



INSTITUTE FOR TESTING AND CERTIFICATION

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TEST REPORT

No. : 78 35 02022 / 2016

Applicant : **MAX DEVELOPING s.r.o.**
Samota 197
783 01 Olomouc-Slavonín

Product : **GRINWOOD WPC hollow profile,**
type: GW

Manufacturer : **GRINWOOD WPC Material Co. Ltd.**
Longquanwu, Eco-Industrial Zone, Miaoxi,
Huzhou, Zhejiang, China

Conformity assessment
carried by : **Milan Kovář**

Date of issue : **2016-10-31**

Validity until : **2019-10-31**



RNDr. Radomír Čevelík
Representative of the Authorized Body



1. Product specification

Terrace four-chamber (rectangular air voids) boards with standard width of 150mm are made of wood-plastics (WPC) composite (HDPE/cellulose fibers) by extrusion and in several colours.

The product is marked as "GW001A-150x25", as well.

Terrace boards have fine antiskid grooves on one side and rough antiskid grooves on the other.

The declared wear side is the side with fine grooves.

Separate boards are laid on a floor grid (from WPC construction bunks) and are fixed with assembly clips.

Reaction to fire according to ČSN EN 13501-1+A1 declared by the applicant (importer): F_{fl}.

Declared section modulus of the profile $W_x = 12352 \text{ mm}^3$

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

2. Conformity assessment with essential requirements pursuant to Section 7, Paragraph 2, NV (Government Order) No.163/2002 Collection of Laws, as last amended by NV No. 312/2005 Collection of Laws and NV No. 215/2016 Collection of Laws.

2.1 Essential requirements for the product and their specification in normative documents

Conformity assessment was carried out according to the document:

"Construction Technical Approval STO-AO224-794/2016", elaborated by Institut pro testování a certifikaci a.s.-AO 224 Zlín.

2.2 Indicators specifying essential requirements, test methods

- Slipperiness, according to Table 1 of ČSN EN 15534-4 and Art. 6.4.2 (Pendulum test) of ČSN EN 15534-1
- Resistance to impact by falling mass (Falling mass impact resistance), according to Art. 4.5.1 of ČSN EN 15534-4 and Art. 7.1.2.1 of ČSN EN 15534-1
- Flexural properties (maximum loads and deflections under a load of 500 N), according to Art. 4.5.2 of ČSN EN 15534-4 and Annex A of ČSN EN 15534-1
- Moisture resistance under cyclic test conditions (change of bending strength after cyclic test conditions), according to Table 7 of ČSN EN 15534-4 and Art. 8.3.2 and 7.3.2 of ČSN EN 15534-1
- Swelling and water absorption, according to Table 7 of ČSN EN 15534-4 and Art. 8.3.1 of ČSN EN 15534-1
- Heat reversion, according to Table 10 of ČSN EN 15534-4 and Art. 9.3 of ČSN EN 15534-1



2.3 Place and range of sampling

The applicant, based on an appeal of a certification worker, delivered following test samples:

- GRINWOOD WPC hollow profile, type: GW in quantity of 25 pcs of boards (profiles) (board length: approx. 1 m)

Test samples were delivered and registered under No. 783502022/1 on 12/08/2016.

2.4 Place and date of testing

The tests were carried out in these institutions:

- Institut pro testování a certifikaci, a. s. – testing laboratory Zlín (August - October 2016)

2.5 Test results

Test results are shown in Table 1.



Table 1 – Test results

Technical characteristic	Unit of measure	Values	
		Required (declared) value	Determined value (average value)
Heat reversion (at 100°C, 60 min, longitudinal direction)	%	Max. 0,5	0,07
Resistance to impact by falling mass (Falling mass impact resistance)	%	0 of damaged test specimens shall show a failure with a crack length ≥ 10 mm or a depth of residual indentation ≥ 0.5	0 of damaged test specimens shall show a failure with a crack length ≥ 10 mm or a depth of residual indentation ≥ 0.5
Slipperiness - dry (dryness) (lengthwise/transverse) -wet (lengthwise/transverse)	-	Min. 36 ⁺	51/67 39/45
Swelling and water absorption - Change in dimensions	%	Change in thickness: Max. 5 (individual values) Max. 4 (mean value) Change in width: Max. 1,2 (individual values) Max. 0,8 (mean value) Change in length: Max. 0,6 (individual values) Max. 0,4 (mean value)	0,81/0,63/0,93/0,84/0,88 0,82 0,09/0,07/0,09/0,08/0,08 0,08 0,10/0,08/0,10/0,06/0,12 0,09
- Change in swelling	% in weight	Max. 9 (individual values) Max. 7 (mean value)	1,52/1,46/1,48/1,44/1,41 1,46

Table 1 – continue

Technical characteristic	Unit of measure	Values	
		Required (declared) value	Determined value (average value)
Flexural properties - Maximum load (F_{max}) - Deflection under a load of 500 N	N	Min. 3000 (individual values)	6061/5887/6027/6117/5993/5819 / 6051/6021
		Min. 3300 (arithmetic mean value)	5997
	mm	Max. 2,5 (individual values)	1,2/1,2/0,9/1,0/1,1/1,3/1,0
		Max. 2,0 (arithmetic mean value)	1,1
Moisture resistance under cyclic test conditions - Bending strength before cyclic test conditions (individual values, arithmetic mean value) - Bending strength after cyclic test conditions (individual values, arithmetic mean value) - Decrease of bending strength after cyclic test conditions	MPa		42,9/41,7/42,6/43,3/42,4/41,2/42,9/42,6
			42,5
	MPa		38,8/38,4/32,9/33,2/38,9/33,8/39,2/38,2
			36,6
	%	Max. 30 (individual values)	10,3/7,9/22,8/23,3/8,3/18,0/8,6/10,3
		Max. 20 (arithmetic mean value)	13,9

Note⁷⁾ - 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.

2.6 Conformity assessment of the product

The Assessed product meets requirements of the document: Construction Technical Approval STO-AO224-794/2016“ in all properties.



3. Conclusion

The Assessed product meets requirements of the document: Construction Technical Approval STO-AO224-794/2016“ in all properties.

4. List of documents used for elaboration of Test Report

- Application for construction product conformity assessment No. 783502022
- Government Decree (Order) No. 163 from 06/03/2002, as amended by NV (Government Degree) No. 312/2005 Coll. And NV (Government Degree) No. 215/2016 Coll., that lays down technical requirements for specified construction products
- Construction technical approval: STO-AO224-794/2016, elaborated by ITC, a.s. -AO224 Zlín
- Decision No. 2/2014 on the authorization of activities during the conformity assessment of specified construction products according to NV 163/2002 Coll., as amended by NV No.312/2005 Coll.
- Test report No. 783502022/01, elaborated by ITC a.s. – testing laboratory Zlín on 25/10/2016