



SHI PRODUCT PASSPORT

Find products. Certify buildings.

SHI Product Passport No.:

15309-10-1013

Unilin Parkett

Product group: Parquet



Unilin Flooring Deutschland GmbH
Reisholzer Werftstraße 33
40589 Düsseldorf



Product qualities:



Köttner

Helmut Köttner
Scientific Director

Freiburg, 02 February 2026



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The SHI Database is the first and only database for construction products whose comprehensive processes and data accuracy are regularly verified by the independent auditing company SGS-TÜV Saar





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SHI Product Assessment 2024

Since 2008, Sentinel Holding Institut GmbH (SHI) has been establishing a unique standard for products that support healthy indoor air. Experts carry out independent product assessments based on clear and transparent criteria. In addition, the independent testing company SGS regularly audits the processes and data accuracy.

Criteria	Product category	Harmful substance limit	Assessment
SHI Product Assessment	Wood-based floor coverings	TVOC $\leq 300 \mu\text{g}/\text{m}^3$ Formaldehyd $\leq 36 \mu\text{g}/\text{m}^3$	Indoor Air Quality Certified
Valid untill: 30 May 2026			



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QNG - Qualitätssiegel Nachhaltiges Gebäude

The Qualitätssiegel Nachhaltiges Gebäude (Quality Seal for Sustainable Buildings), developed by the German Federal Ministry for Housing, Urban Development and Building (BMWSB), defines requirements for the ecological, socio-cultural, and economic quality of buildings. The Sentinel Holding Institut evaluates construction products in accordance with QNG requirements for certification and awards the QNG ready label. Compliance with the QNG standard is a prerequisite for eligibility for the KfW funding programme. For certain product groups, the QNG currently has no specific requirements defined. Although classified as not assessment-relevant, these products remain suitable for QNG-certified projects.

Criteria	Pos. / product group	Considered substances	QNG assessment
3.1.3 Schadstoffvermeidung in Baumaterialien	2.3 Multi-layer wood parquet, bamboo coverings, and floor coverings on wood-based panels	VOC / Emissions / hazardous substances	QNG ready
Verification: Prüfbericht des Instituts Eurofins Product Testing A/S Nr. 392-2024-00159601_A_EN vom 30.05.2024			



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DGNB New Construction 2023

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings. The 2023 version sets high standards for ecological, economic, socio-cultural, and functional aspects throughout the entire life cycle of a building.

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 03.05.2024 (3rd edition)	47c Wood-based materials in floor coverings	VVOCs, VOC, SVOC emissions and content of hazardous substances	Quality level 4
Verification: Prüfbericht des Instituts Eurofins Product Testing A/S Nr. 392-2024-00159601_A_EN vom 30.05.2024			

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 29.05.2025 (4th edition)	47c Floor coverings for indoor use (with wooden components)	VVOCs, VOC, SVOC emissions and content of hazardous substances	Quality level 4
Verification: Prüfbericht des Instituts Eurofins Product Testing A/S Nr. 392-2024-00159601_A_EN vom 30.05.2024			



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DGNB New Construction 2018

The DGNB System (German Sustainable Building Council) assesses the sustainability of various types of buildings. It can be applied to both large-scale private and commercial projects as well as smaller residential buildings.

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact	47a Industrially manufactured products	Formaldehyde	Quality level 4
Verification: Prüfbericht des Instituts Eurofins Product Testing A/S Nr. 392-2024-00159601_A_EN vom 30.05.2024			



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BNB-BN Neubau V2015

The Bewertungssystem Nachhaltiges Bauen (Assessment System for Sustainable Building) is a tool for evaluating public office and administrative buildings, educational facilities, laboratory buildings, and outdoor areas in Germany. The BNB was developed by the former Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and is now overseen by the Federal Ministry for Housing, Urban Development and Building (BMWSB).

Criteria	Pos. / product type	Considered substance group	Quality level
1.1.6 Risiken für die lokale Umwelt	2b Wood-based floor coverings – also systems	VOC / hazardous substances	Quality level 3
Verification: Prüfbericht des Instituts Eurofins Product Testing A/S Nr. 392-2024-00159601_A_EN vom 30.05.2024			



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EU taxonomy

The EU Taxonomy classifies economic activities and products according to their environmental impact. At the product level, the EU regulation defines clear requirements for harmful substances, formaldehyde and volatile organic compounds (VOCs). The Sentinel Holding Institut GmbH labels qualified products that meet this standard.

Criteria	Product type	Considered substances	Assessment
DNSH - Pollution prevention and control	Floor coverings (including associated adhesives and sealants)	Substances according to Annex C, formaldehyde, carcinogenic VOCs category 1A/1B	EU taxonomy compliant
Verification: Prüfbericht des Instituts Eurofins Product Testing A/S Nr. 392-2024-00159601_A_EN vom 30.05.2024. Sicherheitsdatenblatt.			



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BREEAM DE Neubau 2018

BREEAM (Building Research Establishment Environmental Assessment Methodology) is a UK-based building assessment system that evaluates the sustainability of new constructions, refurbishments, and conversions. Developed by the Building Research Establishment (BRE), the system aims to assess and improve the environmental, economic, and social performance of buildings.

Criteria	Product category	Considered substances	Quality level
Hea 02 Indoor Air Quality	Flooring materials (including floor levelling compounds and resin flooring)	Emissions: Formaldehyde, TVOC, TSVOC, carcinogens	Exemplary quality
Verification: Prüfbericht des Instituts Eurofins Product Testing A/S Nr. 392-2024-00159601_A_EN vom 30.05.2024.			



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Product labels

In the construction industry, high-quality materials are crucial for a building's indoor air quality and sustainability. Product labels and certificates offer guidance to meet these requirements. However, the evaluation criteria of these labels vary, and it is important to carefully assess them to ensure products align with the specific needs of a construction project.



This product is SHI Indoor Air Quality certified and recommended by Sentinel Holding Institut. Indoor-air-focused construction, renovation, and operation of buildings is made possible by transparent and verifiable criteria thanks to the Sentinel Holding concept.



Products bearing the Sentinel Holding Institute QNG-ready seal are suitable for projects aiming to achieve the "Qualitätssiegel Nachhaltiges Gebäude" (Quality Seal for Sustainable Buildings). QNG-ready products meet the requirements of QNG Appendix Document 3.1.3, "Avoidance of Harmful Substances in Building Materials." The KfW loan program Climate-Friendly New Construction with QNG may allow for additional funding.



The IBU ("Institut Bauen und Umwelt e.V.") is an initiative of building product manufacturers committed to sustainability in construction. It serves as the programme operator for Environmental Product Declarations (EPDs) in accordance with the EN 15804 standard. The IBU EPD programme provides comprehensive life cycle assessments and environmental impact data for construction products, supported by independent third-party verification.



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Legal notices

(*) These criteria apply to the construction project as a whole. While individual products can positively contribute to the overall building score through proper planning, the evaluation is always conducted at the building level. The information was provided entirely by the manufacturer.

Find our criteria here: <https://www.sentinel-holding.eu/de/Themenwelten/Pr%C3%BCfverfahren/C3%BCr%20Produkte>

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Publisher

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Allgemeine Angaben	
Paneel	1820 / 2200 x 190 mm
Gesamtstärke	13 mm
Anzahl der Paneele pro Packung	6
Verschachtelte Länge	Maximal 1 Planke von 6
m² pro Packung	2,075 / 2,508 m²

Paneelaufbau				
1. Veredelung	Lack UV	Anti-Kratz-Beschichtung		5 - 7 Schichten
2. Deckschicht		PEFC kontrollierte Herkunft	EN 13489	± 2,5 mm
3. Trägerplatte		PEFC kontrollierte Herkunft		HDF Mastercore
4. Gegenzug		PEFC kontrollierte Herkunft	Holz furnier	2 mm
Nut und Feder			Länge	Uniclic
			Breite	Uniclic Multifit



Garantie		
Wohnzwecke	Siehe Garantiebedingungen	Lebenslang
Uniclic - Multifit-Verbindung		Lebenslang
Gewerbliche Nutzung		5 Jahren
"Wood for Life" Surface & Edge Protection	Siehe Garantiebedingungen	15 Jahren
Wasserbeständigkeit	Siehe Garantiebedingungen	15 Jahren

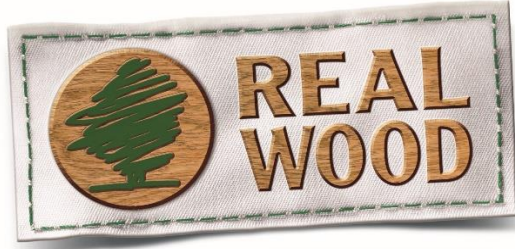
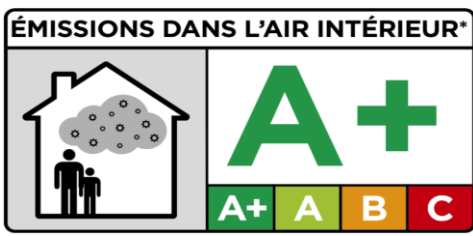
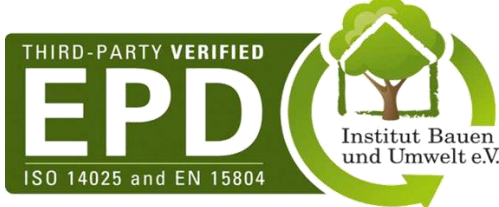
Oberflächenschicht	
Holzart	Eiche
Herkunft	Europa
Natürliche Varianz	Durch natürliche Einflüsse kann die Musterfarbe von den gelieferten Oberflächen abweichen
Oberflächenbehandlungen	Vgl. Verlegeanweisungen

Sortierung			
Gemäß EN 13489:2002 freie Klasse			
	Nature	Marquant	Vibrant
	Anzeige des Elements		
Gesunder Splint	Zulässig, farbig gebeizt	Zulässig, farbig gebeizt	Zulässig, farbig gebeizt
Äste (fest verwachsen)	Kleine Äste erlaubt, Vollfüllung	Äste mittlerer Größe erlaubt, halb oder vollständig gefüllt	Große Äste erlaubt, halb oder vollständig gefüllt
Durchfalläste	Nicht erlaubt	Zulässig bei geschlossenem Riss ≤ 1/2 der Diele	Unbegrenzt erlaubt
Rindeneinwuchs	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt
Blitzriss	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt
Kornstruktur	Unbegrenzt	Unbegrenzt	Unbegrenzt
Gesunder Kern	Zulässig	Zulässig	Zulässig
Farbvariation	Leichte natürliche Variation	Lebhafte Abwechslung	Sehr lebhafte Variation
Stapellattenmarkierung	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt
Markstrahlen	Zulässig	Zulässig	Zulässig
Biologische Abbaubarkeit	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt
	Nicht sichtbare Teile		
Alle Merkmale sind ohne Einschränkung hinsichtlich Größe oder Menge zulässig, wenn diese die Festigkeit oder Tragequalität des Parkettbodens nicht beeinträchtigen			

Verlegung		Normbedingungen	
Schwimmend		Auf einer Quick-Step Unterlage	Vgl. Verlegeanweisungen
Fest verklebt		Quick-Step Polymer-Harz	Vgl. Verlegeanweisungen
Andorderungen der verlegte Fläche	EN 13489	Höhendifferenzen (mm)	≤ 0,20
		Differenzen in der Breite (mm)	≤ 0,20
		Schüsseling in der Länge %	≤ 0,1
		Schüsseling in der Breite %	≤ 0,2
Stabilität bei Klimawechel	ISO 24339 Änderung 30 - 85 RH	Schüsselung quer max %	≤ 0,30
		Schüsselung quer min %	≥ - 0,20
		Fugenöffnung quer (mm)	≤ 0,20
		Fugenöffnung längs (mm)	≤ 0,30
Fußbodenheizung	Geeignet	Siehe besondere Hinweise	

Klassifizierungseigenschaften				
Wasserdichtigkeit	ISO 4760	Qualitative Bewertung für die Quellung nach der Erholung		1
		Quantitative Bewertung für Quellung nach der Erholung		< 0,1mm
		wasserdurchlässige mechanische Verbindung		Beständigkeit mechanischer
Abriebbeständigkeit	SIS 923509	Fallender Sand		800 - 1000
	DIN 68861	S33		100 - 1050
Fleckenunempfindlichkeit	EN 13442	Böden mit Surface Protect+ (nur lackiert)		Klasse 5
CE	EN 14342:2013	Notifizierte Stelle	NB 0766 - EPH Dresden	DOP: auf pack
UKCA	EN 14342:2013	Zugelassene Stelle	AB 0321 - Satra UK	DOP: auf pack
Bürostühle	ISO 4918	Getestet mit Unterlage		25.000
Rutschfestigkeit	CEN/TS 15676: 2008	Trockenpendeltest	Abhängig von Struktur und Oberflächenbehandlung	USRV 37-57
Formaldehydemission	EN 717-1			≤ E1
PCP	CEN/TR 14823:2004			≤ 5 ppm
Wärmewiderstand	EN12664:2001			0,11 m².K/W
Brandklasse	EN 13501-1			Cfl-s1

Umweltzertifikate		
AFFSET	A+	Frankreich
PEFC	PEFC/07-32-37	
EPD	Auf Anfrage	





Allgemeine Angaben	
Paneel	1820 x 220 mm
Gesamtstärke	13 mm
Anzahl der Paneele pro Packung	4
Verschachtelte Länge	Maximal 1 Planke von 6
m² pro Packung	1,602 m²

Paneelaufbau				
1. Veredelung	Lack UV	Anti-Kratz-Beschichtung		5 - 7 Schichten
2. Deckschicht		PEFC kontrollierte Herkunft	EN 13489	± 2,5 mm
3. Trägerplatte		PEFC kontrollierte Herkunft		HDF Mastercore
4. Gegenzug		PEFC kontrollierte Herkunft	Holz furnier	2 mm
Nut und Feder			Länge	Uniclic
			Breite	Uniclic Multifit



Garantie		
Wohnzwecke	Siehe Garantiebedingungen	Lebenslang
Uniclic - Multifit-Verbindung		Lebenslang
Gewerbliche Nutzung		5 Jahren
"Wood for Life" Surface & Edge Protection	Siehe Garantiebedingungen	15 Jahren
Wasserbeständigkeit	Siehe Garantiebedingungen	15 Jahren

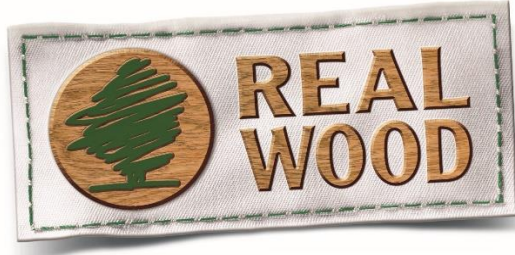
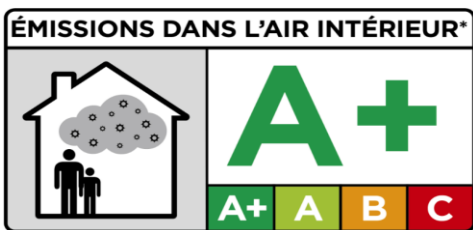
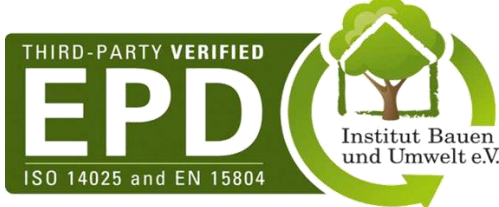
Oberflächenschicht	
Holzart	Eiche
Herkunft	Europa
Natürliche Varianz	Durch natürliche Einflüsse kann die Musterfarbe von den gelieferten Oberflächen abweichen
Oberflächenbehandlungen	Vgl. Verlegeanweisungen

Sortierung										
Gemäß EN 13489:2002 freie Klasse										
	<table><tr><th>Nature</th><th>Marquant</th><th>Vibrant</th></tr><tr><td colspan="3">Anzeige des Elements</td></tr></table>			Nature	Marquant	Vibrant	Anzeige des Elements			
Nature	Marquant	Vibrant								
Anzeige des Elements										
Gesunder Splint	Zulässig, farbig gebeizt		Zulässig, farbig gebeizt							
Äste (fest verwachsen)	Kleine Äste erlaubt, Vollfüllung	Äste mittlerer Größe erlaubt, halb oder vollständig gefüllt	Große Äste erlaubt, halb oder vollständig gefüllt							
Durchfalläste	Nicht erlaubt	Zulässig bei geschlossenem Riss ≤ 1/2 der Diele	Unbegrenzt erlaubt							
Rindeneinwuchs	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
Blitzriss	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
Kornstruktur	Unbegrenzt	Unbegrenzt	Unbegrenzt							
Gesunder Kern	Zulässig	Zulässig	Zulässig							
Farbvariation	Leichte natürliche Variation	Lebhafte Abwechslung	Sehr lebhafte Variation							
Stapellattenmarkierung	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
Markstrahlen	Zulässig	Zulässig	Zulässig							
Biologische Abbaubarkeit	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
	Nicht sichtbare Teile									
Alle Merkmale sind ohne Einschränkung hinsichtlich Größe oder Menge zulässig, wenn diese die Festigkeit oder Tragequalität des Parkettbodens nicht beeinträchtigen										

Verlegung		Normbedingungen	
Schwimmend		Auf einer Quick-Step Unterlage	Vgl. Verlegeanweisungen
Fest verklebt		Quick-Step Polymer-Harz	Vgl. Verlegeanweisungen
Andorderungen der verlegte Fläche	EN 13489	Höhendifferenzen (mm)	≤ 0,20
		Differenzen in der Breite (mm)	≤ 0,20
		Schüsseling in der Länge %	≤ 0,1
		Schüsseling in der Breite %	≤ 0,2
		Schüsselung quer max %	≤ 0,30
Stabilität bei Klimawechel	ISO 24339 Änderung 30 - 85 RH	Schüsselung quer min %	≥ - 0,20
		Fugenöffnung quer (mm)	≤ 0,20
		Fugenöffnung längs (mm)	≤ 0,30
Fußbodenheizung	Geeignet	Siehe besondere Hinweise	

Klassifizierungseigenschaften				
Wasserdichtigkeit	ISO 4760	Qualitative Bewertung für die Quellung nach der Erholung		1
		Quantitative Bewertung für Quellung nach der Erholung		< 0,1mm
		wasserdurchlässige mechanische Verbindung		Beständigkeit mechanischer 800 - 1000
Abriebbeständigkeit	SIS 923509	Fallender Sand		
	DIN 68861	S33		100 - 1050
Fleckenunempfindlichkeit	EN 13442	Böden mit Surface Protect+ (nur lackiert)		Klasse 5
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Umweltzertifikate		
AFFSET	A+	Frankreich
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EPD	Auf Anfrage	





Allgemeine Angaben	
Paneel	1820 / 2200 x 145 mm
Gesamtstärke	13 mm
Anzahl der Paneele pro Packung	6
Verschachtelte Länge	Maximal 1 Planke von 6
m² pro Packung	1,583 / 1,914 m²

Paneelaufbau				
1. Veredelung	Lack UV	Anti-Kratz-Beschichtung		5 - 7 Schichten
2. Deckschicht		PEFC kontrollierte Herkunft	EN 13489	± 2,5 mm
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4. Gegenzug		PEFC kontrollierte Herkunft	Holz furnier	2 mm
Nut und Feder		Länge		Uniclic
		Breite		Uniclic Multifit



Garantie		
Wohnzwecke	Siehe Garantiebedingungen	Lebenslang
Uniclic - Multifit-Verbindung		Lebenslang
Gewerbliche Nutzung		5 Jahren
"Wood for Life" Surface & Edge Protection	Siehe Garantiebedingungen	15 Jahren
Wasserbeständigkeit	Siehe Garantiebedingungen	15 Jahren

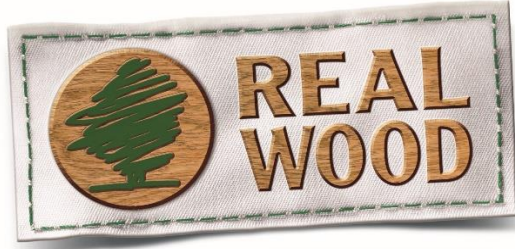
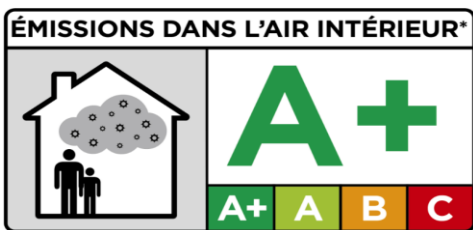
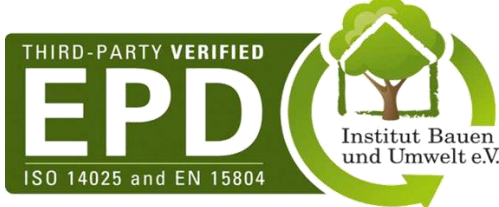
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Durchfalläste	Nicht erlaubt	Zulässig bei geschlossenem Riss ≤ 1/2 der Diele	Unbegrenzt erlaubt							
Rindeneinwuchs	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
Blitzriss	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
Kornstruktur	Unbegrenzt	Unbegrenzt	Unbegrenzt							
Gesunder Kern	Zulässig	Zulässig	Zulässig							
Farbvariation	Leichte natürliche Variation	Lebhafte Abwechslung	Sehr lebhafte Variation							
Stapellattenmarkierung	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
Markstrahlen	Zulässig	Zulässig	Zulässig							
Biologische Abbaubarkeit	Nicht erlaubt	Nicht erlaubt	Nicht erlaubt							
	<table><tr><td>Nicht sichtbare Teile</td></tr></table>			Nicht sichtbare Teile						
Nicht sichtbare Teile										
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Verlegung		Normbedingungen	
Schwimmend		Auf einer Quick-Step Unterlage	Vgl. Verlegeanweisungen
Fest verklebt		Quick-Step Polymer-Harz	Vgl. Verlegeanweisungen
Andorderungen der verlegte Fläche	EN 13489	Höhendifferenzen (mm)	≤ 0,20
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Fußbodenheizung	Geeignet	Siehe besondere Hinweise	

Klassifizierungseigenschaften				
Wasserdichtigkeit	ISO 4760	Qualitative Bewertung für die Quellung nach der Erholung	1	
		Quantitative Bewertung für Quellung nach der Erholung	< 0,1mm	
		wasserdurchlässige mechanische Verbindung	Beständigkeit mechanischer 800 - 1000	
Abriebbeständigkeit	SIS 923509	Fallender Sand		
	DIN 68861	S33	100 - 1050	
Fleckenunempfindlichkeit	EN 13442	Böden mit Surface Protect+ (nur lackiert)	Klasse 5	
CE	EN 14342:2013	Notifizierte Stelle	NB 0766 - EPH Dresden	DOP: auf pack
UKCA	EN 14342:2013	Zugelassene Stelle	AB 0321 - Satra UK	DOP: auf pack
Bürostühle	ISO 4918	Getestet mit Unterlage	25.000	
Rutschfestigkeit	CEN/TS 15676: 2008	Trockenpendeltest	Abhängig von Struktur und Oberflächenbehandlung	USRV 37-57
Formaldehydmission	EN 717-1	≤ E1		
PCP	CEN/TR 14823:2004	≤ 5 ppm		
Wärmewiderstand	EN12664:2001	0,11 m².K/W		
Brandklasse	EN 13501-1	Cfl-s1		

Umweltzertifikate		
AFFSET	A+	Frankreich
PEFC	PEFC/07-32-37	
EPD	Auf Anfrage	



Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial
Registration number REACH : Not applicable (article)
Product type REACH : Article

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant identified uses

Multilayer wood floors

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the Product Safety Information Sheet:

Supplier of the Product Safety Information Sheet

UNILIN Group
Ooigemstraat 3
B-8710 Wielsbeke-Ooigem
☎ +32 56 67 52 11
Technical.services@unilin.com

all brands produced and distributed by Unilin Group

1.4. Emergency telephone number

During business hours, 9:00-16:00 (CET) :
+32 56 67 52 11

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.2. Label elements

Labelling does not apply to articles

2.3. Other hazards

When processed: risk of dust explosion
During processing dust may be released for which exposure limits are set out in the community
During use vapours may be released for which exposure limits are set out in the community

SECTION 3: Composition/information on ingredients

This article does not contain any notifiable substances

This article does not contain a substance of very high concern (SVHC) in accordance with Article 59(1) of Regulation (EC) No 1907/2006 at a concentration above 0,1 % (w/w)

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, consult a doctor/medical service.

After inhalation:

Not applicable. Measures apply only in case of excessive dust production when processing the material. Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

After skin contact:

Not applicable.

After eye contact:

Not applicable. Measures apply only in case of excessive dust production when processing the material. Rinse immediately with (lukewarm) water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

After ingestion:

Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

4.2.1 Acute symptoms

Dust from cutting process may cause mechanical irritation

After inhalation:

Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coughing.

After skin contact:

No effects known.

After eye contact:

Mechanical irritation.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Class A foam extinguisher, Water (quick-acting extinguisher, reel).

Major fire: Water, Class A foam.

5.1.2 Unsuitable extinguishing media:

Small fire: Quick-acting BC powder extinguisher, Quick-acting CO2 extinguisher.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

5.3.1 Instructions:

No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See section 8.2

6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

6.2. Environmental precautions

No data available

6.3. Methods and material for containment and cleaning up

Pick-up the material.

6.4. Reference to other sections

See section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe normal hygiene standards.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, oxidizing agents, (strong) acids.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

Not applicable

Publication date: 2022-09-28

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Formaldehyde	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	0.3 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	0.37 mg/m ³ (13)
	Short time value (Indicative occupational exposure limit value)	0.6 ppm
	Short time value (Indicative occupational exposure limit value)	0.74 mg/m ³
Hardwood dusts	Time-weighted average exposure limit 8 h (Limit value for occupational exposure)	2 mg/m ³ (9)

(13): Limit value of 0,62 mg/m³ or 0,5 ppm (3) for the health care, funeral and embalming sectors until 11 July 2024

(9): Inhalable fraction.

Limit value 3 mg/m³ until 17 January 2023

Belgium

Aldéhyde formique	Short time value	0.3 ppm (M)
	Short time value	0.38 mg/m ³ (M)
Bois (poussières de): tous les types sauf Thuja plicata	Time-weighted average exposure limit 8 h	1 mg/m ³
Particules non classifiées autrement (fraction alvéolaire)	Time-weighted average exposure limit 8 h	3 mg/m ³
Particules non classifiées autrement (fraction inhalable)	Time-weighted average exposure limit 8 h	10 mg/m ³

La mention "M" indique que lors d'une exposition supérieure à la valeur limite, des irritations apparaissent ou un danger d'intoxication aiguë existe. Le procédé de travail doit être conçu de telle façon que l'exposition ne dépasse jamais la valeur limite. Lors des mesurages, la période d'échantillonnage doit être aussi courte que possible afin de pouvoir effectuer des mesurages fiables. Le résultat des mesurages est calculé en fonction de la période d'échantillonnage.

The Netherlands

Formaldehyde	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	0.12 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	0.15 mg/m ³
	Short time value (Public occupational exposure limit value)	0.4 ppm
	Short time value (Public occupational exposure limit value)	0.5 mg/m ³
Hardhoutstof	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	2 mg/m ³

France

Bois (poussières de)	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	1.00 mg/m ³
Formaldéhyde	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	0.3 ppm
Formaldéhyde <i>shall apply until 2024-11-07</i>	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	0.5 ppm
Formaldéhyde	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	0.37 mg/m ³
Formaldéhyde <i>shall apply until 2024-11-07</i>	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	0.62 mg/m ³
Formaldéhyde	Short time value (VRC: Valeur réglementaire contraignante)	0.6 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	0.74 mg/m ³
Poussières réputées sans effet spécifique, fraction alvéolaire	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	5 mg/m ³
Poussières réputées sans effet spécifique	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	10 mg/m ³

Germany

Allgemeiner Staubgrenzwert: Alveolengängige Fraktion	Time-weighted average exposure limit 8 h (TRGS 900)	1.25 mg/m ³
Allgemeiner Staubgrenzwert: Einatembare Fraktion	Time-weighted average exposure limit 8 h (TRGS 900)	10 mg/m ³
Formaldehyd	Time-weighted average exposure limit 8 h (TRGS 900)	0.3 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	0.37 mg/m ³
Hartholzstaub	Time-weighted average exposure limit 8 h (TRGS 900)	2 mg/m ³

Austria

Formaldehyd	Tagesmittelwert (MAK)	0.3 ppm
	Tagesmittelwert (MAK)	0.37 mg/m ³
	Kurzzeitwert Mow (MAK)	0.6 ppm

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Formaldehyd	Kurzzeitwert Mow (MAK)	0.74 mg/m ³
Holzstaub	Tagesmittelwert (TRK)	2 mg/m ³

UK

Formaldehyde	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	2 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	2.5 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	2 ppm
	Short time value (Workplace exposure limit (EH40/2005))	2.5 mg/m ³
Hardwood dust (inhalable fraction)	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	3 mg/m ³
Inhalable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m ³
Respirable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m ³
Softwood dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	5 mg/m ³

USA (TLV-ACGIH)

Formaldehyde	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.1 ppm
	Short time value (TLV - Adopted Value)	0.3 ppm
Particulates (insoluble or poorly soluble) not otherwise specified	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	10 mg/m ³ (I)
	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	3 mg/m ³ (R)
Wood dusts: All other species	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	1 mg/m ³ (I)

(I): Inhalable fraction
(R): Respirable fraction

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

If applicable and available it will be listed below.

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

If applicable and available it will be listed below.

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions. Insufficient ventilation: wear respiratory protection. Dust production: dust mask with filter type P1.

b) Hand protection:

Protective gloves against chemicals (EN 374).

c) Eye protection:

Not required for normal conditions of use. In case of dust production: protective goggles (EN 166).

d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Hard solid material
Odour	No data available on odour
Odour threshold	No data available in the literature
Colour	Variable in colour, depending on the composition
Particle size	No data available in the literature
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
Log Kow	No data available in the literature
Dynamic viscosity	Not applicable (solid)

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Kinematic viscosity	Not applicable (solid)
Melting point	No data available in the literature
Boiling point	No data available in the literature
Relative vapour density	Not applicable (solid)
Vapour pressure	Not applicable (solid)
Solubility	Water ; insoluble
Relative density	≥ 0.6
Absolute density	≥ 600 kg/m ³
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	Not applicable (solid)
pH	No data available in the literature

9.2. Other information

Evaporation rate	Not applicable (solid)
Fire classification of construction products and building elements	Class Cfl-s1 or Dfl-s1 (depending on product build up) according to EN 9239-1

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents, (strong) acids.

10.6. Hazardous decomposition products

Upon combustion: CO and CO₂ are formed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Test results

Acute toxicity

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Corrosion/irritation

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Respiratory or skin sensitisation

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Specific target organ toxicity

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Mutagenicity (in vitro)

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Mutagenicity (in vivo)

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Carcinogenicity

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Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Reproductive toxicity

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

Toxicity other effects

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

No (test)data available

12.2. Persistence and degradability

Water

Biodegradability in water: no data available

12.3. Bioaccumulative potential

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available in the literature			

Conclusion

No bioaccumulation data available

12.4. Mobility in soil

No (test)data on mobility of the component(s) available

12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. The waste code must be assigned by the user, preferably in consultation with the (environmental) authorities concerned.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

No data available

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SECTION 14: Transport information

Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

14.1. UN number	Transport	Not subject
14.2. UN proper shipping name		
14.3. Transport hazard class(es)		
	Hazard identification number	
	Class	
	Classification code	
14.4. Packing group		
	Packing group	
	Labels	
14.5. Environmental hazards		
	Environmentally hazardous substance mark	no
14.6. Special precautions for user		
	Special provisions	
	Limited quantities	
14.7. Maritime transport in bulk according to IMO instruments		
	Annex II of MARPOL 73/78	Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
	Class E1, according to EN 717

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC, 2004/37/EC and amendments)

Product name	Skin sensitisation
Formaldehyde	The substance can cause sensitisation of the skin

National legislation Belgium

Additional classification	Aldéhyde formique; C; La mention "C" signifie que l'agent en question relève du champ d'application de l'arrêté royal du 2 décembre 1993 concernant la protection des travailleurs contre les risques liés à l'exposition à des agents cancérigènes et mutagènes et reprotoxiques au travail. Bois (poussières de): tous les types sauf Thuja plicata; C; La mention "C" signifie que l'agent en question relève du champ d'application de l'arrêté royal du 2 décembre 1993 concernant la protection des travailleurs contre les risques liés à l'exposition à des agents cancérigènes et mutagènes et reprotoxiques au travail.
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National legislation The Netherlands

Waterbezwaarlijkheid	Not applicable (article)
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National legislation France

Catégorie cancérogène	Bois (poussières de); (7); Procédé cancérogène cité à l'arrêté du 5 janvier 1993 modifié.
	Formaldéhyde
Catégorie mutagène	Formaldéhyde; M2

National legislation Germany

WGK	Not applicable (article)
TRGS900 - Risiko der Fruchtschädigung	Formaldehyd; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Sensibilisierende Stoffe	Formaldehyd; Sh; Hautsensibilisierende Stoffe
TRGS900 - Kanzerogener Stoff	Formaldehyd

National legislation Austria

Krebserzeugend	Formaldehyd; III A2 Holzstaub; III C
Gefahr der Sensibilisierung der Haut	Formaldehyd; Sh Holzstaub; S
Gefahr der Sensibilisierung der Atemwege	Holzstaub; S

National legislation United Kingdom

Carcinogen	Hardwood dust (inhalable fraction); Carc
Respiratory sensitisation	Softwood dust; Sen Hardwood dust (inhalable fraction); Sen

Other relevant data

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Engineered Wood Flooring: Unilin, Quick-Step, Pergo, IVC Commercial

TLV - Carcinogen	Formaldehyde; A1
	Wood dusts: carcinogenicity - Oak and beech; A1
	Wood dusts: carcinogenicity - All other woods; A4
TLV - Skin Sensitisation	Formaldehyde; SEN; Sensitization
TLV - Respiratory Sensitisation	Formaldehyde; SEN; Sensitization

15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16: Other information

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
Erc50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEC/NOAEL	No Observed Adverse Effect Concentration/No Observed Adverse Effect Level
NOEC/NOEL	No Observed Effect Concentration/No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this Product Safety Information Sheet informs on the properties of certain substances, preparations or mixtures incorporated in the article. The Product Safety Information Sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this Product Safety Information Sheet does not release the user from the obligation to take all measures dictated by common sense, regulations, the guidelines of the manufacturer and recommendations or which are necessary and/or useful based on the real applicable circumstances. The Product Safety Information Sheet constitutes merely of guidelines and recommendations. The information in this Product Safety Information Sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. New Product Safety Information Sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the Product Safety Information Sheet, the information does not apply to other, even similar products. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This Product Safety Information Sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this Product Safety Information Sheet is subject to the licence and liability limiting conditions as stated in the agreement between BIG and the manufacturer of this product or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

Publication date: 2022-09-28

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	Unilin BV, division flooring
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-UNI-20230478-IBC1-EN
Issue date	15/01/2024
Valid to	14/01/2029

Multi-layer parquet flooring Unilin BV, division flooring

www.ibu-epd.com | <https://epd-online.com>



1. General Information

Unilin BV, division flooring

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-UNI-20230478-IBC1-EN

This declaration is based on the product category rules:

Floor coverings, 01/08/2021
(PCR checked and approved by the SVR)

Issue date

15/01/2024

Valid to

14/01/2029



Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)



Florian Pronold
(Managing Director Institut Bauen und Umwelt e.V.)

Multi-layer parquet flooring

Owner of the declaration

Unilin BV, division flooring
Ooigemstraat 3
8710 Wielsbeke
Belgium

Declared product / declared unit

1m² of Multilayer parquet flooring (representing weighted average on sales with average thickness of 13.25 mm and average mass of 9.55 kg/m²).

Scope:

This declaration is an environmental product declaration according to *ISO 14025* - Type III and *EN 15804+A2* describing the environmental performances of 1m² of a 3-layer parquet flooring produced by Unilin BV, division Flooring in the production plant in Malaysia - Syarikat Malaysia Wood Industries Sdn. Bhd, 864 - V Syarikat.

The product is available with 3 brand names:

- Quickstep
- Pergo
- Unilin

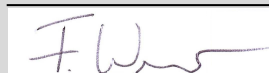
In this EPD the LCA results for HDF or Hevea core products average sales are declared (average mass of 9,55 kg/m² and average thickness of 13,25 mm).

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR	
Independent verification of the declaration and data according to ISO 14025:2011	
☐	internally
☒	externally



Dr. Frank Werner,
(Independent verifier)

2. Product

2.1 Product description/Product definition

This environmental product declaration refers to the production of 1m² multi-layer parquet flooring (MLP).

The multilayer parquet is produced in the Unilin production facilities in Malaysia and meets the requirements of *EN 14342* and *EN 13489*. The panels have a mechanical and patented connection (uniclic and multifit). The surface layer of the product consists of layers UV-curing acrylic layer or layers of UV-curing oil. The multi-layer parquet contains at least 70% PEFC certified wood.

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration *EN 14342:2013, Wood flooring - Characteristics, evaluation of conformity and marking* and the CE-marking.

For the application and use the respective national provisions apply.

2.2 Application

The multi-layer parquet floorings are intended to be used indoors, in new buildings as well for renovation purposes. The parquet meets the requirements of *EN 13489* and *EN 14342*. The flooring can be used in residential applications. For commercial areas conditional use is possible according to the manufacturer's instructions.

2.3 Technical Data

Constructional data

Name	Value	Unit
Product minimum thickness	12	mm
Product maximum thickness	14	mm
Product minimum mass	7,7	kg/m ²
Product maximum mass	11.8	kg/m ²
Product minimum density	600	kg/m ³
Product maximum density	850	kg/m ³

The density of the parquet flooring panels is between 600 and 850 kg/m³.

- Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to *EN 14342:2013 Wood flooring and parquet — Characteristics, evaluation of conformity and marking* and the CE marking.
- Voluntary data: The product complies with the requirements of the following standard, too *EN 13489: Wood Flooring - Multi-layer parquet elements*. For the application and use the respective national provisions apply.

2.4 Delivery status

Typical standard dimensions are as follows (length - width - thickness)

- 1820mm x 145mm x 14mm
- 1820mm x 190mm x 14mm
- 2200mm x 220mm x 14mm
- 2400mm x 260mm x 14mm
- 580mm x 145mm x 14mm
- 1050mm x 310mm x 14mm
- 2200mm x 190mm x 14mm
- 1820mm x 145mm x 12,5mm

- 1820mm x 190mm x 12,5mm

2.5 Base materials/Ancillary materials

The multilayer flooring elements have the composition presented below:

- Wood layers (surface + Core layer solid or HDF + backing) : 94% - 96%
- Glue : 3% - 5%
- Finishing : 1%

Core layer

The core of the multilayer flooring elements consists of wooden core boards of a High-density fiberboard or wood.

Surface layer

On top of the core board, serving as the visible side of the panel after installation, is a layer of solid wood. The surface layer is glued to the core.

Backing layer

The bottom part of the parquet panels is a thin layer of solid wood. This layer is added for dimensional stability.

Glue

The surface layer and the backing is glued to the substrate with low emitting urea-formaldehyde resins.

Finishing

The surface layer is sanded, eventually provided with a bevel and finished with UV-curing acrylic lacquers or natural or mineral oils.

The Uniclic/multifit systems are designed to ensure a strong connection between the Multi-layer parquet flooring elements.

This product contains substances listed in the Candidate List of Substances of Very High Concern for Authorisation *REACH* (date: 16.11.2023) exceeding 0.1 percentage by mass: **NO**

This product contains other CMR substances in categories 1A or 1B which are not on the candidate list, exceeding 0.1 percentage by mass: **NO**

Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the (EU) Ordinance on Biocide Products No. 528/2012): **NO**

2.6 Manufacture

At the production site in Malaysia core, surface and backing layers are glued together in a hot press. The next step is sawing the planks to lamellas. Then panels are sanded, profiled (applying the tongue and groove), finished with lacquer or oil, and packed.

In production a certified *ISO 9001* quality control is in place.

All production machines comply with all regulations in place. The machines are optimized in respect to energy consumption and are equipped with all necessary equipment for safety precautions, dust extraction and noise reduction.

2.7 Environment and health during manufacturing

The constitutional valid regulations and provisions of the national law are observed and respected.

All coatings and adhesives are water-based solvent free. All wood waste and cutting and sanding dust is fully heat-recycled. Water: There is no wastewater.

Soil: There is no impact on soil.

Air: The constitutional valid regulations are observed.

The emissions to air are far below the legally required thresholds.

In production certified *ISO 14001* environmental management system is in place.

2.8 Product processing/Installation

Installation

The flooring panels are mechanically clicked together without using glue. The installation can be floating or glued down. In case of a floating installation an appropriate underlay must be used in order to achieve leveling effect, thermal or acoustical insulation and/or protection against rising moisture. The following type of underlay materials can be used:

- Polyolefin foams
- wood fibre panels
- Polyethylene damp proof membranes

In case of glueing down it is strongly recommended to use hybrid elastic mono component-polymer glue which is solvent-free and water-free.

The materials used as underlay or glue are not considered in this study.

Appropriate measures for protection against saw dust must be taken.

Information about the installation of Multilayer parquet flooring can be downloaded from the website

<https://www.unilin.com/en/flooring>. On this website additional technical information (technical data sheets) is available as well.

2.9 Packaging

A well-defined number of multilayer parquet flooring panels are packed together, putting them with the surface layer onto each other. For some of the formats, the packs are edge-protected using cardboard and are shrink-wrapped in PE foil. For the remaining formats, the panels are packed in a 6-sided cardboard box without shrinkable PE-foil. The packaging materials are fully recyclable.

The packs are palletized on wooden pallets using wood from controlled origin. The pallets can be re-used (Euro pallets) or recycled as wood category 03 01 05 according to the European Waste Catalogue.

2.10 Condition of use

A thermosetting binding agent and saturating resin are used for the production of the flooring panels. When heat and pressure are applied during the pressing phase, this is 3D crosslinked by an irreversible polycondensation reaction. Under normal conditions, the binding agent and saturating resin are both chemically stable and mechanically firmly bonded to the wood parts.

2.11 Environment and health during use

All multi-layer parquet floorings of Unilin comply with the health, safety and energy-saving requirements as described in the harmonised standard *EN 14342*, type 3. All panels are CE marked.

Once the flooring has been installed only very low emissions of volatile compounds occur (see chapter 7 of this EPD). These emissions originate from the wood.

Floorings with a lacquered surface do not need to be re-lacquered in domestic use and normal conditions of use. In case of oiled floors, special periodic maintenance with oilcare and re-oiling should be done following the manufacturer maintenance instructions and in function of the intensity of use and the protection in place on the access to outside.

2.12 Reference service life

The BBSR Table gives a general useful life of **40 years** for floor coverings of component group 352.812. Due to the

comparatively high resistance of the Multilayer parquet flooring, Unilin grants an additional **warranty** (based on the floor owner life according to the manufacturer's warranty conditions) for the declared product. In order to increase the life duration of the floor covering, the manufacturer's instructions concerning warranty and care must be observed, available for download at www.unilin.com/en/flooring. The use stage is declared in this EPD for a one year usage.

2.13 Extraordinary effects

Fire

In function of the composition of the parquet panel the fire class according to *EN 13501-1* is Cfl-s1 or Dfl-s1.

The core board is determinative in this respect

- panels are classified as Cfl-s1

The fire classification goes for glued down installation and for floating installation on the associated Quick-Step or Pergo underlays.

Fire protection

Name	Value
Building material class	Cfl/Dfl
Smoke gas development	s1

Water

In case of a floating installation an appropriate DPM (damp proof membrane) needs to be installed in order to hold back potential rising dampness. Most underlays of the Unilin Multi-layer parquet flooring sales program have a built-in DPM and do not need an extra DPM. The DPM is not a part of this study. In case of a leak or a flood where the flooring has been soaked for a longer period of time (days) the flooring will most probably be considered a total loss. In case of short or shorter time of exposure and after drying, no visible damage may be expected. If the water came under the floorcovering (floating installation) it may be necessary to un-click the planks/tiles and let them dry. The subfloor will most probably also be wet and should be given the time to come to equilibrium moisture content before re-installation of the dry panels. Some of Unilin Multi-layer parquet ranges offer a special water resistance and a watertight connection between panels. During the installation, the periphery needs to be treated with a foam strip and a special sealant to avoid infiltration. In case of water spillage on the surface, it will evaporate before having the chance to penetrate between panels.

Mechanical destruction

Small(er) damages in the flooring surface can be repaired using coloured solvent-free melt waxes. In case of more severe damage the damaged panels can be replaced. The damaged panels go into the normal end-of-life treatment.

2.14 Re-use phase

A multi-layer parquet floorcovering which is not at the end-of-life stage and which is floating, may be un-installed and be re-used as parquet floor.

At the end of life stage, the panels can be used as biomass and be recycled for example in wood based panels. The panels are shredded and reused as raw material in wood-based panels. It can also be incinerated in power plants.

2.15 Disposal

Post-installation and post-consumer flooring panels are considered as wood waste. The European Waste Code *EWG* is 030105. It can be disposed in any regulated municipal waste collection point as wood waste.

2.16 Further information

All information about the product composition, technical performance, instructions for installation and maintenance, precautionary instructions for use, CE-marking and relevant

DOP (declaration of performance) documents, are available either in the packs or can be found on the homepage www.unilin.com/en/flooring or can be requested at Unilin BV division flooring info@unilin.com.

3. LCA: Calculation rules

3.1 Declared Unit

The declared unit is 1 m² of parquet floor covering representing sales average for both HDF or Hevea core products (average mass of 9,55 kg/m² and average thickness of 13,25 mm).

Declared unit and mass reference

Name	Value	Unit
Declared unit	1	m ²
Layer thickness	0.01325	m
Grammage	9.55	kg/m ²

3.2 System boundary

Type of EPD according to *EN 15804*: cradle to grave.

The **production stage** includes all relevant processes from "cradle to factory gate" within the cut-off rules. This includes for example the extraction and manufacture of all raw materials and their delivery to the production site. The top layer and back layer material is dried in Europe and then transported to Malaysia. the manufacturing of the floorcovering panels from raw material to storage and transport. Packaging is included.

The **constructional process** stage includes the delivery of the parquet floor covering to the point of installation (A4). The transport distance from the plant in Malaysia to the European market via the plant of UNILIN in Wielsbeke and more generally the weighted average distance to worldwide market is considered in this EPD A significant volume is transported directly to Australia from Malaysia without going through Europe. Installation stage (A5) is declared, accounting for electricity consumption, product installation losses, and packaging waste.

The **use stage** (B2) includes the cleaning of the parquet for 1 year. The cleaning frequencies are described in chapter 4. Provision of water, cleaning agent and electricity for the cleaning of the floor covering is considered, incl. wastewater treatment.

Product end-of-life (C1-C3) comprises the product dismantling, transportation, and energy recovery in combined heat and power (CHP) plant. In module C3 the release of biogenic CO₂ is declared according to *EN 16485*.

Module D includes benefits from all net flows in the end-of-life stage that leave the product boundary system after having passed the end-of-waste state. It is assumed that post-consumer flooring waste is incinerated as waste in a combined heat and power (CHP) plant. Loads from material incineration and resulted benefits from recovered energy are declared within module D.

3.3 Estimates and assumptions

No additional estimates or assumptions had to be made beyond the information stated in clauses 3 and 4.

3.4 Cut-off criteria

In the assessment, all available data from production process are considered, i.e. all raw materials used, utilised thermal energy, and electric power consumption using LCI datasets. Thus material and energy flows contributing less than 1% of mass or energy are also considered. All reported data are considered and modelled using LCI data.

No flows were cut-off that are known to have significant environmental impacts.

3.5 Background data

The used background data are from SimaPro version 9 software and the ecoinvent version 3.8 background database.

3.6 Data quality

The used data refer to the year 2021. The data of the foreground processes is based on input-output analyses at the Malaysian production site and Belgian distribution facilities. The primary data collection was done thoroughly, all flows were considered.

3.7 Period under review

The period under review is 2021.

3.8 Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product's lifespan: Global

3.9 Allocation

The overall production of UNILIN comprises further products beside the product considered in this study. Data for thermal and electrical energy as well as auxiliary material refers to the declared product. During data collection the allocation is done via area (m²).

For information on allocation within the background database, refer to ecoinvent documentation.

3.10 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account.

Background database is as described in chapter 3.5.

4. LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

Information on describing the biogenic carbon content at factory gate

Name	Value	Unit
Biogenic carbon content in product	4.1	kg C
Biogenic carbon content in accompanying packaging	0.24	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO₂.

The following technical information is a basis for the declared modules. Scenarios correspond to the worldwide production and consumption.

Transport to the construction site (A4)

Product shipping stage A4 represents weighted average based on worldwide sales.

Name	Value	Unit
Transport distance by boat	12400	km
Transport distance by truck	875	km
Capacity utilisation (including empty runs) for truck	67	%

Installation in the building (A5)

Name	Value	Unit
Electricity consumption	0.04	kWh
Product installation losses	4.0	%
Product packaging waste	0.24	

Maintenance (B2)

Maintenance scenario:

- 1 vacuum cleaning per week
- 1 wet cleaning per month (with detergent)
- 1 oil car 3 times per year

Name	Value	Unit
Water consumption	1.33	kg/m ² /year
Detergent	0.0133	kg/m ² /year
Oil for care	0.0100	kg/m ² /year
Electricity consumption (European mix)	0.54	kWh/m ² /year

Reference service life

Name	Value	Unit
Reference service life	40	a

End of Life (C1-C4)

Name	Value	Unit
Collected separately waste type (wood waste)	8.8	kg
Energy recovery from waste	8.8	kg

100% of floor covering is incinerated in a combined heat and power (CHP) plant.

Benefits and loads beyond the product system (D)

As per *IBU* PCR Part A, recovered heat is assumed to substitute to heat generation from natural gas furnace for the calculation of benefits and loads beyond the product system (module D). Produced electricity is assumed to substitute to grid mix.

5. LCA: Results

The LCA results for the MLP-flooring declared in this EPD refer to a MLP-flooring with a thickness of 13.25 mm, which meets the requirements of *EN 14342*.

The results for module B2 refer to a period of one year.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MND	X	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m² Multi-layer parquet flooring

Parameter	Unit	A1	A2	A3	A4	A5	B2	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq	-1.18E+01	1.16E+00	6.91E+00	2.62E+00	1.73E+00	2.39E-01	0	6.6E-02	1.52E+01	0	-1.11E+01
GWP-fossil	kg CO ₂ eq	3.31E+00	1.16E+00	7.6E+00	2.61E+00	8.37E-01	2.34E-01	0	6.59E-02	2.14E-01	0	-1.11E+01
GWP-biogenic	kg CO ₂ eq	-1.52E+01	2.92E-04	-7.39E-01	6.92E-04	8.86E-01	1.29E-03	0	2.14E-05	1.5E+01	0	-8.87E-03
GWP-luluc	kg CO ₂ eq	1.5E-02	9.29E-04	4.29E-02	1.45E-03	2.45E-03	3.61E-03	0	2.55E-05	1.02E-04	0	-4.19E-03
ODP	kg CFC11 eq	6.29E-06	2.43E-07	4.74E-07	5.71E-07	3.08E-07	1.77E-08	0	1.66E-08	7.3E-09	0	-1.52E-06
AP	mol H ⁺ eq	2.46E-02	2.78E-02	3.67E-02	4.26E-02	5.68E-03	1.33E-03	0	2.12E-04	1.3E-02	0	-1.68E-02
EP-freshwater	kg P eq	1.76E-04	5.56E-06	3.99E-04	1.46E-05	2.73E-05	2.51E-05	0	4.74E-07	2.68E-05	0	-1.83E-04
EP-marine	kg N eq	6.23E-03	6.26E-03	5.17E-03	1.03E-02	1.28E-03	2.2E-04	0	4.66E-05	5.75E-03	0	-3.39E-03
EP-terrestrial	mol N eq	7.42E-02	6.98E-02	5.64E-02	1.14E-01	1.45E-02	2.03E-03	0	5.18E-04	6.76E-02	0	-3.78E-02
POCP	kg NMVOC eq	2.31E-02	1.86E-02	1.67E-02	3.08E-02	4.07E-03	5.59E-04	0	2.04E-04	1.56E-02	0	-1.22E-02
ADPE	kg Sb eq	4.46E-05	2.18E-06	1.2E-05	6.91E-06	2.91E-06	2.41E-06	0	1.64E-07	3.5E-06	0	-5.54E-06
ADPF	MJ	7.4E+01	1.58E+01	8.87E+01	3.71E+01	9.21E+00	4.98E+00	0	1.08E+00	3.42E+00	0	-2E+02
WDP	m ³ world eq deprived	4.06E+00	3.83E-02	1.53E+00	9.29E-02	2.38E-01	6.83E-02	0	3.72E-03	5.48E-02	0	-4.53E-01

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m² Multi-layer parquet flooring

Parameter	Unit	A1	A2	A3	A4	A5	B2	C1	C2	C3	C4	D
PERE	MJ	5.5E+01	1.42E-01	1.25E+01	4.16E-01	1.57E+01	1.02E+00	0	1.38E-02	1.56E+02	0	-7.26E+00
PERM	MJ	1.56E+02	0	6.51E+00	0	-6.38E+00	1.54E-03	0	0	-1.54E+02	0	0
PERT	MJ	2.11E+02	1.42E-01	1.91E+01	4.16E-01	9.29E+00	1.02E+00	0	1.38E-02	2.46E+00	0	-7.26E+00
PENRE	MJ	5.27E+01	1.58E+01	8.6E+01	3.71E+01	1.2E+01	4.33E+00	0	1.08E+00	2.4E+01	0	-2E+02
PENRM	MJ	2.13E+01	0	2.62E+00	0	-2.81E+00	6.37E-01	0	0	-2.06E+01	0	0
PENRT	MJ	7.4E+01	1.58E+01	8.87E+01	3.71E+01	9.21E+00	4.97E+00	0	1.08E+00	3.42E+00	0	-2E+02
SM	kg	2.61E-04	0	7.17E-02	0	2.88E-03	5.74E-04	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0
FW	m ³	1.09E-01	1.2E-03	7.26E-02	3.23E-03	8.13E-03	4.31E-03	0	1.26E-04	9.06E-03	0	-3.19E-02

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 m² Multi-layer parquet flooring

Parameter	Unit	A1	A2	A3	A4	A5	B2	C1	C2	C3	C4	D
HWD	kg	1.33E-01	1.66E-02	4.1E-01	3.09E-02	3.59E-02	6.23E-03	0	7.48E-04	6.68E-02	0	-5.12E-02
NHWD	kg	2.4E+00	4.79E-01	5.74E+00	1.38E+00	4.24E-01	9.36E-02	0	1.07E-01	1.66E-01	0	-5.85E-01
RWD	kg	2.84E-04	1.08E-04	6.4E-05	2.54E-04	3.12E-05	3.44E-05	0	7.33E-06	3.61E-05	0	-3.61E-04
CRU	kg	0	0	0	0	0	0	0	0	0	0	0

MFR	kg	9.42E-04	0	7.93E-04	0	6.94E-05	7.44E-04	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0	0	0
EEE	MJ	2.31E-01	0	1.88E-01	0	2.04E+00	2.59E-03	0	0	1.4E+01	0	0
EET	MJ	4.46E-01	0	3.63E-01	0	3.93E+00	5E-03	0	0	1.35E+02	0	0

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional:

1 m² Multi-layer parquet flooring

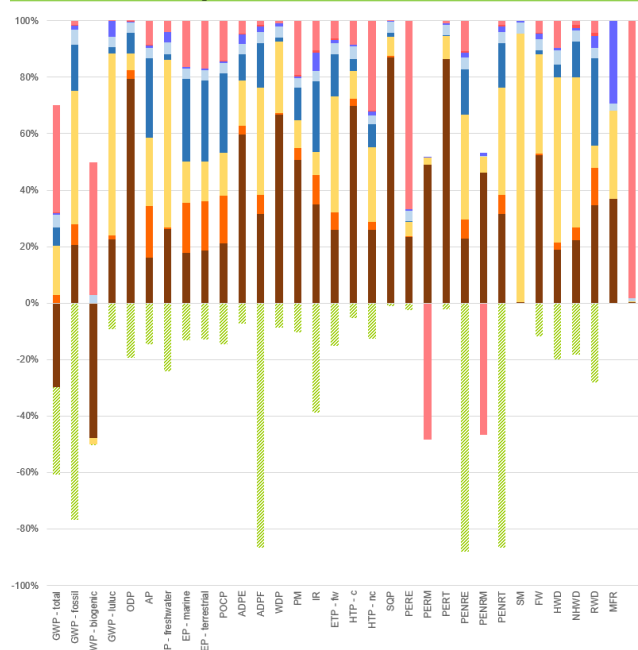
Parameter	Unit	A1	A2	A3	A4	A5	B2	C1	C2	C3	C4	D
PM	Disease incidence	6.67E-07	5.65E-08	1.29E-07	1.53E-07	4.4E-08	4.57E-09	0	7.7E-09	2.54E-07	0	-5.21E-08
IR	kBq U235 eq	2.22E-01	6.76E-02	5.16E-02	1.6E-01	2.21E-02	4.15E-02	0	4.69E-03	6.75E-02	0	-3.78E-01
ETP-fw	CTUe	2.09E+01	4.82E+00	3.3E+01	1.21E+01	3.25E+00	8.56E-01	0	3.58E-01	5.06E+00	0	-7.42E+00
HTP-c	CTUh	2.04E-08	7.37E-10	2.84E-09	1.27E-09	1.3E-09	1.17E-10	0	2.3E-11	2.5E-09	0	-1.33E-09
HTP-nc	CTUh	5.81E-08	5.95E-09	5.93E-08	1.81E-08	6.9E-09	3.11E-09	0	7.37E-10	7.1E-08	0	-1.91E-08
SQP	SQP	9.99E+02	6.1E+00	7.9E+01	1.73E+01	4.43E+01	1.14E+00	0	1.24E+00	1.01E+00	0	-1.19E+01

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 – for the indicator “Potential Human exposure efficiency relative to U235”. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators “abiotic depletion potential for non-fossil resources”, “abiotic depletion potential for fossil resources”, “water (user) deprivation potential, deprivation-weighted water consumption”, “potential comparative toxic unit for ecosystems”, “potential comparative toxic unit for humans – cancerogenic”, “Potential comparative toxic unit for humans - not cancerogenic”, “potential soil quality index”. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

6. LCA: Interpretation



Benefits and burdens beyond the system boundary (module D) vary from a few percent to more than 80% of the impacts over the product life cycle (modules A-C) and relate to the energy recovery from waste processing in a combined heat and power plant that is considered to substitute natural gas (heat) and electricity grid mix.

Figure : Indicator results of multi-layer parquet floor covering over its life cycle

The largest part of environmental impacts is caused during production (modules A1-A3) and at waste processing (module C3); comparably small impacts are caused during the transport of the product to the construction site.

Maintenance (module B2) is presented for 1 year of product use, so its impact can be significant over the reference service life depending on the considered indicator.

All the other modules related to the product life cycle are not significant.

7. Requisite evidence

7.1 PEFC Certificate

The product fulfills the requirements according to *PEFC ST 2002:2010: Chain of Custody of Forest Based Products - Requirements* second edition. CTIB - TCHN - Hof ter Vleest dreef 3 - 1070 Brussels Belgium

7.2 Formaldehyde emissions

Determination of the formaldehyde emissions of a multi-layer parquet flooring performed according to the latest versions of *EN 16516* and *ISO 16000* series (part 3, 6 and 9) and to AgBB-Scheme. – Servaco/Normec Product Testing - Honderweg 13 - 9230 Wetteren - Belgium. Emission test report of Unilin sample Engineered wood flooring (new combinations)' nr SPT2021-R195 from November 9th 2021.

Name	Value	Unit
Formaldehyde CAS 50-00-0	24	µg/m ³

7.3 VOC emissions

Determination of the VOC emissions of a multi-layer parquet flooring performed according to the latest versions of *EN 16516* and *ISO 16000* series (part 3, 6 and 9) and to AgBB-Scheme. – Servaco/Normec Product Testing - Honderweg 13 - 9230

Wetteren - Belgium. Emission test report of Unilin sample Engineered wood flooring (new combinations)' nr SPT2021-R195 from November 9th 2021.

- Compliant with AgBB-Scheme 2018 and 2021
- Compliant with M1 Emission Classification of Building Materials (Testing protocol 15.11.2017)
- Compliant with the French VOC-Regulation: A+

VOC EMISSION RESULTS (AgBB) AFTER 3 days

Name	Value	Unit
TVOC	540	µg/m ³
R (dimensionless)	1,427	-
VOC without LCI	21	µg/m ³
Carcinogenic Substances	1	µg/m ³

VOC EMISSION RESULTS (AgBB) AFTER 28 days

Name	Value	Unit
TVOC	280	ug/m ³
R (dimensionless)	0,376	-
VOC without LCI	0	ug/m ³
Carginogenic Substances	0	ug/m ³

8. References

Institut Bauen und Umwelt

Institut Bauen und Umwelt e.V., Berlin (pub.):
Generation of Environmental Product Declarations (EPDs);

General principles

for the EPD range of Institut Bauen und Umwelt e.V. (IBU),
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