INSTYTUT TECHNOLOGII DREWNA

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WOOD, WOOD-BASED MATERIALS, PACKAGING, FURNITURE, WOODEN CONSTRUCTIONS AND WORKING MACHINES TESTING LABORATORY

SURFACE TESTING SECTION

Poznań, 2015-08-05

TEST REPORT no. 1876/2015/S.H

Subject of the order

Testing of surface resistance to scratching and abrasion of decorative surface layer of FB-300 KERRADECO panel made of expanded PVC-UE

Order no.

A-1876-BBP/2015

Name and address of the client

Profile VOX sp. z o.o., sp. k.
ul. Gdyńska 143
PL 62-004 Czerwonak

Performance date

July 2015

Operator

First name and surname	Signature
Piotr Szczęsnowski	

Authorized representative

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Dr Zofia Krzoska-Adamczak

1. IDENTIFICATION (DESCRIPTION) OF THE TEST OBJECT

The tested object was a decorative surface of a plastic panel described by the client as the **profileFB-300 KERRADECO,** produced in compliance with PN-EN 13245-2 requirements.

According to information provided by the client it was a panel made of expanded poly-chloride vinyl (PVC – UE). Surface of the panel was covered with a hard poly-chloride vinyl (PVC – U) printed and coated with a lacquer. Decor of the tested surface – **Stone Moon**

No more technological details of the panel production and surface finishing were delivered.

Date of the tested object production - unknown

The test samples in amount of 13 pieces of the sizes of (100 × 100 × 8) mm were prepared by Mr. Szymon Głuchy and sent to the Wood Technology Institute in Poznań, Poland.

Before the test, the test samples were stored for 1 week in the atmosphere of (23±2) °C and (50±5) % RH.

In the laboratory, the tested objects were marked with register number A-1876.

2. DATE OF THE OBJECT'S DELIVERY FOR TESTING

The test samples were delivered on 17.07.2015

3. METHODS AND SCOPE OF TESTING

Tests were carried out according to the methods described in the following standard:

- **EN 438-2:2005** High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called Laminates) – Part 2: Determination of properties
  P. 10 – Resistance to surface wear
  P. 25 – Resistance to scratching

The scope of the test s was agreed with the client.

4. LIST OF MEASUREMENT AND TEST APPARATUSES, AND MATERIALS

To perform the tests the following apparatuses and materials were used:

- Taber-Abraser apparatus, type 352/F, model 5151, lab. identity no. H9/6,
- Scratch testing apparatus "Universal Scratch Tester", model 413, Erichsen firm, furnished with hemispherical diamond scratching point, with a point radius of (0.09 ± 0.003) mm and an angle of (90 ± 1)°, lab id H12/12.

  Materials:
  - abrasive paper equivalent to S-42, produced by Taber Industries,

5. TESTS RESULTS

Tests results are presented in Tables 1-2.

6. STATEMENT

Tests results presented in Tables 1-2 refer only to the examined object.

The test report cannot be copied in parts but only in its entirety.

Order no.: A-1876-BBP/2015
Tested object: **expanded PVC- UE panel covered with a decorative hard PVC- U**
Producer of the tested object: Profile VOX sp. z o.o., sp. k., Czerwonak, Poland
Date of the object's delivery: 17.07.2015

Table 1

Resistance to surface wear (acc to EN 438-2 p. 10)

The tested sample	Type of a surface damage		Wear resistance*) $WR = \frac{IP + FP}{2}$
	Initial wear point (*IP*)	Final wear point (*FP*)	
	Number of revolutions		
Sample no.1	**25**	225	125
Sample no.2	**25**	225	125
Sample no.3	**25**	225	125
Average value	**25**	**225**	**150**

*) The initial wear point (IP) for the sample under the test shall be the average of the IP values obtained on the 3 tested samples. The resistance to surface wear (WR) of the tested object shall be the average of the WR values obtained on the 3 tested samples, rounded to the nearest 50 revolutions.

Table 2

Resistance to scratching (acc to EN 438-2 p.25)

Rating scale of scratch resistance*) an almost continuous double circle of scratch marks clearly visible on at least 90% of the circle	Mean value of 3 observers [rating scale*)]			**Final assessment** of scratch resistance [rating scale*)]
	Sample no. 1	Sample no. 2	Sample no. 3	
Rating 5 – at the load **over** 6N Rating 4 – at the load of 6N Rating 3 – at the load of 4N Rating 2 – at the load of 2N Rating 1 – at the load of 1N	3	3	3	**3**

*) acc. to EN 438-2 p. 25 (table 3)

Piotr Szczęsnowski
Operator

Roland Jakubiak
Checked by

27.07.2015
Date of the tests termination

The End