ZHEJIANG ECO NEW MATERIAL CO., LTD.

TEST REPORT

SCOPE OF WORK
Heterogeneous PVC flooring covering (type: VINYL FLOORING – SPC)

REPORT NUMBER
200311012SHF-002

TEST DATE(S)
2020-04-20 - 2020-06-12

ISSUE DATE
2020-06-12

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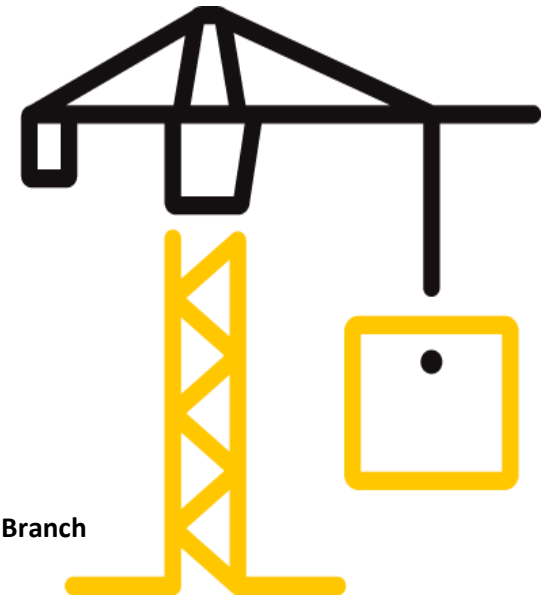

Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch

Test Report

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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch
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Website: www.intertek.com

Test Report

Issue Date:	2020-06-12	Intertek Report No.	200311012SHF-002
Applicant:	ZHEJIANG ECO NEW MATERIAL CO., LTD.		
Address:	No.38, ZIJIN ROAD, PUYUAN HIGH-TECH ZONE, TONGXIANG, ZHEJIANG, CHINA		
Attn:	Patrick Cao		

Sample information

Product:	Heterogeneous PVC flooring covering (type: VINYL FLOORING – SPC)
Model:	/
Specification:	180*1220*3.2mm/0.20mm, 180*1220*3.5mm/0.30mm , 180*1220*4.0mm/0.30mm, 180*1220*4.5mm/0.55mm, 180*1220*5.0mm/0.55mm, 180*1220*5.5mm/0.55mm, 180*1220*6.0mm/0.55mm, 180*1220*7.0mm/0.55mm
Material:	Multi-layer composite (UV layer/wear layer/print film/SPC bottom layer)
Classification of installation and use:	Installation way: loose way with click The products are intended for use as floor coverings in a building
Manufacturer:	ZHEJIANG ECO NEW MATERIAL CO., LTD.
Sample ID:	S200311012SHF-001~005, 007~011
Date of receipt of test item:	2020-04-20
Date (s) of performance of tests:	2020-04-20~2020-06-12

Testing information

Standard:	EN 14041:2004/AC:2006
Rating(s):	Reaction to fire Class B_{fl}-s1, Formaldehyde emission Class E1
Possible Test Case Verdits	
Test Case does not apply to the Test object:	N/A
Test object does meet the requirement:	P (Pass)
Test object does not meet the requirement:	F (Fail)

The submitted samples were tested in accordance with specified standards, and listed the result accordingly, refer to text for detail.

Report Authorized

INTERTEK TESTING SERVICES SHENZHEN LTD. SHANGHAI FENGXIAN BRANCH 天祥质量技术服务有限公司上海奉贤分公司 检验检测专用章

Sally Xie Tod Qian

Name: Sally Xie Name: Tod Qian

Title: Reviewer Title: Project Engineer

Test Report

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Test Items, Method and Results:

EN 14041:2004/AC:2006 Resilient, textile and laminate floor coverings-Essential Characteristics			
Clause	Requirement - Test	Result - Remark	Verdict
4	Requirement		
4.1	Reaction to fire The floor covering shall be tested and classified according to the requirements of EN 13501-1 and the resulting class and subclass (as appropriate to the class itself) shall be declared.	180*1220*3.2mm/0.20mm Reaction to fire class B_{fl}-s1, 180*1220*7.0mm/0.55mm Reaction to fire class B_{fl}-s1, Refer to test report in Appendix B (Issue by NB No. 1023)	P
4.3	Formaldehyde emission When formaldehyde-containing materials have been added to the product as a part of the production process, the product shall be tested and classified into one of two classes: E1 or E2.	180*1220*7.0mm/0.55mm Class E1 Refer to test report in Appendix B (Issue by NB No. 1023)	P
4.5	Slip resistance If a claim for slip resistance is made, the floor covering intended to be used in dry and non-contaminated conditions shall have a dynamic coefficient of friction of ≥ 0.30 when tested ex-factory under dry conditions in accordance with EN 13893 and shall be declared as technical class DS.	Class DS 180*1220*3.2mm/0.20mm DCOF: 0.48, Class DS 180*1220*4.0mm/0.30mm DCOF: 0.48, Class DS 180*1220*5.0mm/0.55mm DCOF: 0.48, Class DS 180*1220*6.0mm/0.55mm DCOF: 0.48, Class DS 180*1220*7.0mm/0.55mm DCOF: 0.48	P

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5	Evaluation of conformity		
5.1	General The conformity of floor coverings with the requirements of this standard (including classes) shall be demonstrated by: Clause 5.2 and 5.3	Refer to clause 5.2 and 5.3	P
5.2	Initial type testing or assessment Shall be performed to demonstrate conformity with this standard.	Refer to clause 4	P
5.3	Factory production control (FPC) The manufacturer shall establish, document and maintain an FPC system to ensure that the products placed on the market conform to the stated performance requirements.	The manufacture has established a Quality management system according to ISO 9001. See Appendix A	P
6	Marking and labeling Product which conform to the requirements of this document shall be clearly and indelibly marked by the manufacturer either on their package or on an adhesive label with following information: a) the number and the year of this European Standard b) the manufacturer's or supplier's identification c) the product name and batch number	See Appendix C 'Copy of marking plate'	P

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Appendix A: ISO 9001 Certificate

CSI GUOLIAN BEIJING CERTIFICATION CENTER

QMS CERTIFICATE OF REGISTRATION

Registration No.: 128180211941R0S

This is to certify that the Quality Management System of

Zhejiang ECO New Material Co., Ltd.

Unified social credit code(Organization code): 91330483MA28B91J4Y
Address: Building 1-6, No.38 Zijin Road, Puyuan Town, Tongxiang City, Jiaxing, Zhejiang 314502P.R.China

Has been audited to conform to the following Quality Management System Standard:

GB/T19001-2016/ISO9001:2015

For the whole process of

Production of stone plastic floor and wood plastic floor

DATE OF ISSUE: 10-11-2018 DATE OF SUPERVISION : 09-03-2019 VALID UNTIL: 10-10-2021

Certified organizations within the validity period of the certificate surveillance audit at least once a year, the organization should take audit before 10-31-2020 to remain the validity. This certificate is valid until 10-31-2020.
The certificate information is available in the certification and accreditation administration of the People's Republic of China's official website:www.cnca.gov.cn

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C128-M

CSI China Standards Institute

No.21, No.4 Yard, Yuetanbeijiaojie Street, Xicheng District, Beijing. 010-68017408

Test Report

Issue Date: 2020-06-12 Intertek Report No. 200311012SHF-002

INSTITUTE FOR TESTING AND CERTIFICATION, INC.
třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic

TEST REPORT
Reference No. 75 35 01871/ 2020

Applicant:	**ZHEJIANG ECO NEW MATERIAL CO., LTD. No. 38, ZIJIN ROAD, PUYUAN HIGH-TECH ZONE, TONGXIANG, ZHEJIANG, China**
Product:	**Heterogeneous PVC flooring covering (type: VINYL FLOORING-SPC, two specifications: 1220 mm x 180 mm x 3.2 mm/0.20 mm and 1220 mm x 180 mm x 7.0mm/0.55 mm), brand name: ECO FLOORS**
Manufacturer:	ZHEJIANG ECO NEW MATERIAL CO., LTD. No. 38, ZIJIN ROAD, PUYUAN HIGH-TECH ZONE, TONGXIANG, ZHEJIANG, China

Elaborated by: Milan Kovář

Issued on: 8th June 2020

Jiří Heš
Representative of Notified Body No. 1023

Tax & VAT Id No.: CZ47910381 Phone: +420 577 601 238 Fax: +420 577 104 855 e-mail: itc@itczlin.cz
Company Id No.: 47910381 +420 577 601 623 +420 577 601 702 www.itczlin.cz

1. Introduction

This report was elaborated on the basis of the application *No. 753501870, registered on 01/04/2020* and tests results carried out by the notified testing laboratory in accordance with the procedure mentioned in the article 1.4 of the Annex V to the Regulation (EU) No. 305/2011 of the European Parliament and of the Council of 9 March 2011, as amended, laying down harmonised conditions for the marketing of construction products („CPR").

2. Assessment and verification of constancy of performance according to Regulation (EU) No 305/2011 of the European Parliament and of the Council, as amended

Floor coverings as construction products are assessed on the basis of relevant clauses of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9th March 2011 laying down harmonised conditions for marketing of construction products and repealing Council Directive 89/106/EEC as amended (called „CPR")

2.1 System of assessment and verification of constancy of performance (AVCP)

The submitted product is assessed pursuant to system of AVCP 3 of the CPR (Annex V).

The type testing was carried out according to Annex ZA of the standard ČSN EN 14041 (EN 14041:2004/AC:2006).

2.2 Indicators specifying basic requirements for construction works

The initial type testing (testing) was carried out by the notified body (the notified testing laboratory) in the following range of relevant properties according to Table ZA.4 (of the ČSN EN 14041):

- Reaction to fire
  - ignitability – surface exposure according to ČSN EN ISO 11925-2 (exposure time: 15s)
  - burning behaviour using a radiant heat source according to ČSN EN ISO 9239-1 /test samples were not glued to the standard substrate/
  - classification according to ČSN EN 13501-1
- Formaldehyde emission according to ITC test regulation ITC A-19-115 (ČSN EN 717-1) (thickness of 7.0 mm/0.55 mm, only)

2.3 Product specification

PVC heterogeneous floor covering tiles. Standard dimensions: (1220 x 180) mm.
Composition :

- Total thickness: 3.2 mm – UV layer - epoxy acrylic resin (0.10 mm), wear layer (0.20 mm – PVC), print film (0.10 mm), SPC bottom layer (2.80 mm – PVC+calcium carbonate)
- Total thickness: 7.0 mm – UV layer - epoxy acrylic resin (0.10 mm), wear layer (0.55 mm – PVC), print film (0.10 mm), SPC bottom layer (6.25 mm – PVC+calcium carbonate)

Laying way: loose, with click

2.4 Sampling place and number of samples taken

The test samples were sent by the manufacturer. The number of the test samples sent was as follows:

- Heterogeneous PVC floor covering tiles (type: VINYL FLOORING-SPC) in quantity: 10 pcs of tiles (1220 x 180 x 3.2/0.20) mm
- Heterogeneous PVC floor covering tiles (type: VINYL FLOORING-SPC) in quantity: 11 pcs of tiles (1220 x 180 x 7.0/0.55) mm and 3 pcs of tiles (1220 x 180 x 7.0/0.55) mm, (packed into PE foil)

The test samples were registered under the registration numbers 75 35 01871/1 and 75 35 01871/2 on 27/04/2020.

Photo of the test sample:

2.5 Place and date of testing

- Institut pro testování a certifikaci (ITC), a.s., NB 1023, accredited laboratory No. 1004 Zlín (May 2020)
- Institut pro testování a certifikaci (ITC), a.s. CSI division - Centrum stavebního inženýrství Prague, Accredited test laboratory No.1007.4 (May-June 2020)

2.6 Test results

2.6.1 Ignitability results

Table 1– Ignitability test results - total thickness: 3.2 mm

Characteristic	Surface exposure test – lengthwise direction (characteristic for individual test specimens)	Surface exposure test – crosswise direction (characteristic for individual test specimens)
Ignition of the test specimen Yes/No	No, No, No, No, No	No, No, No, No, No
Flame reaching of a mark in distance of 150 mm Yes/No	No, No, No, No, No	No, No, No, No, No
Burning time to reach 150 mm (s)	-, -, -, -, -	-, -, -, -, -
Ignition of the filter paper	No, No, No, No, No	No, No, No, No, No

Table 2 – Ignitability test results - total thickness: 7.0 mm

Characteristic	Surface exposure test – lengthwise direction (characteristic for individual test specimens)	Surface exposure test – crosswise direction (characteristic for individual test specimens)
Ignition of the test specimen Yes/No	No, No, No, No, No	No, No, No, No, Yes
Flame reaching of a mark in distance of 150 mm Yes/No	No, No, No, No, No	No, No, No, No, No
Burning time to reach 150 mm (s)	-, -, -, -, -	-, -, -, -, -
Ignition of the filter paper	No, No, No, No, No	No, No, No, No, No

2.6.2 Results of burning behaviour using a radiant heat source

Table 3 - Results of burning behaviour using a radiant heat source – total thickness: 3.2 mm

Characteristic	Measuring unit	Crosswise direction measurement	Lengthwise direction measurement (mean value)
Maximum distance of flame spread	mm	220	233.3
Critical heat flux (CHF)	kW/m²	8.7	**8.4**
Distance of flame spread at 10th min.	mm	200	206.7
HF-10	kW/m²	9.1	9.0
Distance of flame spread at 20th min.	mm	(-)	(-)
HF-20	kW/m²	(-)	(-)
Distance of flame spread at 30th min.	mm	(-)	(-)
HF-30	kW/m²	(-)	(-)
Maximum light attenuation	%	48.8	54.6
Integrated smoke value	% x min	307.8	**318.5**

Table 4 - Results of burning behaviour using a radiant heat source - total thickness: 7.0 mm

Characteristic	Measuring unit	Crosswise direction measurement	Lengthwise direction measurement (mean value)
Maximum distance of flame spread	mm	210	223.3
Critical heat flux (CHF)	kW/m²	8.9	**8.6**
Distance of flame spread at 10th min.	mm	180	213.3
HF-10	kW/m²	9.5	8.8
Distance of flame spread at 20th min.	mm	(-)	(-)
HF-20	kW/m²	(-)	(-)
Distance of flame spread at 30th min.	mm	(-)	(-)
HF-30	kW/m²	(-)	(-)
Maximum light attenuation	%	55.6	64.2
Integrated smoke value	% x min	324.8	**346.4**

2.6.3 Results of the reaction to fire classification

Table 5 – Reaction to fire classification

Product	Reaction to fire class	Additional class for smoke production	Final class
Heterogeneous PVC floor covering tiles (type: VINYL FLOORING-SPC), total thickness: 3.2 mm	B_{fl}	s1	**B_{fl} – s1**
Heterogeneous PVC floor covering tiles (type: VINYL FLOORING-SPC), total thickness: 7.0 mm	B_{fl}	s1	**B_{fl} – s1**

2.6.4 Formaldehyde emission result

Table 6 – Results of the formaldehyde emission

Product	Measuring unit	Test result (class)
Heterogeneous PVC floor covering tiles (type: VINYL FLOORING-SPC), total thickness: 7.0 mm	$mg.m^{-3}$	< 0.026[a)] (E1)

Note: [a)]- detection limit of the method

Notified Body NB 1023 has carried out the testing in accordance with the paragraph 1.4 of Annex V to the Regulation (EU) No 305/2011, as amended for the product specified in the Art. 2.3 of this Report **and concluded that**
all requirements of this paragraph of the above Regulation and the relevant harmonized standard have been met and this report may be issued as a basis for affixing CE marking to these products.

This Report is applicable only to products identically marked and named, such as those which were the subject to testing, provided that the products characteristics have not been changed or no significant changes in their production (materials, technology, manufacturing equipment, etc.) have been done.

3. List of documents used to elaborate the Test Report

- Application No. 753501871 for assessment of CE-marked construction products
- ČSN EN 14041 (91 7883): Pružné textilní a laminátové podlahové krytiny – Podstatné vlastnosti (Resilient, textile and laminate floor coverings – Essential characteristics)
- Test Report of accredited laboratory, reference No. 753501871-01, elaborated by ITC a.s., accredited laboratory No. 1004, in Zlín, on 20/05/2020
- Test Reports, references No. 20/P266 and 20/P267 , elaborated by Institut pro testování a certifikaci (ITC), a.s. CSI division - Centrum stavebního inženýrství Prague, Accredited test laboratory No.1007.4 on 05/06/2020
- Test Report of accredited laboratory, reference No. 753501871-03, elaborated by ITC a.s., accredited laboratory No. 1004, in Zlín, on 21/05/2020
- Classification Report using Results of Reaction to Fire No. 75 35 01871K/2020, elaborated by ITC, a.s. Zlín, on 05/06/2020

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Appendix C: Copy of Marking Plate

CE
ZHEJIANG ECO NEW MATERIAL CO., LTD. **20**
EN 14041:2004/AC:2006 Heterogeneous PVC flooring covering (type: VINYL FLOORING – SPC) Reaction to fire Class B_{fl}-s1 Slipperiness DS Formaldehyde E1

Note:

1. If the CE marking is reduced or enlarged the proportions given in the above graduated drawing must be respected.
2. The various components of the CE marking must have substantially the same vertical dimension, which may not be less than 5 mm.
3. CE marking and label shall be affixed visibly, legibly and indelibly.

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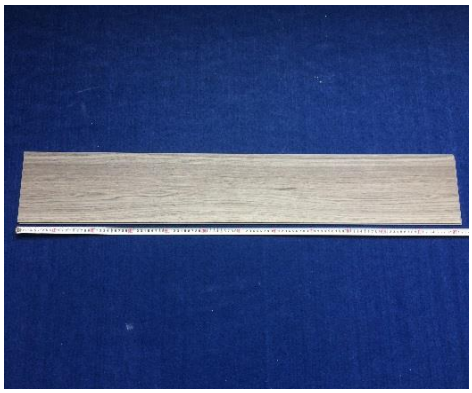
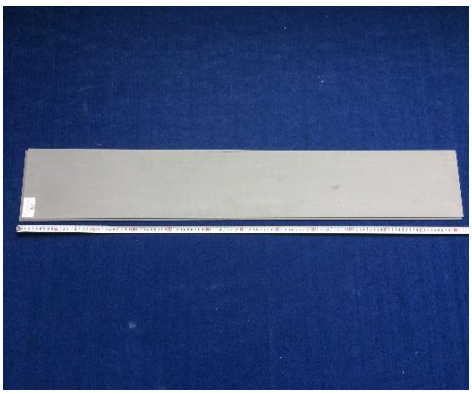
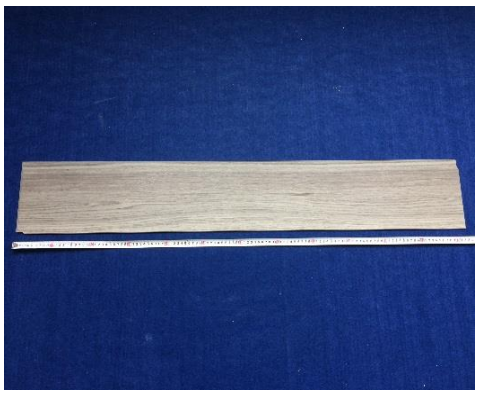
Appendix A: Sample Received Photo



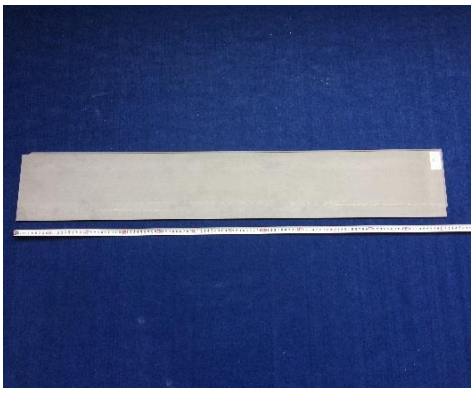
Front view(180*1220*3.2mm/0.2mm)



Back view(180*1220*3.2mm/0.2mm)

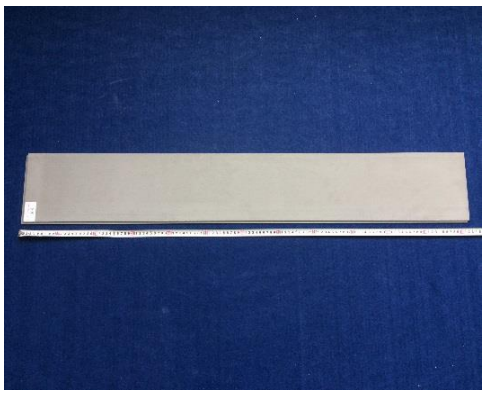


Front view(180*1220*4.0mm/0.3mm)

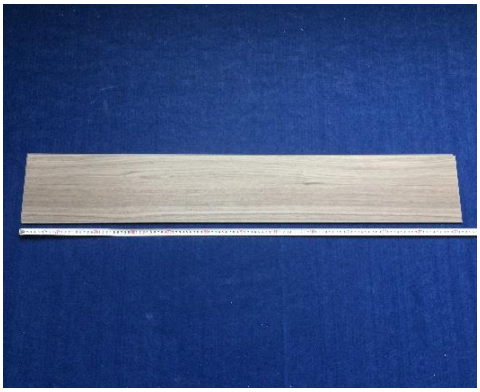


Back view(180*1220*4.0mm/0.3mm)

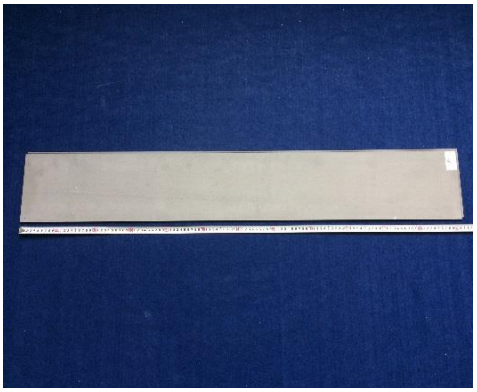
Front view(180*1220*5.0mm/0.55mm)



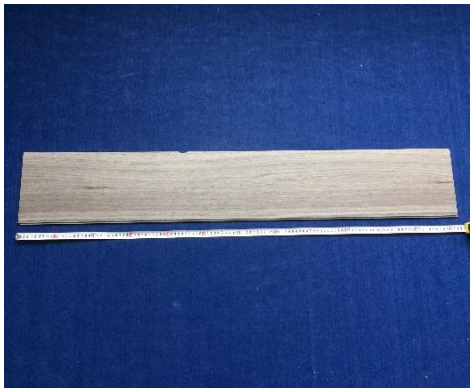
Back view(180*1220*5.0mm/0.55mm)



Front view(180*1220*6.0mm/0.55mm)



Back view(180*1220*6.0mm/0.55mm)



Front view(180*1220*7.0mm/0.55mm)

Back view(180*1220*7.0mm/0.55mm)

Revision:

NO.	Date	Changes	Author	Reviewer
200311012SHF-002	2020-06-12	First issue	Tod Qian	Sally Xie