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Dresden, 06/02/2019
MPET

Test Report Order No. 2718614

Client: KASTAMONU INTEGRATED WOOD INDUSTRY LLC
SEZ «Alabuga», SH-3 street, building 3/3
423600 Yelabuga, Tatarstan
Russian Federation

Date of order: 28/11/2018

Order: Performance of tests for laminate floor coverings according to
EN 14041:2008 (CE-labelling)

Contractor: EPH – Laboratory Surface Testing

Engineer in charge: Dipl.-Ing. (FH) M. Peter



Dr.-Ing. Rico Emmeler

Head of Laboratory Surface Testing

The test report contains 5 pages. Any duplication, even in part, requires written permission of EPH.
These test results are exclusively related to the tested material.

1 Task

The authorized laboratory Entwicklungs-und Prüflabor Holztechnologie GmbH (EPH) was commissioned by KASTAMONU INTEGRATED WOOD INDUSTRY LLC in Yelabuga, Russian Federation to carry out testing of selected properties of laminate floor coverings according to EN 14041:2008 for the CE-labelling.

2 Material

For the tests, the client has sent following variants of laminate floor coverings (entrance at the EPH laboratory 07/01/2019):

Determination of the electrostatic behaviours according to EN 1815:2016

Variant 1: Laminate floor covering

Thickness: 8 mm

Variant 1/2: Laminate floor covering

Thickness: 8 mm

Determination of the PCP content according to CEN/TR 14823:2004

Variant 2: Laminate floor covering

Thickness: 12 mm

Determination of the sliding properties according to EN 13893:2003

Variant 3: Laminate floor covering

Structure: WOOD

Thickness: 7 mm

Variant 4: Laminate floor covering

Structure: COUNTRY

Thickness: 8 mm

Variant 5: Laminate floor covering

Structure: VINTAGE

Thickness: 12 mm

Variant 6: Laminate floor covering

Structure: REGISTR (3D)

Thickness: 8 mm

Variant 7: Laminate floor covering

Structure: TIMB

Thickness: 8 mm

3 Test performance

3.1 Determination of the sliding properties according to EN 13893:2003

For the test, a mass with a defined shape and sliders of rubber + leather (1 rubber, 2 leather) according to EN 13893:2003 (dry conditions) were used. The slider acts with a defined force on the sample surface and is drawn over the surface with a constant velocity. The force necessary to move the mass is measured along the whole distance. The sliding coefficient is the ratio of that force to the force acting vertically.

The assessment of the sliding coefficient μ estimated according to EN 13893:2003 was done according to EN 14041:2008 (harmonised standard for resilient, textile and laminate floor coverings).

The tests were carried out on: 15/01/2019.

3.2 Determination of the PCP content according to CEN/TR 14823:2004

The determination of the chloro-organic pesticide PCP was conducted in compliance with CEN TR 14823:2004 and the IHD-standard IHD-W-409:2017 after derivatisation with acetic anhydride using a gas chromatography-electron capture detector (GC-ECD). External calibration was performed with commercial calibration standards.

The test results are average values of a double determination related to dry mass, measured following DIN EN ISO 16979:2003.

Limit of quantitation (LOQ) for 2 g of sample: 0.05 mg/kg

The test was carried out on: 18/01/2019 – 19/01/2019.

3.3 Determination of the electrostatic behaviours according to EN 1815:2016

The test areas were conditioned 7 days at 23 °C / 25 % RH.

The body voltage (UP) was measured when walking on the test objects in a 40 m³ test chamber at 23 °C / 25 % RH according to EN 1815:2016.

The following test parameters / test devices were used:

- Floor underlay: Conductive grounded metal plate / isolating PE-foam
- Measuring system for the body voltage according to STM 97.2:
Field strength measuring device PFM-711 A incl.
Charge plate attachment CPM-720 and
Computer for collecting and recording the measured values.

The tests were carried out with the following standard shoes:

Rubber sole: Testing sandals acc. to EN 1815:2016

The tests were carried out on: 17/01/2019.

4 Results

4.1 Anti slip properties according to EN 13893:2003

Variant	Estimated sliding coefficient μ according to EN 13893:2003 (1 rubber slider, 2 leather sliders)	Classification according to EN 14041:2008 *
3	0.56	DS
4	0.55	DS
5	0.51	DS
6	0.53	DS
7	0.59	Ds

* Requirement for class DS according to EN 14041: $\mu \geq 0.3$

4.2 PCP-content according to CEN/TR 14823:2004

Variant	PCP content in mg / kg
2	< LOQ

LOQ = Limit of quantitation

4.3 Determination of the electrostatic behavior according to EN 1815:1998

Variant	Body voltage U_p [kV] with Rubber sole			
	Single values			Mean value
1	9.4	8.4	8.4	8.7
1/2	10.0	10.0	8.9	9.6

The standard EN 14041:2008 is stipulating the following limit for the classification of floor coverings as "Antistatic floor covering":

$$\text{body voltage } U_p \qquad U_p \leq 2 \text{ kV}$$

The tested floorings don't meet the requirement for the classification as "Antistatic Floor Covering" in accordance with the European Standard EN 14041:2008.

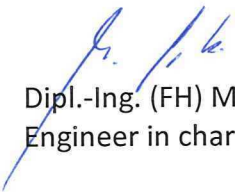
5 Evaluation

The tested laminate floor coverings can be classified regarding to several properties according to EN 14041:2008 for the CE-labelling as follows:

Variant	Properties	Results	Declaration according to EN 14041:2008
1 2 3 4 5	Anti-sliding properties according to EN 13893:2003	$\mu = 0.56$ $\mu = 0.55$ $\mu = 0.51$ $\mu = 0.53$ $\mu = 0.59$	class DS class DS class DS class DS class DS
2	Content of PCP according to CEN/TR 14823:2004	< LOQ	≤ 5 ppm
1 1/2	Electrostatic behaviour according to EN 1815:1998	$U_p = 8.7$ kV $U_p = 9.6$ kV	not possible* not possible*

LOQ = Limit of Quantitation

* The standard EN 14041 is stipulating the following limit for the classification of floor coverings as "antistatic floor covering": body voltage $U_p \leq 2$ kV



Dipl.-Ing. (FH) M. Peter
Engineer in charge