Intertek

TEST REPORT
EN 649:1996/A1:2003
Resilient floor coverings-Homogeneous and heterogeneous polyvinyl chloride floor coverings -Specification

Report Reference No. ..... :	GZ10110720-1
Tested by (name and signature)..... :	Jacky Yao Jacky Yao
Approved by (name and signature) .. :	Jeff Deng Jeff Deng
Date of issue ..... :	December 16, 2010
Contents ..... :	Total test report 9 pages including: Report text:6 pages Appendix A for Resistance to staining:1 page Appendix B for Product photos: 2 pages
Testing Laboratory name ..... :	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Address ..... :	Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
Testing location ..... :	Same as above
Applicant's name ..... :	Vertex Floors Limited
Address ..... :	Room B&C, 15/F Hang Seng Causeway Bay Building, 28 Yee Wo Street, Causeway Bay, Hong Kong
Test specification:	
Standard ..... :	EN 649:1996/A1:2003, EN423, EN685, EN12667, DIN51130
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	TTRF EN 649:1997/A1:2010
TTRF Originator ..... :	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Master TTRF ..... :	Dated 2010-04
Test item description ..... :	Click Vinyl Plank 0.3mm wear layer
Trade Mark ..... :	BiDesign Clic / Allure Locking / Click Vinyl
Model and/or type reference ..... :	1210×190 ×5×0.3mm
Manufacturer ..... :	Vertex Floors Limited
Rating(s) ..... :	Class 31 (commercial moderate) & Class 23 (domestic heavy).

Copy of marking plate

Summary of testing:

The submitted samples were tested and evaluated, and found to comply with essential requirements of EN 649: 1996 and list results of several standards.

Test item particulars	
Classification of installation and use ..... :	Welding
Possible test case verdicts	
- 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)
Testing	
Date of receipt of test item..... :	November 15, 2010
Date (s) of performance of tests..... :	November 15, 2010 to December 3, 2010

General remarks:

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"(See remark #)" refers to a remark appended to the report.
"(See Appendix #)" refers to an appendix appended to the report.
Throughout this report a comma (point) is used as the decimal separator.

When determining the test result, measurement uncertainty has been considered.

General product information:

Click Vinyl Plank 0.3mm wear layer, model number: # 54616, heterogeneous floor coverings. Nominal overall dimension: 1210×190× 5mm, and the nominal thickness of wear layer: 0.3mm.

Refer to 'Appendix A Product Photos' for appearance.

Performance test			
Clause	Requirement - Test	Result - Remark	Verdict
4.1 Table 1	Roll form: EN 426 Length and Width: The length and width not less than the nominal values	Only for roll form.	N/A
	Tiles: EN 427 Side length Deviation ≤0.13% of nominal length up to 0.5 mm maximum Squareness and straightness for side length: ≤ 400 mm deviation allowed at any point ≤0,25mm > 400 mm deviation allowed at any point ≤0,35mm > 400 mm (intended for welding) deviation allowed at any point ≤0,50mm	Nominal dimension (L×W): 1210 ×190 mm Length: 1219.90 to1210.10mm; Width: 189.92 to 190.08mm; Maximum deviation: Length: 0.01%;Width: 0.04% Maximum deviation for squareness:0,18mm Straightness: 0,10mm.	P
	Overall Thickness: EN 428 The thickness no deviation nominal value $^{+0.13}_{-0.10}$; individual results no deviation average value ±0,15mm	Claimed: 5mm Tested: 5.02mm to 5.08mm Average value: 5.05mm	P
	Total mass per unit area: EN 430 The average value of total mass per unit area no deviation (-10%~+13%) of nominal value	Average tested: 9276g/m^2 Maximum deviation:2.2%	P
	Density for homogenous and wear layer of heterogeneous: EN 436(method A) The average density no deviation ±50kg/m^3 of nominal value	Density for wear layer Claimed: 1280± 50g /m^3	P
	Residual indentation: EN 433 The residual indentation shall be ≤0,1mm	Maximum: 0,07mm	P
	Dimensional stability after exposure to heat: EN 434 The dimensional variation after exposure to heat shall be , For sheets and tiles intended for welding not exceed 0,4% Tiles (intended for dry-joint laying): not exceed 0,25%.	Tiles intended for welding; Dimensional variation: 0, 01% to 0, 08%.	P

Performance test			
Clause	Requirement - Test	Result - Remark	Verdict
4.1 Table 1	Curling after exposure to heat: EN434 The curling after exposure to heat shall be, For sheets and tiles intended for welding not exceed 8mm; Tiles (intended for dry-joint laying): not exceed 2mm.	Tiles intended for welding; Curling: 0.01mm to 0.04mm.	P
	Flexibility: EN435 (method A) Bend the specimen by hand around the mandrel through an arc of 180° with 5s, note any superficial damage occurs in the surface.	Metal mandrels diameter:40mm No cracking	P
	Colour fastness to artificial light: ISO 105-B02 Colourfastness to artificial light shall be 6 minimum.	Grade: 6	P
4.2	Classification requirements		—
4.2.1	Classification requirement for wear groups: EN660-2 Floor coverings with a transparent wear layer are a prior group T and need not be tested.	Transparent wear layer Volume loss: 1.90 to 2.00mm^3 Wear group: T	P
4.2.2	Homogeneous products and wear layers	See clause 4.2.1	—
4.2.3	Level of use classification The products were classified as suitable for different levels of use in accordance with the performance requirements specified in Table 3 of EN 649 and EN 685. The thickness of wear layer was measured in accordance with EN 429. Castor chair test was tested in accordance with EN 425	See clause 4.2.1 for overall thickness. Nominal thickness of wear layer: 0.30mm; Measured: average 0.29mm Castor chair test result: No any significant appearance change Level of use classification: Class 23/31	P

<table>
<tr><td colspan="4">Performance test</td></tr>
<tr><td>Clause</td><td>Requirement - Test</td><td>Result - Remark</td><td>Verdict</td></tr>
<tr><td>—</td><td>Resistance to staining
According to EN 423:2001, Resilient floor coverings - Determination of resistance to staining.</td><td>Not affected, see Appendix A</td><td>—</td></tr>
<tr><td>—</td><td>Slip resistance
According to DIN 51130-2004 Testing of floor coverings Determination of the anti-slip property.
Classified as below,
<table>
<tr><td rowspan="5">Anti-slip Class</td><td>6° ~10°</td><td>R9</td></tr>
<tr><td>10° ~19°</td><td>R10</td></tr>
<tr><td>19° ~27°</td><td>R11</td></tr>
<tr><td>27° ~35°</td><td>R12</td></tr>
<tr><td>Above 35°</td><td>R13</td></tr>
</table></td><td>8.1°, Class: R9
Direction: along length axis</td><td>—</td></tr>
<tr><td>—</td><td>Thermal resistance
According to EN 12664:2001, Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Dry and moist products of medium and low thermal resistance.</td><td>0.067 $m^2 \cdot K/W$</td><td>—</td></tr>
<tr><td>5</td><td>Marking
Floor coverings covered by this standard and/or their packaging shall bear the following marking:
a) Number and date of this European Standard;
b) Manufacturer's or supplier's identification;
c) Product name;
d) Colour/pattern, and number batch and, if applicable, roll number;
e) Classes/symbols appropriate for the product;
f) For rolls: the length, width and thickness;
g) For tiles: the dimensions of a tile and the area in square meters contained in a package.</td><td>Refer to 'Copy of marking plate'</td><td>P</td></tr>
</table>

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Appendix A

Resistance to staining

Chemical substances	Duration of contact: 2 hours.
Lye (NaOH) 10%	Not affected
Soda 10%	Not affected
Hydrochloric acid 10%	Not affected
Citric acid 10%	Not affected
Light fuel oil (ethanol)	Not affected
White spirit(naphtha)	Not affected
Acetic acid 30%	Not affected

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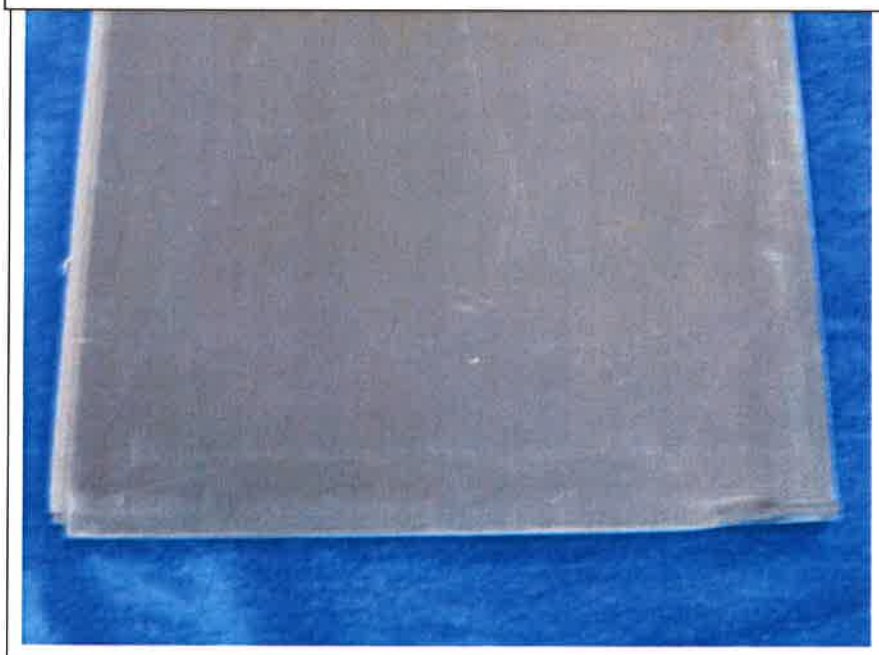
Appendix B

Product Photos

A.1 Front view

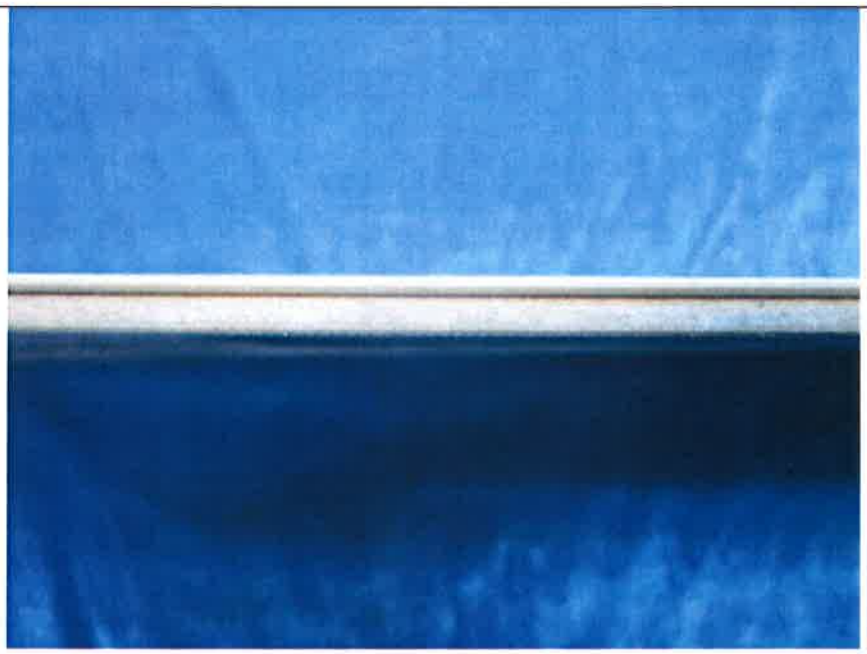


A.2 Back view

Appendix B

Product photos (continued)

A3 Overall view



A.4 Sectional view

**********End of Report**********