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European Technical Assessment

**ETA 16/0652– version 01
of 01/08/2018**

General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: **Technický a skúšobný ústav stavebný, n. o.**

Trade name of the construction product

Structural insulated panels H-Block and H-Block_{plus}

Product family to which the construction product belongs

Product area code: 34
Building Kits, Units and Prefabricated elements

Manufacturer

Solcraft Sp. z o.o.
Bogdanka 7F
95-060 Brzeziny
Poland
www.solcraft.pl

Manufacturing plant

Solcraft Sp. z o.o.
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Poland

This European Technical Assessment contains

37 pages including 4 annexes which form an integral part of this assessment.

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

ETAG 019, edition 2004, used as European Assessment Document (EAD).

This version replaces

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Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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Specific part

1 Technical description of the product

Panels are manufactured with nominal thicknesses of 130 mm, 170 mm and 230 mm. Skins of panels are made of 15 mm thick OSB/3 oriented strand boards. Internal ribs of the panels are made of 15 mm thick OSB/3 or 18 mm thick softwood plywood. The core of the panels is made of rigid polyurethane. The panels are manufactured in widths ranging from 200 mm to a maximum of 1 250 mm. Length of the panels is up to 8,0 m. Detailed composition of panels and components such a joints and mechanical fasteners are described in Annex 1.

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

2.1 Intended use

The panels are intended for use in timber structures subject to service classes 1 and 2 according to EN 1995-1-1.

H-Block and H-Block_{plus} panels are intended for use in single or multiple-storey constructions as a loadbearing internal wall, separating wall, loadbearing inner leaf of an external wall, loadbearing floor panel and loadbearing panel of flat or pitched roof.

Panels can be also used as infill panels to framed construction.

Suitability of intended use is considered individually according to the standards and law regulations valid in the country of panels use.

2.2 Intended working life of the construction product

Provisions made in this European Technical Assessment are based on an assumed intended working life of panels of 50 years.

The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer or the 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 Performance of the product and reference to the methods used for its assessment

3.1 Mechanical resistance and stability (BWR 1)

The mechanical properties, design load-carrying capacities for the wall, floor and roof panels are given in Annex 2 and Annex 3. The load-carrying capacities have been calculated in accordance with ETAG 019, EN 1995-1-1 and methods based on EOTA Technical Report TR 019. The data should be used for designs in accordance with EN 1995-1-1, EN 1991-1-1, EN 1991-1-2 and EN 1991-1-3 or an appropriate national code. Additional strength of the panels can be achieved using structural engineering principles and introducing structural members such as ribs or posts within the panels.

3.2 Safety in case of fire (BWR 2)

3.2.1 Reaction to fire of materials and components

The classification of the materials and components according to EN 13501-1 is given in Annex 4, Table 42. Those materials which are deemed to satisfy all requirements for the performance characteristic without need for testing according to Commission Decisions are given in Annex 2 with reference to the related Commission Decision.

3.2.2 Resistance to fire

No performance assessed.

3.2.3 External fire performance of the roof covering

No performance assessed. Roof covering is not part of the panels

3.3 Hygiene, health and environment (BWR 3)

3.3.1 Vapour permeability and moisture resistance

No performance assessed.

3.3.2 Watertightness

No performance assessed for external envelope and internal surfaces.

3.3.3 Release of dangerous substances

The panels and their components comply with the provision of Guidance paper H¹ about dangerous substances taking in account Regulation (EC) No 1272/2008 and release scenarios according to EOTA TR 034². Content of formaldehyde in wood-based products is assessed as class E1. The content of pentachlorophenol (PCP) of the wood-based products is less than 5 ppm. Manufacturer issued declaration about content of dangerous substances. In addition, each country may have national requirements (e.g. national legislation, regulations and provisions) applicable to the intended use of the panels that should be complied with.

3.4 Safety in use (BWR 4)

3.4.1 Slipperiness of floors

No performance assessed. Floor finishes are not part of the panels.

3.4.2 Impact resistance

No performance assessed. Panels will be normally covered with external and internal finishes when they are used to construct walls, floors or roofs.

3.5 Protection against noise (BWR 5)

3.5.1 Airborne sound insulation

Weighted apparent sound reduction index R_w for wall made of H-Block panel and LBH joists is given in Table 1.

Table 1 – Airborne sound insulation of H-Block panel

Structural part	Type of panel	R_w (C; C _{tr}) (dB)
Wall	H-Block ($H = 170$ mm)	30 (-2; -3)

No performance assessed for floors or roofs

¹ Guidance Paper H: A harmonised approach relating to dangerous substances under the Construction Products Directive, edition September 2002.

² EOTA TR 034: General ER 3 Checklist for ETAGs/CUAPs/ETAs – Content and/or release of dangerous substances in products/kits, edition March 2012.

3.5.2 Impact sound insulation

No performance assessed.

3.5.3 Sound absorption

No performance assessed.

3.6 Energy economy and heat retention (BWR 6)

3.6.1 Thermal resistance

No performance assessed.

3.6.2 Air permeability

No performance assessed.

3.6.3 Thermal inertia

No performance assessed.

3.7 Sustainable use of natural resources (BWR 7)

No performance assessed.

3.8 Durability, serviceability and identification

The panels can be used in use classes 1 and 2 according to EN 1995-1-1 and EN 335. The products may be exposed directly to the weather for a short time during installation.

The ability of the panels to resist loads without undue deflection (serviceability) is dealt with in the Clause 3.1.

Each panel bears the manufacturer's identification mark, the product type and CE marking according to 5.3. Manufacturer prefers to mark products in accompanying documentation.

The identification parameters and references to products specification for identifying the materials and components of the panels are given in Annex 4, Table 42.

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

The AVCP system 1 applies (further described in Annex V to Regulation (EU) No 305/2011).

The manufacturer shall draw up the declaration of performance and determine the product-type on the basis of the assessments and verifications of constancy of performance carried out under the system 1 on the basis of:

- (a) The manufacturer shall carry out:
 - (1) Factory production control;
 - (2) Further testing of samples taken at the manufacturing plant by the manufacturer in accordance with the prescribed test plan.
- (b) The notified product certification body shall decide on the issuing, restriction, suspension or withdrawal of the certificate of constancy of performance of the construction product on the basis of the outcome of the following assessments and verifications carried out by that body:
 - (3) An assessment of the performance of the construction product carried out on the basis of testing (including sampling), calculation, tabulated values or descriptive documentation of the product;
 - (4) Initial inspection of the manufacturing plant and of factory production control;
 - (5) Continuing surveillance, assessment and evaluation of factory production control.

Continuing surveillance, assessment and evaluation of factory production control has to be performed at least twice a year.

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

In order to help the Notified Body to make an evaluation of conformity, the Technical Assessment Body (TAB) issuing the ETA shall supply the information detailed below. This information together with the requirements given in EC Guidance Paper B will generally form the basis of the factory production control (FPC).

This information shall initially be prepared or collected by the Technical Assessment Body and shall be agreed with the manufacturer. The following gives guidance on the type of information required:

1) The ETA

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.

2) Basic manufacturing process

The basic manufacturing process is described in sufficient detail to support the proposed FPC methods.

Components for partitions are normally manufactured using conventional techniques. Any critical process or treatment of the components affecting performance shall be highlighted.

3) Product and materials specifications

The manufacturer's documentation includes:

- detailed drawings (possibly including manufacturing tolerances);
- incoming (raw) materials specifications and declarations;
- references to European and/or international standards;
- technical data sheets.

5.1 Determination of the product-type on the basis of type testing, type calculation, tabulated values or descriptive documentation of the product

The results of tests performed as a part of the assessment for this European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between the manufacturer and the TSÚS.

5.2 Control plan and factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures. This production control system shall insure that the product is in conformity with this European Technical Assessment.

The manufacturer shall only use materials stated in the technical documentation³ of this European Technical Assessment. The factory production control shall be in accordance with the control plan which is part of the technical documentation of this European Technical Assessment.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

³ The technical documentation of this European Technical Assessment has been deposited at the TSÚS.

5.3 CE marking

The CE marking shall be affixed visibly, legibly and indelibly to the panel or to a label attached to it. Where this is not possible or not warranted on account of the nature of the panel, it shall be affixed to the packaging or to the accompanying documents.

The CE marking shall be followed by:

- two last digits of the year in which it was first affixed;
- name and the registered address of the manufacturer, or the identifying mark allowing identification of the name and address of the manufacturer easily and without any ambiguity;
- unique identification code of the product-type;
- reference number of the declaration of performance;
- level or class of the performance declared;
- reference to the harmonised technical specification applied (number of the ETA);
- identification number of the notified body;
- intended use as laid down in the harmonised technical specification applied.

Manufacturer prefers to mark products in accompanying documentation.

5.4 Packing, transport and storage

The manufacturer's manual for the packaging, transport and storage of the panels shall be followed.

The panels and their components shall be protected from weather exposure and mechanical damage during transportation and storage.

The panels and their components cannot be lifted or stored in such a way that will cause damage or excessive deformation to them.

5.5 Manufacturing

The panels are manufactured in accordance with the provisions of the European Technical Assessment using the manufacturing process as identified in the inspection of the manufacturing plant and factory production control by the notified body and laid down in the technical documentation.

5.6 Installation

The panels and their components shall be checked before installation that they have not been damaged during transportation or storage. Damaged components and materials shall be replaced by good ones.

The installation guide prepared by manufacturer shall be followed. Installation guide shall contain all important aspects such as:

- assembly methods and necessary equipment;
- standard assembly joints and special joints;
- completion of joints between panels and components (structural fixing, weather sealing, etc.);
- additional materials and components applied on the site, which are a precondition for the fitness of use;
- details of stiffening of the panels;
- requirements related to the foundations;
- protection against weather during installation.

5.7 Use, maintenance, repair

It is the responsibility of the manufacturer to ensure that each delivery contains proper information for the use maintenance and repairs of the panels and their components on the basis of the European Technical Assessment

The panels shall be regularly inspected and maintained in accordance with maintenance instructions which should be available on manufacturer's website.

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On behalf of the Technický a skúšobný ústav stavebný, n. o.
Bratislava, 01 August 2018



prof. Ing. Zuzana Sternová, PhD.
Head of Technical Assessment Body

Annexes

- Annex 1 H-Block and H-Block_{plus} details
- Annex 2 Load capacities of H-Block panels
- Annex 3 Load capacities of H-Block_{plus} panels
- Annex 4 Materials and components specifications