



INSTITUTE FOR TESTING AND CERTIFICATION, a.s.
Třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic
CSI division – Centre of Civil Engineering



AUTHORIZED BODY No. 224

Authorisation Decision No. 1/2021 od 28 January 2021

Issues to

CONSTRUCTION TECHNICAL APPROVAL

No. STO - AO 224 - 1316/2023

pursuant to §2 and §3 of Czech Government regulation No. 163/2002 Coll., as amended by Government regulation No. 312/2005 Coll. and Government regulation No. 215/2016 Coll.

The Authorized Body certifies the suitability of the construction product

WPC - terraced board
Type: Hollow profile 152x30

Introduced to the market by

WPC GARDEN, SE
Vrážská 1562/24,
153 00 Praha 5
IČ: 17118441
DIČ: CZ17118441

from the manufacturing site:

WPC GARDEN, SE, Vrážská 1562/24, 153 00 Praha 5

with respect to the essential requirements for constructions and to the intended product use in the construction.

Contract No.: 785200164

Number of pages:

9

Place and date of issue:

Zlín, 2023-02-01

This Certificate shall be valid till:

2026-01-31



Mgr. Jiří Heš

Representative of the authorized body No. 224

1. Introduction

This Construction Technical Approval (hereinafter referred to as CTA) was issued by Authorized Body AO 224 based on the application of the applicant for conformity assessment of the construction product pursuant to Government Decree No. 163/2002 Coll., as amended by Government Decrees No. 312/2005 Coll. and No. 215/2016 Coll. (hereinafter referred to as Government Decree 163), due to non-existence of specific standards or technical regulations specifying applicable essential requirements with respect to the intended use of the product in the construction. In this document, the Authorized Body AO 224 specifies the technical properties of the product, their performances and procedures to examine the properties in relation to the essential requirements for constructions specified in Annex 1 to Government Decree 163 and to the intended product use in the construction. This document is a technical specification intended for use within product conformity assessment.

2. Identification of the Authorized Body

This Construction Technical Approval is issued by Authorized Body AO 224, – Institute for Testing and Certification in Zlín. Authorization for this construction product type was granted to this Authorized Body by the Office for Standards Metrology and Testing (ÚNMZ), Decision No. 1/2021 on 28 January 2021. The identification data of the Authorized Body are as follows:

Institut pro testování a certifikaci, a.s.
Třída Tomáše Bati 299, Louky
763 02 Zlín
Czech Republic
Company Registration No.: 47910381
VAT Reg. No.: CZ47910381
Phone: +420 572 779 922, e-mail director@itczlin.cz

3. Identification of the applicant and the manufacturer

3.1. Identification of the applicant

The application for cooperation on the conformity assessment was issued by a company, also engaged in production of the construction elements. The identification data of the applicant are as follows:

WPC GARDEN, SE
Vrážská 1562/24,
153 00 Praha 5
IČ: 17118441
DIČ: CZ17118441
Telefon: +420 773 111 114, e-mail: r.neumann@wpc-garden.com, Roman Neumann

3.2. Identification of the manufacturer

WPC GARDEN, SE
Vrážská 1562/24, 153 00 Praha 5

4. Identification of the product and specification of its use in the construction

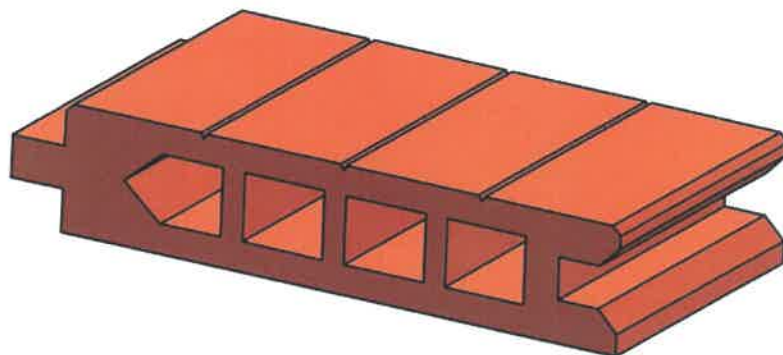
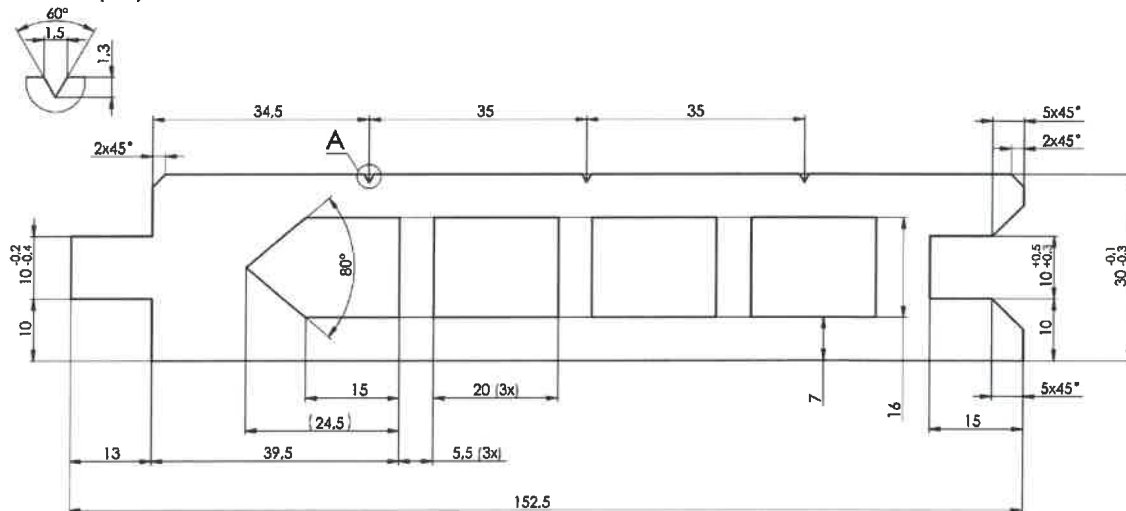
4.1. Product identification and description

WPC - Terrace board is a WPC composite (Wood-Plastics Composite) consisting of approximately two-thirds of wood (60%), one-third of polymer (approx. 40% PP). Terrace boards (planks) that are made of wood-plastic composite in several color shades, using extrusion technology. WPC - Decking boards are four-chamber (rectangular air cavity) boards with a standard width of 152 mm and a thickness of 30 mm.

Terrace boards are provided with rough anti-slip grooves on one side and a smooth surface on the other. The declared stepping side is with rough grooves. The individual boards (boards) are for outdoor use and are placed on the floor grid (carriers) and fixed using mounting clips (see the assembly instructions for detailed information).

Drawing: WPC terraced board, hollow profile 152 x 30 mm

DETAIL A (5:1)



Declared span of supports $l_1 = 350 \text{ mm}$

Calculated section modulus of the profile $W_{ox} = 18895.0 \text{ mm}^3$

4.2. Marking on the product

Each pallet is marked with the manufacturer's name, production date, profile type and color.

4.3. Intended use of the product in the construction

The method of using the product in construction on horizontal surfaces, especially outdoor use - terraces, around the pool, sidewalks, etc.

4.4. Restrictions on the product use

WPC products are not a construction material, so they cannot be used as a material for a load-bearing structure, e.g. for balconies, raised terraces and hatches.

5. Documents submitted by the manufacturer

The application was accompanied by the following documents:

- Assembly instructions for terraced board profile WPC GARDEN
- Technical drawing of the product

6. Used technical regulations, standards, sources of scientific and technical knowledge, information gained by practical experience

The following documents were used to develop and issue this CTA:

- ČSN EN 15534-1+A1 Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC) – Part 1: Test methods for characterisation of compounds and products)
- ČSN EN 15534-4 Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) – Part 4: Specifications for decking profiles and tiles)
- ČSN 74 4505 Floors – Common regulations
- ČSN 73 0810 Fire protection of buildings – General requirements
- ČSN EN 13501-1 Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire
- ČSN EN ISO 11925-2 Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test
- Regulation of MV No. 23/2008 Coll., on technical conditions of fire protection of buildings, as amended by Decree No. 268/2011 Coll.
- Regulation of MV No. 246/2001 Coll., on establishing the conditions of fire safety and the performance of state fire supervision (decree on fire prevention), as amended by Regulation No. 221/2014 Coll. and Regulation No. 19/2021 Coll

- Regulation of MMR No., 268/2009 Coll., on general technical requirements for constructions, as amended
- Regulation of MMR No. 398/2009 Coll., on general technical requirements providing barrier-free use of constructions
- Regulation of the European Parliament and of the Council (EC) No. 1907/2006" as amended - Title VIII and Annex XVII (Restrictions on the production, placing on the market and use of certain dangerous substances, preparations and articles)
- Act No. 477/2001 Coll., on packaging, as amended in latter regulations

7. Product classification and conformity assessment in accordance with Government regulation 163, as amended in NV 312 and in NV215

7.1. Product classification in accordance with Government regulation 163/2002 Coll., as amended in NV 312/2005 Coll. and in NV 215/2016 Coll.

According to the Annex 2 to Government regulation 163, the product belongs to the product group No. 09 *Special materials, products, structures and equipment*, subgroup 15 *Products for reinforced outdoor surfaces, paving elements (with a smooth or plastic surface), e.g. paving blocks, paving slabs, curbs, blocks, glass-concrete sidewalk skylights; surface treated sheet metal covers; slate slabs; tile; mosaics; fired tiles; terrazzo tiles; sheet metal mesh; vegetation parts, products for crossings; road sections and grates for the surfaces of pavements and traffic areas.*

7.2. Prescribed conformity assessment procedures

For products of Group 09, Subgroup 15 the Annex 2 of Government regulation 163 establishes the conformity assessment procedure under § 8 (Conformity assessment by the manufacturer).

Under § 10 of Government regulation 163, at the request of the manufacturer or importer, this procedure may be replaced by the procedure under § 5 (certification).

7.3. Applied Technical Guidelines

Within its coordination activities, the Office for Standards, Metrology and Testing developed the Technical Guideline 09_15_09 for this product category. This Guideline served as the basis for definition of the scope of properties examined and methods of their measurement.

7.4. Deviations from the Technical Guideline

The technical guidance given in Article 7.3 of this Technical Certificate was applied without deviations.

8. Specification of the technical properties with respect to the basic requirements and procedures of measurement

8.1. Basic requirements and specification of the technical properties

Specification of the technical properties examined with respect to the basic requirements is described in the second column of Table 1 in compliance with sections 7.3 and 7.4 above,

Table 1: Basic requirements and specification of the technical properties

No	Name of technical property	Testing procedure	Subject of the test	Number of test samples		Required (declared) value:
				C	D	
1	Heat reversion (at 100°C, 60 min, longitudinal direction)	ČSN EN 15534-4 Table 10 and ČSN EN 15534-1+A1, Art. 9.3	product sample	Amount according to the test standard	Amount according to the test standard	max. 0,3 %
2	Resistance to impact by falling mass (Falling mass impact resistance)	ČSN EN 15534-4, Art. 4.5.1 and ČSN EN 15534-1+A1, Art. 7.1.2.1	product sample	Amount according to the test standard	Amount according to the test standard	0% of damaged test specimens shall show crack length \geq 10 mm or a depth of residual indentation \geq 0.5 mm
3	Slipperiness	ČSN EN 15534-4, Table 1 and ČSN EN 15534-1+A1, Art. 6.4.2 (Pendulum test)	product sample	Amount according to the test standard	-	min. 36 ⁺⁾
4	Swelling and water absorption	ČSN EN 15534-4, Table 7 and ČSN EN 15534-1+A1, Art. 8.3.1	product sample	Amount according to the test standard	Amount according to the test standard	<p>Change in thickness: max. 5% (individual values) max. 4% (mean value)</p> <p>Change in width: max. 1,2% (individual values) max. 0,8% (mean value)</p> <p>Change in length: max. 0,6% (individual values) max. 0,4% (mean value)</p> <p>Swelling: max. 9% in weight (individual values) max. 7% in weight (mean value)</p>
5	Flexural properties - maximum load (F_{max}) - deflection under a load of 500 N	ČSN EN 15534-4, Art. 4.5.2 and ČSN EN 15534-1+A1, Annex A	product sample	Amount according to the test standard	Amount according to the test standard	<p>min. 3000 N (individual values) min. 3300 N (arithmetic mean value)</p> <p>max. 2,5 mm (individual values) max. 2,0 mm (arithmetic mean value)</p>
6	Moisture resistance under cyclic test conditions - Decrease of bending strength after cyclic test conditions	ČSN EN 15534-4, Table 7 and ČSN EN 15534-1+A1, Art. 8.3.2 and 7.3.2	product sample	Amount according to the test standard	-	<p>max. 30% (individual values) max. 20% (arithmetic mean value)</p>

7	Reaction to fire	ČSN EN 15534-4 Table 10 and ČSN EN 15534-1+A1, Art. 9.6.1 ČSN EN ISO 11925-2 ČSN EN 13501-1	product sample	Amount according to the test standard	-	E _{fi}
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Note: ^{*)} - requirement for the standard value of the pendulum value for floors of all housing and public rooms (premises) (including private terrace) is min. 30 and min. 40 for surfaces of walkable areas of parts of constructions used by the public, according to Art. 4.17 of ČSN 74 4505 standard referenced by Czech Regulation MMR No. 268/2009 Coll,

8.2 Definition of the method of assessment of technical properties

The above table also contains a list of normative regulations used to define the method of assessment of individual monitored technical properties and the necessary number of samples for certification (C) and supervision of the production control system and control of compliance with the specified requirements for products (D).

8.3. Required values of technical properties

Required values for the specified uses of the product in construction described in the Section 4.3. and 4.4. of this CTA were set for the separate properties. The values are given in the last column of the above table.

8.4. Other technical regulations related to the given product

The requirements of Act No. 477/2001 Coll., on packaging, as amended, apply to consumer, group and transport packaging of the product.

The product is also subject to Regulation (EC) 1907/2006, as amended (REACH), in particular Annex XVII, which establishes lists of hazardous chemical substances and hazardous chemical preparations, the placing on the market of which is prohibited or whose placing on the market, until circulation or use is restricted. The manufacturer may only apply additives (stabilizers, flame retardants, pigments, etc.) whose use is not restricted by the REACH Regulation.

9. Detailed requirements for assessment of factory production control system

The requirements for the production control system are set out in Annex 3 to the Government regulation 163, as amended, and are binding for the manufacturers of selected construction products.

9.1. Obligations of the manufacturer related to the Factory Production Control system

The manufacturer is required to set up a Factory Production Control system (hereinafter referred to as "FPC") so that all products it markets correspond to the technical documentation and meet the essential requirements.

The minimum scope of requirements for provision of the FPC by the manufacturer is provided in the following Table 2.

Table 2: Minimum scope of requirements for provision of the FPC

No.	Quality system area	Specifying requirements
1	Responsibility for manufacture	The manufacturer has delegated employees responsible for purchasing raw materials, materials and products affecting product quality, for production process control, inspection and testing, control, measurement and testing equipment, and for release of the product for shipment.
2	Responsibility for total quality control	A member of the management team responsible for total product quality control, including review and responsibility for corrective and preventive measures has been appointed.
3	Technological production process	The manufacturer has elaborated the technological process of manufacture in a sufficiently detailed manner. Current technological or manufacturing regulations are available at the appropriate work locations.
4	Technical specification	The manufacturer has established technical specifications and a detailed description of technical properties for the product, and a method of product use in the construction.
5	Record keeping	The manufacturer keeps records of the properties of initial raw materials, materials and products, production, production and inspection tests, gauge verification and calibration, and of complaints about product quality. The records are identifiable and legible and securely archived.
6	Production and handling equipment	The manufacturer ensures that the required production equipment is in good condition.
7	Inspection and testing	The manufacturer has drawn up an inspection and testing plan (incoming, in-process, outgoing inspection and testing). It carries out inspections and tests in accordance with this plan. Current inspection and testing procedures are available at appropriate places. The manufacturer keeps records of the tests and inspections performed.
8	Gauges used in the production, inspection and testing processes	The manufacturer has specified suitable gauges for the production, inspection and testing processes, keeps records of them and keeps them in good condition. The manufacturer keeps records of the verification and calibration of the measuring gauges in accordance with the Act on Metrology.
9	Product packaging and marking	The manufacturer has set up the process of packaging and marking of the products to the extent necessary to ensure compliance of the products with the specified requirements.
10	Storage spaces	The manufacturer has the necessary facilities for storing raw materials materials and products and for storing and dispatching of finished products.
11	Product usage instructions	The manufacturer has instructions for use and maintenance of the product in the Czech language.
12	Basic preventive measures	The manufacturer takes basic preventive measures (e.g. employee training for functions affecting product quality, use of quality records, and customer complaints).

9.2. Responsibility for supervision of the factory production control system

9.2.1. Procedure according to Sections 8 of the Government Order No. 312 – Conformity assessment by the manufacturer

In assessing by way of verification of conformity according to Section 8 the sole responsibility for implementation, documentation and operation of the factory production control system including internal supervisions lies with the manufacturer.

The manufacturer will perform or have the product sample tested (see Table No. 1) and assess whether the product type meets to CTA. He obtains a document on the results of the tests and their assessment.

9.2.2. Procedure according to Article 5 of the Government Order No. 312 - Certification

The sole responsibility for implementation, documentation and operation of the factory production control system lies with the manufacturer, in case of distribution of the construction products the responsibility for inspection of the distributed products lies with the distributor.

Manufacturer shall conduct tests of at least the following properties using his/her own means or shall have the tests performed by an accredited testing laboratory within the final (outgoing) inspection.

Samples shall be taken randomly by the manufacturer at the end of the manufacturing line.

Authorized body – within its participation in the conformity assessment process – shall conduct regular supervisions of the due operation of the FPC or of the proper functioning of the product inspection at the applicant and carry out a check of adherence to specified product requirements once a 12 months. Validity of the certificate and the possibility to continue distributing the products on the market are conditioned positive inspection results given in the report and handed over to the manufacturer or the applicant.

The authorized body shall select the scope of the supervision over the operation of the factory production control system so that all elements of the factory production control system specified in Section 9.1 are verified over the period of three years.

In the course of the supervision, procedure according to Section 5, a worker of the authorized body shall take samples from the manufacturer or the applicant in the amounts of which are given in column "D" of Table in Section 8.1, in order to check whether the specified requirements have been met. The check shall be based on tests performed by laboratories of the authorized body. The product characteristics tested shall be at least those shown below:

- Heat reversion
- Resistance to impact by falling mass
- Flexural properties

10. Verification tests

The results of the verification tests carried out by the authorized person of AO 224 in its testing laboratory are given in the Test report No. 785200164ZP/2023, issued on 01.02.2023.

Elaborated by: Mr. Jaroslav Mikulík