

FORESTER LAMINATE



FORESTER LAMINATE
慕木超耐磨地板



慕木超耐磨地板 CONCEPT 1

最溫潤木質的踩踏感受，就在慕木。
The stepping feeling of warm wood is in Mumu.



慕木 超耐磨地板
Forester Laminate



進口精品第一品牌
慕木超耐磨地板

迎接自然之美，精選高品質超耐磨木質地面，帶出優雅與溫暖，質地細膩、色澤自然，為居家添增永恆與舒適的美感。

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國際高端居家品牌

作為一家以裝飾板材為核心的美好場景服務商，依靠精益求精的產品品質，堅持客戶第一的原則，以健康品質贏得全球信賴，以研發創新引領時代之先，以質感美學，為世界締造美好。



耐久性 超群

超耐磨木地板擁有出色的耐磨性，適合於高流量的家庭空間或商業環境。

易於 保養

不需特別的保養程序，通常只需定期清潔即可保持地板的原始光澤，為你節省寶貴的時間和精力。

多樣化 選擇

從現代到古典風格，超耐磨木地板提供多樣的設計和顏色選擇，以滿足各種室內設計需求。

環保與 健康

選用高品質的材料，保證產品的環保性和對家庭健康的友好性，給你一個安全舒適的居家環境。

品牌 保證

慕木提供最高品質的超耐磨木地板，並支持多種安裝方式，讓你的選擇更加靈活。

**As close as it gets to real wood,
with all the benefits of laminate.**

在現代家居設計中，超耐磨木地板以其出色的耐久性和精緻的外觀，成為理想的地板選擇。這些地板融合了實木地板的溫暖感，卻克服了傳統木質地板容易受磨損的問題，讓你享受長久的美好時光而無需擔心地板的維護。



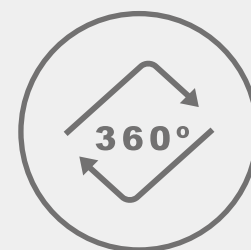
LOTO TEC 奈米晶盾

德國進口液態高分子疏水保護膜。



4V DRY 耐水鎖扣

近似真空超品密的拼接槽口，更加平整，滲漏無憂。



360°六面耐水科技

外抗潮濕，內阻黴菌。



慕木超耐磨木地板

寧靜而美好，輕輕漫過溫潤的白沙，感受到溫度的情緒，純粹的本色近乎不加修飾，雜染喧嘩已與您無關，有的只是一份靜怡與愜意。



慕木 | 現貨

1216x196x10mm
+AC4+V2G+4V+WAX



LF20122001
哥本哈根灰



LF20122002
奧斯陸白



LF20122003
赫爾辛基米



LF20122005
圖爾庫咖



LF20122004
坦佩雷棕

慕木 | 現貨規格

1216x196x10mm
+AC4+V2G+4V+WAX

尺寸	1216x196mm
厚度	10mm
耐磨等級	AC4
倒角	四邊V型倒角(4V)
卡扣	Välinge瑞典專利-V2G標準卡扣
包裝	7片/箱=1.67 M2(0.52坪)
基材標準	E2 standard. EN717
纖維板密度	HDF density≥830kgs/m2
甲醛釋放量	F3,≤1.5mg/L,CNS 11342
防焰性	CNS 7614(1994)
標準防水蠟	WAX
火源加熱時間	30sec
餘焰時間	0sec
餘燼時間	0sec
碳化長度	5cm



慕木 | 客訂

1216x196x10mm
1216x196x12mm



2008-7A



2004-8



91708-6



9346-1



K0285-3



2006-6



15019-1

慕木 | 客訂規格

1216x196x10mm

1216x196x12mm

尺寸	1216x196mm
厚度	10mm、12mm
耐磨等級	AC4
倒角	四邊V型倒角(4V)
卡扣	Välinge瑞典專利-V2G標準卡扣、V5G防水膠條卡扣
纖維板密度 與防水層	water-proof+30H、water-proof+80H water-proof：纖維板+防水膠條卡扣，30H/80H：防水時間
基材標準	E2 standard. EN717
規格選擇	10mm or 12mm - AC4+4V+V2G+wax - AC4+4V+V5G+30H+water-proof - AC4+4V+V5G+80H+water-proof

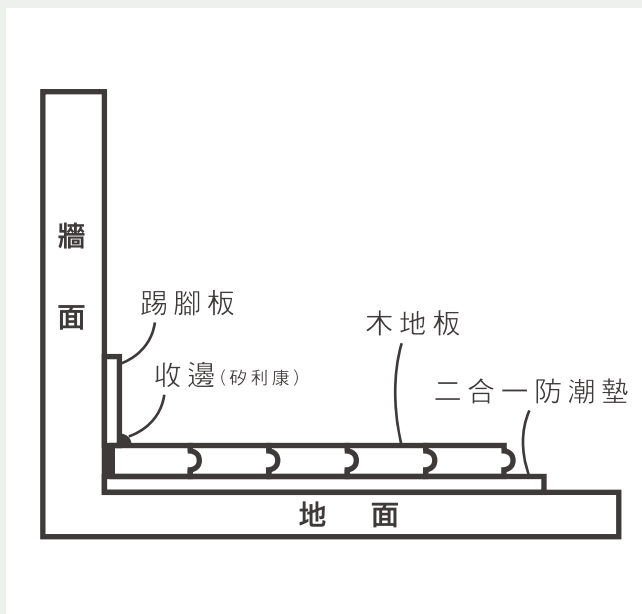
施工與保養



超耐磨施工方法

Construction

超耐磨地板一直是大家居家建材的首選，以下為超耐磨木地板的三種施工工法；施工前，確認地面是否平整，地坪高低誤差不能超過2mm，若超過則需用平鋪法或架高施作。



a. 直鋪法

為三種工法中最快速且最經濟實惠的施工法，但相反的，對地坪的平整度要求非常嚴格，地坪高低誤差值不能超過2mm。

施工步驟

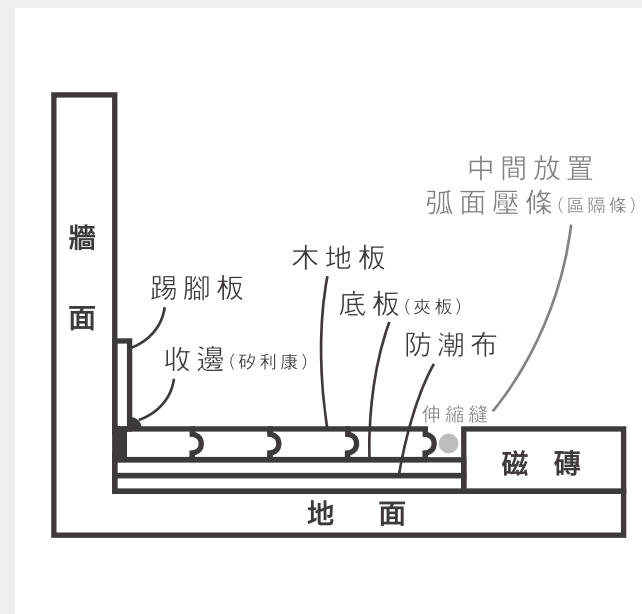
- ✓ 於原始地坪（磁磚/水泥地/粉光地）。
- ✓ 鋪上防潮降噪軟墊修飾高低差。
- ✓ 鋪設超耐磨木地板。
- ✓ 完成後四周打上矽利康或是安裝收邊條。

優點

- 1.價格實惠
- 2.最效率的施工速度
- 3.低蟲害
- 4.比較不會有噪音

缺點

- 1.地面不平整無法施作



b. 平鋪法

若現場高低差過大，建議使用平鋪法或者使用12mm厚度的超耐磨木地板，工法多一層夾板用於整平地坪，但因為夾板需用釘子固定，因此一定要請師傅評估現場地坪條件是否適合釘子，避免破壞到管線。

施工步驟

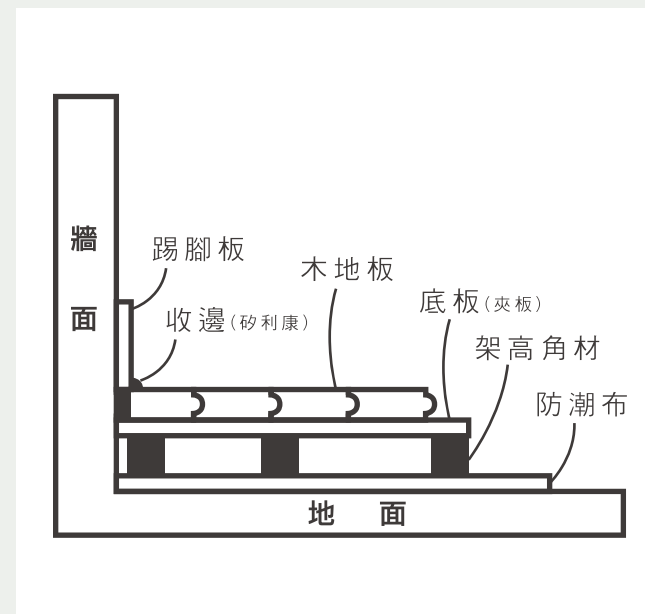
- ✓ 鋪上防潮降噪軟墊修飾高低差。
- ✓ 鋪設夾板（夾板常用的厚度3、4、5分厚度，根據現場狀況評估）。
- ✓ 鋪設超耐磨木地板。
- ✓ 完成後四周打上矽利康或是安裝收邊條。

優點

- 1.大部分空間都適用
- 2.可銜接高低差
- 3.採起來比較沈穩，不易產生雜音

缺點

- 1.地坪容易被破壞
- 2.夾板材質必須慎選，避免蟲害



c. 架高法

當地板水平狀況非常差，又無法等泥作順水平，即可使用架高法。

施工步驟

- ✓ 鋪上防潮降噪軟墊修飾高低差。
- ✓ 架設角材，鋪設夾板（夾板常用的厚度3、4、5分厚度，根據現場狀況評估）。
- ✓ 鋪設超耐磨木地板。
- ✓ 完成後四周打上矽利康或是安裝收邊條。

優點

- 1.可以克服地面凹凸不平的狀況
- 2.架高處可收納管線

缺點

- 1.施工較費時,單價較高
- 2.因高度增高,施作前需評估是否破壞空間格局設計
- 3.較容易產生蟲害(夾板+角材)



收邊配件 Finishing Touch

打造一個完美且精緻的空間，地板收邊也是關鍵角色，安裝超耐磨地板會遇到材料邊緣、銜接處、轉角等地方，都是以「收邊」進行修飾與保護。

為什麼需要收邊呢？

- 1.使裝潢更有完整度。
- 2.必免材質交接處度的縫隙藏污納垢。

a. 矽利康Silicone

矽利康作為地板收邊材料，因為施工限制少，以及在防水、彈性和耐久性方面具有顯著優勢，所以可以應用的範圍最廣，特別適用於需要防水和彈性收邊的場所。

然而，在清潔、顏色穩定性和硬度方面存在一些不足。因此，選擇矽膠作為收邊材料時，需要根據使用環境。以及需求評估是否可行。

b. 分隔條 / T 型條

轉換空間或轉換方向時，使用區隔條銜接兩邊的地板，例如房間門下到走廊的交界處，分隔條安裝時需先確認門片高度，若預留高度不足，則裁材切門片，確保門能流暢開關。

不論是超耐磨木地板或是石塑地板，都會熱脹冷縮，因此在空間四周都要預留伸縮縫，讓地板可以均勻的脹縮，超耐磨木地板至少要留8mm伸縮縫，若是門下沒有留伸縮縫，地板就容易往門口方向膨脹，導致地板壓擠變形。另外，超耐磨地板鋪設長度超過10米，也需要阻斷空間利用分隔條銜接。

c. 起步條

起步條型類似一個小斜坡，具弧度設計，主要作為異材質銜接（如六角花磚、玄關等），使高低差交界處流暢銜接，避免腳踢到而受傷。

d. 樓梯收邊條 / L 型條

形狀像一個L字，用於樓梯轉角處。

e. 踢腳板

安裝於與地板交接的牆面上，具下壓功能，可以使牆面與地板密合。由於顏色選擇較少，會造成整體視覺上的區隔，不具完整性，加上踢腳板具本身具有一定的厚度，突起造成家具不能靠牆，因此常常使用矽利康取代。

f. 特殊弧形

超耐磨收邊條無法彎曲塑形，遇到弧形收邊，通常都是使用矽利康。



清潔保養與維修 Cleaning points

慕木超耐磨木地板是易保養的地板，因為表面密封，非常容易清潔和維護。只要定期使用專用清潔液清潔表面、保護地板外觀，可以延長享受「新地板」的體驗。



全能地板清潔液

專為清潔強化地板、木地板和塑膠地板而發明。適合每日清潔。



維修工具

能輕鬆修復輕微損傷。



清潔工具選擇

超細纖維拖把，可將抹布沾溼清潔地板。

損耗計算 count

如何事先評估裝潢費用，以及避免貼到一半貨不夠延誤施工工期，計算損耗量是非常重要的一步，以下是計算超耐磨地板損耗的步驟和考慮因素。

a. 計算地板面積

首先，測量需要鋪設超耐磨的總面積：

矩形房間：長度 $\times$ 寬度 = 面積

不規則形狀房間：將房間分割成幾個簡單的矩形或其他可計算形狀，計算每個形狀的面積，最後相加即可。

b. 考慮損耗因素

地板損耗量取決於多種因素，包括：

- 切割損耗：在安裝過程中，地板需要切割以適應房間的形狀和尺寸，這會產生一些損耗。
- 設計損耗：如果地板有特定的設計或花紋，需要精確對齊，這會增加損耗。
- 備用地板：為了應對未來的維修或更換，需要保留一些備用地板。

c. 損耗百分比

根據不同的鋪貼方式，通常建議增加5%到10%的損耗量：

簡單安裝（矩形房間，無特別設計）：5%的損耗。

複雜安裝（不規則房間，有特定設計或花紋）：10%~15%的損耗。

d. 購買數量及建議

根據計算出的總面積進行購買，購買單位為一箱，購買時，可以根據損耗數量備用，整箱出貨，整箱退貨。

計算超耐磨地板的損耗量是一個關鍵步驟，可以確保安裝過程順利進行並避免材料短缺或浪費，讓工地順利完工。

國際認證 Certification



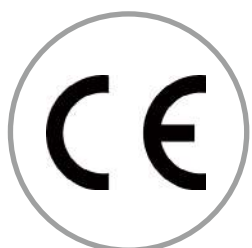
GREENGUARD GOLD綠色驗證 黃金級認證

美國環保認證，檢設項目眾多，標準嚴格，代表更健康、更清潔的居住環境。



FLOOR SCORE認證 地板產品化學物質的排放標準

美國環保認證，檢測地板產品、甲醛，檢測鋪裝居所的整體空氣質量。



CONFORMITE EUROPEENNE 歐盟CE認證

進入歐洲市場必備的環保認證，從源頭開始評估生產企業，是生產商進入歐美的護照。



兒童安全級認證

不僅對大家平時關注的甲醛釋放量做出嚴苛的限制，同時，對大家平時關注極少但對寶寶健康危害極大的可溶性重金屬(鉛、鉻、鎘)，刺激性揮發物質(苯、甲苯、二甲苯)等做出嚴格要求，對環保與健康的評價比新國際ENF更為全面。



美國CARB複合木材認證

美國加州的綠卡，綠色地板的代名詞，沒有CARB認證的複合木製品都不能進入其市場。



ISO9001、ISO14001國際認可證書

質量與環境的雙重國際認證，意味著企業在生產、環境管理及汙染物治理等方面達到了世界水平。



VOC A+法國認證

法國環保認證，模擬人們實際居住的室內環境，對產品的環保性進行的評級認證。



FSC™ 森林管理委員會認證

森林管理委員會頒發的認證，代表對環境負責，對社會有利的森林經營，級符合人類和環境需要的環保產品。



EPD第三類產品環境宣告

第三類環境宣告是因應全球暖化、氣候異常等議題所延伸出來的，基於產品生命週期之特性，依據ISO 14025標準(產品環境標誌與宣告)提供消費者量化且可比較之環境績效結果

Environmental Product Declaration

In accordance with EN 15804:2012+A2:2019 for:

Resilient flooring tile

from

Jiangsu BBL Home Technology Co., Ltd.



Programme: The International EPD® System, www.environdec.com
Programme operator: EPD International AB
EPD registration number: S-P-11120
Publication date: 2023-10-23
Valid until: 2028-10-23

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.bblhome.com.



General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 50 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification

Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR):
PCR 2019:14 Construction products, version 1.2.5

PCR review was conducted by: *IVL Swedish Environmental Research Institute*
Moderator: *Martin Erlandsson, Martin.erlandsson@ivl.se*

Life Cycle Assessment (LCA)

LCA accountability: *Zhou Jiangling, Xu Fangyan (Ecovene Environmental)*

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☑ EPD verification by individual verifier

Third-party verifier: *Sunil Kumar, SIP, Pvt Ltd (sunil@sip-sustainability.com)*

Approved by: The International EPD® System

OR

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☐ EPD verification by accredited certification body

Third-party verification: <name, organisation> is an approved certification body accountable for the third-party verification

The certification body is accredited by: <name of accreditation body & accreditation number, where applicable>

OR



Figure 1 BBL WPC resilient flooring tile manufacturing process

Product description:

BBL's resilient flooring series has a total of six series of products, including LVT (Luxury Vinyl Tile), LVT click (Luxury Vinyl Tile click), PP (Polypropylene), SPC (Stone Plastic Composite), EPC (Engineered Plastic Composite) and WPC (Wood Plastic Composite). The various series of flooring product shares the similar manufacturing processes and ingredients. According to the LCA analysis, WPC flooring product has the highest level of impact among the six series, hence in this EPD, WPC flooring tile, with various combinations of thickness, length and width of the tile, is selected as representative model. Among the WPC products, WPC with a thickness of 3.0 mm is the general specifications for each category, which can be abbreviated as WPC (5.0). A detailed flooring product specification is depicted below in Table 1 above.

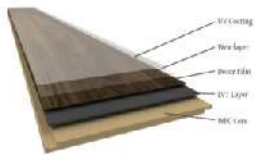


Figure 2 Structure of WPC floor

BBL's flooring tiles are 100% water-proof, and they use best plasticizer DOTP and 100% virgin material, which have passed certification of Floorscore, Green Guard Gold and Eurofin's indoor Air Quality Comfort.

UN CPC code:

38910 Floor coverings of plastics, in rolls or in the form of tiles; wall or ceiling coverings of plastics.

Geographical scope:

Global

LCA information



According to BBL, most of flooring products are used in Europe, North America, and the Asia-Pacific region. The disposal of the used flooring product will adopt a region average disposal mode following literature review. End of life disposal treatment process (C4) from environment will be used in this LCA study. For the waste scenario, 100km of road transportation (C2) from home to waste treatment site is assumed. According to BBL, the tile can be manually removed from the floor, hence input and output is omitted in deconstruction (C1), and waste processing (C3) stage of the life cycle. Table below shows the disposal in the target market.

Table 6 Disposal in the target market

Region		Ratio	Recycling Rate	Landfill Rate	Incineration Rate
Europe	EU ¹	30%	45.2%	19%	30.2%
	US ²	50%	18.5%	65.6%	16%
	The rest market				
North America	Australia ³	20%	80%	20%	0%
	The rest market				

Source:

¹ Eurostat, Recovery and recycling rates for packaging, 2020. (Last updated March 2023)

² Advancing Sustainable Materials Management: 2018 Fact Sheet. (Released December 2020)

³ National Waste Report 2022. (Released December 2022)

Modules declared, geographical scope, share of specific data (in GWP+GHG results) and data variation (in GWP+GHG results)

		Product stage			Construction process stage		Use stage								End of life stage				Resource recovery stage																
		Flow material supply																																	
		Transport			Manufacturing		Transport		Construction		Installation		Use		Maintenance		Repair		Replacement		Refurbishment		Operational energy use		Operational water use		Use-construction demolition		Transport		Waste processing		Disposal		
Module	Material declared	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4																	
	X	X	X	X	X	X	ND	X	ND	ND	ND	ND	ND	ND	X	X	X	X																	
Geography	CH	CH	CH	CH	GLC	GLC	ND	GLD	ND	ND	ND	ND	ND	ND	GLD	GLD	GLD	GLD																	
Specific data used	>90%																			-															
Variation - products	27.40%																			-															
Variation - sites	0%																			-															
																					Flow-to-Recovery potential														
																					X														
																					GLC														

Content information



Product components	EPC (5.0)	LVT (2.5)	LVT click (4.2)	PP (4.2)	SPC (5.0)	WPC (5.0)
Stone powder	65.60%	70.10%	70.10%	64.50%	67.40%	62.32%
PVC	21.30%	16.30%	16.30%	-	20.50%	26.51%
Other additive	0.92%	-	-	2.00%	0.80%	0.90%
Wearlayer	6.32%	7.50%	7.50%	-	10.00%	5.10%
Wearlayer-PVC free	-	-	-	0.22%	-	-
Stabilizer	1.32%	1.30%	1.30%	0.00%	1.10%	0.20%
UV coating	0.22%	0.20%	0.20%	0.22%	0.20%	0.20%
Carbon black	0.22%	0.20%	0.20%	0.12%	0.10%	0.20%
Lubricant	0.32%	-	-	0.22%	0.50%	0.80%
Film	0.12%	0.20%	0.20%	-	0.10%	0.10%
Emulsion free	-	-	-	0.22%	-	-
DOTP	-	9.20%	9.20%	-	-	2.00%
PP	-	-	-	23.60%	-	-
Spa	-	-	-	-	-	0.50%

Packaging materials	Weight, kg/DU	Weight biogenic carbon, kg C/DU
Packaging box	0.146	0.051
Tray	0.09h	0.047
Wrapping film	0.019	0
Packing belt	0.01	0

Results of the environmental performance indicator

BBL's resilient flooring series has a total of six series of products, including LVT (Luxury Vinyl Tile), LVT click (Luxury Vinyl Tile click), PP (Polypropylene), SPC (Stone Plastic Composite), EPC (Engineered Plastic Composite) and WPC (Wood Plastic Composite).



Plastic Composite) and WPC (Wood Plastic Composite), among which the environmental impact of WPC flooring is the largest. Therefore, the environmental impact value of WPC is selected as representative product for disclosure in this EPD report.

Mandatory impact category indicators according to EN 15804

Results per declared unit										
Impact category	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
GWP - total	kg CO ₂ e	1.34E+01	2.48E+00	1.58E+01	4.19E+00	0.00E+00	1.85E+00	0.00E+00	1.38E+00	3.17E+00
GWP - local	kg CO ₂ e	1.34E+01	2.48E+00	1.58E+01	4.19E+00	0.00E+00	1.85E+00	0.00E+00	1.38E+00	3.17E+00
GWP - biogenic	kg CO ₂ e	3.43E+00	4.75E+00	1.71E+01	2.33E+00	0.00E+00	1.54E+00	0.00E+00	1.09E+00	1.98E+00
GAP - global	kg CO ₂ e	1.32E+00	1.54E+00	2.52E+00	4.39E+00	0.00E+00	1.92E+00	0.00E+00	1.47E+00	3.17E+00
ODP	kg CFC-11	4.07E-04	5.14E-04	8.08E-04	1.54E-04	0.00E+00	1.22E-04	0.00E+00	1.64E-04	1.24E-04
AP	kg SO ₂ e	5.07E-02	5.25E-02	2.55E-01	1.64E-01	0.00E+00	1.86E-01	0.00E+00	1.45E-01	1.54E-01
CPHs water	kg H ₂ O	4.18E+00	4.19E+00	5.96E+00	1.48E+00	0.00E+00	1.31E+00	0.00E+00	1.59E+00	1.25E+00
EP - marine	kg H ₂ O	1.37E+00	4.18E+00	1.57E+00	1.58E+00	0.00E+00	1.36E+00	0.00E+00	0.93E+00	2.59E+00
EPHs total	kg H ₂ O	1.37E+00	4.18E+00	1.57E+00	1.58E+00	0.00E+00	1.36E+00	0.00E+00	0.93E+00	2.59E+00
POCP	kg CO ₂ e	3.77E+00	4.19E+00	1.21E+00	2.79E+00	0.00E+00	1.78E+00	0.00E+00	1.67E+00	3.69E+00
ADP - mineral	kg SO ₂ e	1.19E+00	4.29E+00	7.89E+00	1.13E+00	0.00E+00	1.11E+00	0.00E+00	1.25E+00	4.79E+00
ADP - fossil	kg SO ₂ e	1.19E+00	4.29E+00	7.89E+00	1.13E+00	0.00E+00	1.11E+00	0.00E+00	1.25E+00	4.79E+00
WDP	kg SO ₂ e	1.19E+00	4.29E+00	7.89E+00	1.13E+00	0.00E+00	1.11E+00	0.00E+00	1.25E+00	4.79E+00

* Declaration: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicators. The estimated impact results are only relative statements which do not indicate the order and extent of the impact categories, exceeding threshold values, safety margins or risks.

Additional mandatory and voluntary impact category indicators



Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
GWP - total	kg CO ₂ e	1.28E+00	2.48E+00	1.73E+00	7.53E+00	0.00E+00	1.02E+00	0.00E+00	1.03E+00	3.98E+00

Resource use indicators

Results per declared unit										
Impact category	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
PERRE	kg	2.43E+02	3.38E+01	3.87E+02	4.87E+01	0.00E+00	1.54E+01	0.00E+00	1.78E+00	-
PERC	kg	1.55E+01	2.88E+01	1.28E+02	1.25E+02	0.00E+00	5.44E+02	0.00E+00	2.24E+02	-
PERRM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	3.00E+00	-
PERM	kg	1.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	3.00E+00	-
PENRT	kg	2.43E+02	3.38E+01	3.87E+02	4.87E+01	0.00E+00	1.54E+01	0.00E+00	1.78E+00	-
PERT	kg	2.00E+01	2.88E+01	1.28E+02	1.25E+02	0.00E+00	5.44E+02	0.00E+00	7.32E+02	-
PW	m ³	0.05E+00	1.53E+01	1.34E+01	1.59E+00	0.00E+00	6.22E+02	0.00E+00	1.03E+01	-
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	3.00E+00	-
RS*	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	3.00E+00	-
NRSP	kg	0.00E+00	1.00E+00	0.00E+00	1.00E+00	0.00E+00	1.00E+00	0.00E+00	1.00E+00	-

Waste indicators

Results per declared unit										
Impact category	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Non-hazardous waste disposed	kg	4.10E+01	0.00E+00	1.07E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-



Radioactive waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
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Output flow indicators

Results per declared unit										
Impact category	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
CO ₂ equivalent for climate	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Methane for climate	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Material for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Copied electrical energy	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Copied thermal energy	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-

References

Genere Programme Instructions of the International EPD® System, Version 4.0.

PCR 2019:14 CONSTRUCTION PRODUCTS, Version 1.2.5

EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

Jiangsu BBL Home Technology Co., Ltd.

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材料暨工程實驗室-台中

試驗報告

報告編號: TB-23-07606
C-23-18274
頁數: 2 OF 2
報告發行日期: 113年01月11日

試驗結果:

試驗項目	試驗規格	試驗結果	方法/測試標準 (MDL)
一、主要型式: Forester Laminate 12mm (12mm, F3)	---	---	---
1.甲醛釋出量	CNS 11342:103年10月	---	---
最大值 (mg/L)	2.1 以下	1.3	3.05
平均值 (mg/L)	1.5 以下	1.2	3.05
2.標示檢查(非TAF認可項目, 僅就標示進行審查, 未評定實質內容)	CNS 11342第7條標示項目	中文標示標依符合	---
二、系列型式: Forester Laminate 10mm (10mm, F3)	---	---	---
1.甲醛釋出量	CNS 11342:103年10月	---	---
最大值 (mg/L)	2.1 以下	0.7	0.65
平均值 (mg/L)	1.5 以下	0.7	0.65

- 註: 1.評定 符合(依據103年1月02日修訂之CNS 11342執行檢驗)
#2 本報告附件共有:
(1)型式試驗分驗表2頁;(2)規格一覽表、商品斷面圖紙1頁;
(3)彩色照片(含厚度其尺規)1頁;(4)裝框概要及中文標示樣張2頁
3.試驗結果若低於方法偵測極限值(MDL)之判定值以“N.D.”表示;
若高於方法偵測極限值(MDL),但低於定量極限值(ODL)時,以“<C.L.”表示;
並註記明其實測值,定量極限值(CDL)為0.2 mg/L
4.N.D. = Not Detected / 未檢出
5.本試驗報告甲醛釋出量試驗為TAF認證範圍,其餘則非
6.樣品描述:複合木質地板
7.本實驗室執行試驗之地點同實驗室地址

本報告若有提供規範值時,該規範僅供參考,合格之判定以委託單位實際要求為準

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材料暨工程實驗室-台中

試驗報告

報告編號: TB-23-07606
C-23-18274
頁數: 1 OF 2
報告發行日期: 113年01月11日

標準檢驗局指定試驗室認可編號: SL3-JJ-C-0006

工程名稱: 型式試驗

承包廠商: ---

委託單位: 波蘭泰國際企業有限公司

供料廠商: ---

樣品名稱: 複合木質地板

主要型式: 型號(代號): Forester Laminate 12mm, 厚度: 12mm, 甲醛釋出量標示符號: F3

系列型式: 型號(代號): Forester Laminate 10mm, 厚度: 10mm, 甲醛釋出量標示符號: F3

送驗人員: 波蘭泰國際企業有限公司-盧宇廷

收件日期: 112年12月26日

試驗日期: 112年12月26日-113年01月11日

試驗方法: CNS 11342:103年10月

備註:

1.以上資料(會驗人員、試驗方法、試驗數量、收件日期及試驗日期除外)及下述報告內容標示#處係由顧客提供

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試驗結果: 請見下一頁

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材料暨工程實驗室-台中

試驗報告

報告編號: TB-24-03502
C-24-08623
頁數: 1 OF 1
報告發行日期: 113年05月28日

工程名稱: 自測

承包廠商: ---

委託單位: 波蘭泰國際企業有限公司

地址: 台北市內湖區行愛路77巷16號5樓

供料廠商: ---

樣品名稱: 複合木質地板

送驗人員: 波蘭泰國際企業有限公司-盧宇廷

收件日期: 113年05月17日

試驗日期: 113年05月17日-113年05月28日

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試驗結果:

試驗項目	試驗結果	試驗方法
對磨耗性 (磨耗A試驗)	迴轉500次後,仍留有表面七粒粗粒材料,基材未顯露	CNS 11342:2014
每迴轉100次之磨耗量(g)	0.026	

註: 1.耐磨耗性試驗之片數為2片,每片磨耗紙為AA-180,附加於每一磨耗輪之重量為500公克,

磨耗試驗機之旋轉盤的旋轉速度為60 r/min,試驗迴轉數為500轉

2.試驗樣品厚度為10.1mm

3.樣品描述:本地板

4.本實驗室執行試驗之地點同實驗室地址

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材料暨工程實驗室-台中

試驗報告

報告編號: TB-24-03501
C-24-08624
頁數: 1 OF 1
報告發行日期: 113年05月27日

工程名稱: 自測

承包廠商: ---

委託單位: 波蘭泰國際企業有限公司

地址: 台北市內湖區行愛路77巷16號5樓

供料廠商: ---

樣品名稱: 複合木質地板

送驗人員: 波蘭泰國際企業有限公司-盧宇廷

收件日期: 113年05月17日

試驗日期: 113年05月17日-113年05月27日

備註: 1.以上資料(會驗人員、試驗方法、試驗數量、收件日期及試驗日期除外)及下述報告內容標示#處係由顧客提供

2.除非另有說明,此報告結果僅適用於收取之試驗件

未經本公司事先書面同意,此報告不可部分複製

試驗結果:

試驗項目	試驗結果	試驗方法
防焰性	#火源加熱時間(sec)	30
	焰焰時間(sec)	0
	焰焰時間(sec)	0
	炭化長度(cm)	5

註: 1.樣品平均厚度 10.1mm

2.試驗者: 黃雲統

#3.測試面為表面(紋路面)

4.本試驗之樣品厚度不在試驗方法之適用範圍內(厚度須為5mm),故無法出具TAF標誌之報告

5.樣品描述: 本地板

6.本實驗室執行試驗之地點同實驗室地址

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本報告若有提供規範值時,該規範僅供參考,合格之判定以委託單位實際要求為準

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台灣檢驗科技股份有限公司 T (886-4) 2356-15-5 F (886-4) 2356-2557 www.sgs.com.tw

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材料暨工程實驗室-台中

試驗報告

報告編號: TB-23-07606
C-23-18274
頁數: 1 OF 2
報告發行日期: 113年01月11日

標準檢驗局指定試驗室認可編號: SL3-JJ-C-0006

工程名稱: 型式試驗

承包廠商: ---

委託單位: 波蘭泰國際企業有限公司

供料廠商: ---

樣品名稱: 複合木質地板

主要型式: 型號(代號): Forester Laminate 12mm, 厚度: 12mm, 甲醛釋出量標示符號: F3

系列型式: 型號(代號): Forester Laminate 10mm, 厚度: 10mm, 甲醛釋出量標示符號: F3

送驗人員: 波蘭泰國際企業有限公司-盧宇廷

收件日期: 112年12月26日

試驗日期: 112年12月26日-113年01月11日

試驗方法: CNS 11342:103年10月

備註:

1.以上資料(會驗人員、試驗方法、試驗數量、收件日期及試驗日期除外)及下述報告內容標示#處係由顧客提供

2.除非另有說明,此報告結果僅適用於收取之試驗件

未經本公司事先書面同意,此報告不可部分複製

試驗結果: 請見下一頁

-----1-----

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經濟部標準檢驗局 商品型式認可證書

Certificate of the Type Approval of Product
Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs



證書號碼: TAI13G2680011 號 00
Certificate

茲據波蘭泰國際企業有限公司 申請型式認可,
經審查結果符合規定,准予認可,並使用檢驗標識
及識別號碼: T3G268 其認可事項如下:

The application made by 波蘭泰國際企業有限公司 for Type Approval of Product and Identification No. T3G268. Details of the approval are as follows:

申請人: 波蘭泰國際企業有限公司

Applicant

地址: 臺北市內湖區行愛路77巷16號5樓之2

Address

產品種類名稱:

Type/name of

一、商品分類識別: 4411.92.93.00.5-E

C.C.C Code

二、中文名稱: 複合木質地板

Chinese name

三、英文名稱: Composite wood flooring

English name

四、型 式: Forester Laminate 12mm (12mm, F3)(中國、江蘇貝爾家

Type 居科技有限公司,中國江蘇省常州市武進區楊塘999號)

五、系列型式: Forester Laminate 10mm (10mm, F3)(以下空白)

Series Type

六、依據標準/日期: CNS11342 (1031009年版)

Standards / Date

標準檢驗局發證

This certificate shall be issued by the BSMI

本證書所載內容若有不符之處,以標準檢驗局系統登錄資料為主,並按證書資料網址:

<http://civil.bsmi.gov.tw>

認可日期: 中華民國 113 年 02 月 21 日

Approval Date 2024 (year) 02 (month) 21 (day)

本證書有效期限至 116 年 02 月 20 日

Expiration Date 2027 (year) 02 (month) 20 (day)

發證日期: 中華民國 113 年 02 月 21 日

Date of issue 2024 (year) 02 (month) 21 (day)

取得本證書後,商品仍需向經濟部標準檢驗局報驗並取得合格證書後,始完成檢驗程序。





TEST REPORT

No. : XMIN190701603CCM
Date : Jul.15, 2019
Page: 1 of 2

CUSTOMER NAME: JIANGSU BEIER DECORATION MATERIALS CO., LTD.
ADDRESS: NO.999, CHAOYANG ROAD, HENGLIN TOWN, WUJIN, CHANGZHOU, JS213101, CHINA

Sample Name: LAMINATE FLOOR
Spec: LOTO TECH LAMINATE FLOOR
Manufacturer: JIANGSU BEIER DECORATION MATERIALS CO., LTD.

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required: Selected test(s) as requested by applicant.
Date of Receipt: Jul.06, 2019
Testing Start Date: Jul.06, 2019
Testing End Date: Jul.16, 2019
Test Result(s): For further details, please refer to the following page(s).
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. Xiamen Branch
Testing Center

Bryan Horg
Authorized Signatory



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TEST REPORT

No. : XMIN190701603CCM
Date : Jul.15, 2019
Page: 2 of 2

Sample Information:
Flooring: See the photograph(s)
Test Result(s):

No.	Test Item(s)	Test Method(s)	Test condition	Test result(s)
1	Thickness swelling	EN 13323:2016 +A1:2017 & ISO 24336:2005	Soak condition: 160mmx60mmx12mm, 40pcs. Condition: 23±2°C, 50±5%RH, 48h Immersion condition: 20±1°C, 24 h	8.8%

Note: All test specimens were cut from the samples, see the photograph(s).

Specimen photograph(s):



Original sample
SGS authenticates the photo(s) on original report only
*****End of report*****



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TEST REPORT

No. : XMIN190500078CCM
Date : May.25, 2018
Page: 3 of 3

Specimen photograph(s):



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*****End of report*****



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TEST REPORT

No. : XMIN190300545CCM
Date : Mar.22, 2019
Page: 1 of 3

CUSTOMER NAME: JIANGSU BEIER DECORATION MATERIALS CO., LTD.
ADDRESS: NO.999 CHAOYANG ROAD, HENGLIN TOWN, CHANGZHOU, 213101, JIANGSU, CHINA

Sample Name: LAMINATE FLOORING
Spec: 1216*196*12mm
Manufacturer: JIANGSU BEIER DECORATION MATERIAL CO., LTD.

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test required: Selected test(s) as requested by applicant.
Date of Receipt: Mar.23, 2019
Testing Start Date: Mar.23, 2019
Testing End Date: Mar.22, 2019
Test result(s): For further details, please refer to the following page(s).
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. Xiamen Branch
Testing Center

Cui Huang
Authorized Signatory



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TEST REPORT

No. : XMIN190500078CCM
Date : May.25, 2018
Page: 1 of 3

CUSTOMER NAME: JIANGSU BEIER DECORATION MATERIALS CO., LTD.
ADDRESS: NO.999, CHAOYANG ROAD, HENGLIN TOWN, WUJIN, CHANGZHOU, JS213101, CHINA

Sample Name: LAMINATED FLOORING
Material: HDF
Spec: 1216*196*12mm
Buyer: FLOORING FOCUS LTD
Manufacturer: JIANGSU BEIER DECORATION MATERIALS CO., LTD.
Sample Information: L19-1504-01001

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Test Required: Selected test(s) as requested by applicant.
Date of Receipt: May.21, 2018
Testing Start Date: May.21, 2018
Testing End Date: May.24, 2018
Test Result(s): For further details, please refer to the following page(s).
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

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TEST REPORT

No. : XMIN190500078CCM
Date : May.25, 2018
Page: 2 of 3

Wet Pendulum Test
Test Method:
AS 4586-2013 Amd1 1-2017 Slip resistance classification of new pedestrian surface materials -
Appendix A - Wet Pendulum Test Method
Rubber slider: slider 96(FHD 9612 at 20±3 °C)
Specimens: Flooring, 160mmx150mmx12mm, 6pcs, see the photo(s):

Test Result:
Testing direction: perpendicular to length direction

Specimens identification No.	1	2	3	4	5	6
Mean of British Pendulum Number (for each test surface)	33	33	33	32	32	34
Slip resistance value (SRV "wet")	33					
Class	P2					

Classification of pedestrian surface materials according to the wet pendulum test

Class	Pendulum SRV (slider 96)
P5	>61
P4	45-54
P3	35-44
P2	25-34
P1	12-24
P0	<12

***** To be continued *****



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TEST REPORT

No. : XMIN190300545CCM
Date : Mar.22, 2019
Page: 2 of 3

Summary of test result:
(Average of result)

No.	Test Item(s)	Test method(s)	Test result(s)
1	Static coefficient of friction	ASTM C1025-07	Dry condition: 0.88 Wet condition: 0.58

***** To be continued *****



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TEST REPORT

No. : XMIN190300545CCM
Date : Mar.22, 2019
Page: 3 of 3

1. Static coefficient of friction
Test Method:
ASTM C1025-07 Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
Specimens: Flooring, 200mmx197mm cut from original samples, 3pcs
Testing surface: see photo
Test Result:

Static Coefficient of Friction for Dry Surface	0.88
Static Coefficient of Friction for Wet Surface	0.58

Specimen photograph(s):



Original samples
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*****End of report*****



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Jiangsu BBL Home Technology Company Limited

TEST REPORT

SCOPE OF WORK
Laminated Flooring

REPORT NUMBER
2304082113-HF-002

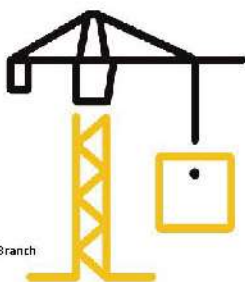
TEST DATE(S)
2023-07-03 ~ 2023-04-10

ISSUE DATE
2023-07-02

PAGES
2

DOCUMENT CONTROL NUMBER
LIT-VFAC-SHF-CP-108(September 1, 2022)
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Intertek Testing Services Shenzhen Ltd., Shanghai Fengqian Branch



Test Report

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8. Intertek B&C will serve as the record for the entire test record retention period. The test record retention period ends 6 years after this report's original issue date. The test record retention period for certification program is 10 years. Test records and other pertinent project documentation will be retained for the entire test record retention period.

9. The report was digital signed by Shangmo, Intertek Group plc, please use Adobe Acrobat Reader to verify the digital signature.

Version: Sep. 01, 2022

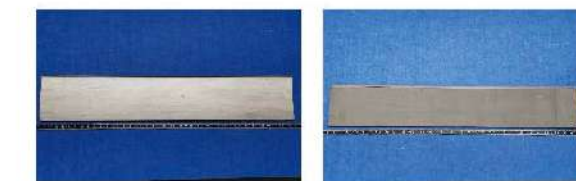
Page 2 of 2

LIT-VFAC-SHF-CP-108

Test Report

SCOPE OF WORK Laminated Flooring

REPORT NUMBER 2304082113-HF-002



Revisions

NO.	Date	Changes
2304082113-HF-002	2023-04-11	Final Issue

Page 2 of 2

Test Report

SCOPE OF WORK Laminated Flooring
Applicant: Jiangsu BBL Home Technology Company Limited
Address: NO.12 Changshu East Road, Fengqian Town, Chongming District, Shanghai City, Jiangsu Province, China
Attn: Tracy
Test Type: Performance test, samples provided by the applicant

Product Name	Laminated Flooring	Brand	Z
Sample Identification	Good Condition	Sample Amount	100
Sample ID	Model	Specimen Name	
2304090313-HF-002	Z	2318019616mm-2mmE-GV	

Test Method and Standard	EN 14552:2016
Specification Standard	Z
Test Conclusion	The sample meets test requirements according to the above standards, and the results are shown in the following graph.

Note:
1. This report does not involve sampling. The report only reflects conformity of the tested items of the sample provided by the testing applicant. The responsibility and authority of the authorized signatories or responsible persons of the testing applicant.

Report Authorized

Name: Han Hong
Title: Engineer
Signature: Han Hong
Date: 2023-07-02

Version: Sep. 01, 2022

Page 2 of 2

LIT-VFAC-SHF-CP-108

Test Report

SCOPE OF WORK Laminated Flooring

Test Items, Method and Results:

Test Item: Floor Content Screening (Floor Content Screening) (FCS)

Test Method: With reference to EN 14552:2016, by using the bomb and determining by ion chromatography

Test content list:

- Wear layer
- Loss layer
- Underlayment

Test Item	Result (mg/kg)	Unit (mg/kg)
Fluorine (F) Content	ND	ND

Note:

- Reporting limit > 20 mg/kg
- ND = Not detected, less than the reporting limit
- The test method is according to Model Test 1 - Packaging Legislation and draft amendments on PFAS test (1) in the "Guidelines for Testing of PFAS" (2023).
- Test Method: Ion Chromatography (IC) with Intertek Testing Service (Shanghai) Limited, Shanghai, China

Version: Sep. 01, 2022

Page 1 of 1

LIT-VFAC-SHF-CP-108

TEST REPORT

No. : XMNI180500679CCM
Date : May 25, 2018
Page: 2 of 3

Wet Pendulum Test

Test Method:

AS 4586-2013 And 1-2017 Slip resistance classification of new pedestrian surface materials -

Appendix A - Wet Pendulum Test Method

Rubber slider: slider 96 (RHD 96) at 23±0.5°C

Specimens: Flooring: 180mm x 150mm x 2mm, 6 pcs, see the photo(s)

Test Result:

Testing direction: perpendicular to length direction

Specimens Identification No.	1	2	3	4	5	6
Mean of British Pendulum Number (for each test surface)	33	30	33	32	32	34
Slip resistance value (SRV "wet")	33					
Class	P2					

Classification of pedestrian surface materials according to the wet pendulum test

Class	Pendulum SRV (slider 96)
P5	>54
P4	45-54
P3	35-44
P2	25-34
P1	12-24
P0	<12

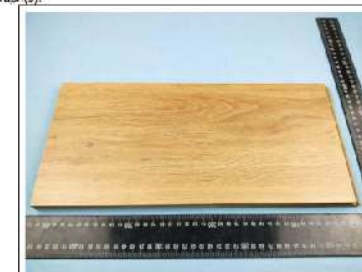
***** To be continued *****

Intertek Testing Services Shenzhen Ltd., Shanghai Fengqian Branch
Floor 5, No. 6368 Dapeng Road, Fengqian District, Shanghai, China
Tel: +86 21 61189622 Fax: 021-61189922
Website: www.intertek.com

TEST REPORT

No. : XMNI180500679CCM
Date : May 25, 2018
Page: 3 of 3

Specimen photograph(s):



SGS authenticate the photo(s) on original report; only
*****End of report*****

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出 刊 日 期：2024年

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