assessed.

<sup>12)</sup> The identification parameters and references to products specification for identifying the materials and components of the kits are given in Annex 3, Table 1.

Harmonised technical specification, test report, calculation, assessment, laboratory ordinal number, link to document, annex 2*)	
1.	ETA 18/0312 – version 01 of 17/09/2018 and Evaluation Report to ETA 18/0312 Prefabricated timber building kits made of SE structural insulation panels “SE SIP”. Issued by Technical Assessment Body - Technický a skúšobný ústav stavebný, n. o. (TSÚS), Studená 3, 821 04 Bratislava, Slovenská republika
2.	Detailed description of “SE SIP” panels composition of external wall, internal walls, floor and roof constructions (Annex 1 to ETA 18/0312)
3.	Materials and components specifications (Annex 2 to ETA 18/0312)
4.	Mechanical resistance of the constructions (Annex 3 to ETA 18/0312)
5.	Fire resistance of the constructions (Annex 4 to ETA 18/0312)
6.	Thermo-technical parameters of the constructions (Annex 5 to ETA 18/0312)
7.	Construction details of the kits (Annex 7 to ETA 18/0312)
8.	Statický posudok – Vnútná stena SIPDOM – Plášť OSB/3 (Mechanical resistance and stability report – Internal wall SIPDOM – Skin OSB/3). Prepared by Ing. Roman Soyka, PhD., authorised building engineer – specialisation: mechanical stability and resistance of buildings; Zvolen, Slovak Republic, 6th September 2016
9.	Statický posudok – Vnútná stena SIPDOM – Plášť Vidiwall (Mechanical resistance and stability report – Internal wall SIPDOM – Skin Vidiwall). Prepared by Ing. Roman Soyka, PhD., authorised building engineer – specialisation: mechanical stability and resistance of buildings; Zvolen, Slovak Republic, 6th September 2016
10.	Statický posudok – Obvodová stena SIPDOM – Plášť OSB/3 (Mechanical resistance and stability report – Perimeter wall SIPDOM – Skin OSB/3). Prepared by Ing. Roman Soyka, PhD., authorised building engineer – specialisation: mechanical stability and resistance of buildings; Zvolen, Slovak Republic, 6th September 2016
11.	Statický posudok – Obvodová stena SIPDOM – Plášť Vidiwall (Mechanical resistance and stability report – Perimeter wall SIPDOM – Skin Vidiwall). Prepared by Ing. Roman Soyka, PhD., authorised building engineer – specialisation: mechanical stability and resistance of buildings; Zvolen, Slovak Republic, 6th September 2016
12.	Statický posudok – Strop – Plášť OSB/3 (Mechanical resistance and stability report – Floor – Skin OSB/3). Prepared by Ing. Roman Soyka, PhD., authorised building engineer – specialisation: mechanical stability and resistance of buildings; Zvolen, Slovak Republic, 6th September 2016
13.	Statický posudok – Strešná konštrukcia, panely rovnobežne so spádom – Plášť OSB/3 (Mechanical resistance and stability report – Roof construction, panels parallel to roof pitch – Skin OSB/3). Prepared by Ing. Roman Soyka, PhD., authorised building engineer – specialisation: mechanical stability and resistance of buildings; Zvolen, Slovak Republic, 6th September 2016
14.	Statický posudok – Strešná konštrukcia, panely kolmo na spád – Plášť OSB/3 (Mechanical resistance and stability report – Roof construction, panels perpendicular to roof pitch – Skin OSB/3). Prepared by Ing. Roman Soyka, PhD., authorised building engineer – specialisation: mechanical stability and resistance of buildings; Zvolen, Slovak Republic, 6th September 2016
15.	Test report No 50-16-0063 – Dimensions and moisture content of structural timber. Prepared by Technický a skúšobný ústav stavebný, n. o., testing laboratory, branch Zvolen, Slovak Republic; 7th September 2016
16.	Test report No 50-16-0064 – Dimensions of building constructions and components. Prepared by Technický a skúšobný ústav stavebný, n. o., testing laboratory, branch Zvolen, Slovak Republic; 7th September 2016
17.	Test report No 50-17-0071 – Surface adhesion of building structures to the base. Prepared by Technický a skúšobný ústav stavebný, n. o., testing laboratory, branch Zvolen, Slovak Republic, 29th November 2017
18.	Stanovenie požiarnej odolnosti – Vnútná deliaca priečka 1 – SIPDOM. (Report of assessment of fire resistance – Internal dividing wall 1 - SIPDOM). Prepared by prof. Ing. Anton Osvald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
19.	Stanovenie požiarnej odolnosti – Vnútná deliaca priečka 2 – SIPDOM. (Report of assessment of fire resistance – Internal dividing wall 2 - SIPDOM). Prepared by prof. Ing. Anton Osvald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016

20.	Stanovenie požiarnej odolnosti – Vnútorná deliaca priečka 3 – SIPDOM. (Report of assessment of fire resistance – Internal dividing wall 3 - SIPDOM). Prepared by prof. Ing. Anton Oswald CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
21.	Stanovenie požiarnej odolnosti – Vonkajšia stena 1 – SIPDOM. (Report of assessment of fire resistance – External wall 1 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
22.	Stanovenie požiarnej odolnosti – Vonkajšia stena 2 – SIPDOM. (Report of assessment of fire resistance – External wall 2 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
23.	Stanovenie požiarnej odolnosti – Vonkajšia stena 3 – SIPDOM. (Report of assessment of fire resistance – External wall 3 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
24.	Stanovenie požiarnej odolnosti – Vonkajšia stena 4 – SIPDOM. (Report of assessment of fire resistance – External wall 4 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
25.	Stanovenie požiarnej odolnosti – Strop 1 – SIPDOM. (Report of assessment of fire resistance – Floor 1 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
26.	Stanovenie požiarnej odolnosti – Strop 2 – SIPDOM. (Report of assessment of fire resistance – Floor 2 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
27.	Stanovenie požiarnej odolnosti – Strecha 1 – SIPDOM. (Report of assessment of fire resistance – Roof 1 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
28.	Stanovenie požiarnej odolnosti – Strecha 2 – SIPDOM. (Report of assessment of fire resistance – Roof 2 - SIPDOM). Prepared by prof. Ing. Anton Oswald, CSc. and Ing. Linda Makovická Osvaldová, PhD., Technical university in Žilina, Žilina, Slovak republic, 23rd August 2016
29.	Správa č. 50/051/09/16 o stanovení súčiniteľa prechodu tepla, priepustnosti vodnej pary a odolnosti proti vlhkosti (Report No 50/051/09/16 of calculation and assessment of thermal transmittance vapour permeability and moisture resistance). Prepared by Technický a skúšobný ústav stavebný, n. o., testing laboratory, branch Zvolen, Slovak Republic, 14th September 2016
30.	Vyhlasenie výrobcu o obsahu nebezpečných látok (Declaration of content of dangerous substances. Issued by manufacturer SIPEUROPE s.r.o., Ivanka pri Nitre, Slovak Republic, 19th September 2016
31.	Control plan for ETA – Prefabricated timber building kits made of SE structural insulation panels “SE SIP”. Issued by manufacturer SIPEUROPE s.r.o., Ivanka pri Nitre, Slovak Republic, 13th August 2018
32.	Natural durability of wood and use classes of components and fasteners (Annex 6 to ETA 18/0312)
33.	Safety data sheet for polyurethane glue PU 4682/12 UNPIGMENTED MOISTURE CURING ADHESIVE. Issued by Leeson Polyurethanes Ltd., United Kingdom, 18th June 2012

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 (CPR)<sup>3)</sup>, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:



František Jakab  
CEO

.....  
name and function

Nitra, 22.09.2018

.....  
place and date of issue



.....  
signature, stamp



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<sup>1)</sup> Names of the essential characteristics and declared performances are given according to European technical assessment listed in article 5

<sup>2)</sup> Should be stated ordinal number assigned to test laboratory according to table of participate laboratories; should be stated harmonised technical specification, test report, calculation, assessment number/mark and date of issue, link to document and annex

<sup>3)</sup> – Regulation (EU) No 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR) laying down harmonised conditions for the marketing of construction product and repealing Council Directive 89/106/EEC

Note: Annexes No. 1, 8–31 a 33 are archived by manufacturer due to large content of the complete documents (available on request)