SENTINEL HOLDING
INSTITUT

SHI PRODUCT PASSPORT

Find products. Certify buildings.

SHI Product Passport No.:

15118-10-1004

Kingdom SPC Flooring /Solid Plastic Composite

Product group: Vinyl

Zhejiang Kingdom New Material Group Co. , Ltd
No. 38 Desheng Road, Heshan Town
Tongxiang City, Zhejiang Province, 314512, China

Product qualities:

- SHI Product Assessment 2024
- QNG Qualitätssiegel Nachhaltiges Gebäude
- DGNB NEW CONSTRUCTION 2023.2
- DGNB NEW CONSTRUCTION 2023
- DGNB NEW CONSTRUCTION 2018
- BNB-BN NEUBAU V2015
- EU TAXONOMY
- BREEAM DE NEUBAU 2018
- LEED v4.1 (outside US)

CERTIFIED SUSTAINABLE PRODUCT
SHI PRODUCT PASSPORT
SENTINEL HOLDING INSTITUT
www.sentinel-holding.eu

Köttner

Helmut Köttner
Scientific Director
Freiburg, 17 August 2026

SENTINEL HOLDING
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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	Other floor coverings	TVOC ≤ 160 µg/m^3 Formaldehyd ≤ 10 µg/m^3	Indoor Air Quality Certified
Valid untill: 09 August 2027			

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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	2.2 Resilient floor coverings – including multilayer systems	VOC / Emissions / hazardous substances / polycyclic aromatic hydrocarbons (PAH) / SVHC / heavy metals	QNG ready
Verification: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

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DGNB New Construction 2023.2

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact			Not relevant for assessment

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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)	7 Floor coverings (Resilient floor coverings)	VVOCs, VOC, SVOC emissions and content of hazardous substances	Quality level 3
Verification: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

Criteria	Assessment
SOC1.2 Indoor air quality (*)	May positively contribute to the overall building score
Verification: SHI-Schadstoffgeprüft	

Criteria	Assessment
ECO1.1 Life cycle cost (*)	May positively contribute to the overall building score
Verification: siehe EPD, technisches Datenblatt, Verlegeanleitung	

Criteria	Assessment
ECO2.6 Climate resilience (*)	May positively contribute to the overall building score
Verification: siehe technisches Datenblatt	

Criteria	Assessment
ENV1.1 Climate action and energy (*)	May positively contribute to the overall building score
Verification: siehe EPD, Sicherheitsdatenblatt, technisches Datenblatt, Verlegeanleitung	

Criteria	Assessment
SOC1.1 Thermal comfort (*)	May positively contribute to the overall building score
Verification: siehe technisches Datenblatt	

Criteria	Assessment
SOC1.3 Sound insulation and acoustic comfort (*)	May positively contribute to the overall building score
Verification: siehe technisches Datenblatt	

Criteria	No. / Relevant building components / construction materials / surfaces	Considered substances / aspects	Quality level
ENV 1.2 Local environmental impact, 29.05.2025 (4th edition)	7 Floor coverings for indoor use (elastic floor coverings)	VVOCs, VOC, SVOC emissions and content of hazardous substances	Quality level 3
Verification: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

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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	7 Floor coverings (Resilient floor coverings)	VOC / SVOC / hazardous substances	Quality level 4
Verification: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

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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	2a Elastic floor coverings – with and without bonded underlay or insulation layer	VOC / hazardous substances / heavy metals	Quality level 3
Verification: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

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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)	Stoffe nach Anlage C, Formaldehyd, Karzinogene VOC Kategorie 1A/1B	compliant
Verification: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

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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: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

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LEED v4.1

LEED (Leadership in Energy and Environmental Design) is an internationally recognised building certification system developed by the U.S. Green Building Council. It is one of the most widely used sustainability standards for buildings worldwide and is particularly applied in internationally oriented projects. LEED assesses buildings holistically across categories such as energy efficiency, resource conservation, material selection, indoor environmental quality and site sustainability. Depending on the number of points achieved, projects are awarded one of the certification levels: LEED Certified, Silver, Gold or Platinum.

Criteria	Product category	Considered substances	Assessment
EQ Credit: Low-Emitting Materials	Bodenbeläge	Emissionen: Formaldehyd, VOC, Krebserregende Stoffe	compliant
Verification: Zertifikat TÜV PROFiCERT-product Interior PREMIUM vom 07.08.2024 / Zertifikats Nr. 707205828-2			

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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.

"TÜV PROFiCERT-product Interior" is a certification procedure developed for interior products. The certification is carried out according to strict TÜV health and quality criteria. The PREMIUM variant requires particularly low emission levels.

Eurofins Indoor Air Comfort® confirms compliance with requirements for low VOC emissions. The standard level covers all mandatory VOC regulations in the EU, while the Gold level additionally takes into account emission criteria from voluntary ecolabels and building certifications.

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.

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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%BCfkriterien%20f%C3%BCr%20Produkte

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Kingdomfloor
www.kingdomflooring.com.cn

Technical Data Sheet

Kingdom SPC Flooring / Solid Plastic Composite			
No	**Property**	**Method & Standard**	**Review in accordance with Standard**
1	Formaldehyde emission	EN 717-1	E1
2	Reaction to fire	EN 13501-1	Bfl-s1
3	Slip resistance	EN 13893	Class DS
4	Slip resistance	DIN EN 16165	R9/R10
5	Wear resistance	ISO 24338 Procedure A	⩾ 5000 cycles
6	Micro-scratch resistance	EN 16094	⩽ MSR-A2
7	Impact resistance (big ball)	EN 13329	⩾ 1600mm
8	Effect of furniture leg	EN ISO 16581	No visible damage
9	Castor chair resistance	EN ISO 4918	25000 cycles
10	Resistance to staining	EN 438-2	Not affected
11	Light stability	EN ISO 105-B02	⩾ 6
12	Antistatic resistance	EN 1815	< 2kV
13	Thermal conductivity&Thermal resistance	EN 12664	0.112 W/(m· K) & 0.085 (㎡.K)/W
14	Dimensional stability	EN ISO 23999	⩽ 0.15%
15	Curling after exposure to heat	EN ISO 23999	⩽ 1mm
16	Residual Indentation	ISO 24343-1	⩽ 0.1mm
17	Sound Insulation	ISO 10140-3 ISO 717-2	21 db(with underlayer)
18	VOC emissions	ISO 16000 parts -3, -6, -9, 11	A+
19	REACH SVHC	REACH	ND
20	Phthalates	EN14372	ND
21	CE	EN 14041	Certified
22	UKCA	EN 14041	Certified
23	EPD	EN 16810, EN 15804, ISO 14025	Certified
24	Floorscore	CDPH/EHLB (California Section 01350)	Certified
25	Indoor Air Comfort Gold	AgBB, French A+, BlueAngel, EU Taxonomy	Certified
26	TUV ProFiCert PREMIUM	ISO 10582, EN 14041, AgBB, French VOC	Certified
27	Sustainability Assessment	NSF/ANSI 332 Platinum	Certified
28	Utilization		Recyclable
29	Anticipated Product Lifetime		25 Years

Printing date 08.Jun.2024 Reviewed on 08.Jun.2024

Material Safety Data Sheet

1 Identification of the substance/preparation and of the company/undertaking

. Product details

. Trade name: Solid Plastic Composite / SPC Flooring

. Manufacturer/Supplier: Zhejiang Kingdom New Material Group Co., Ltd.

No. 38, Desheng Road, Heshan Industrial Park, Heshan Town, Tongxiang City, Zhejiang Province, China

. Further information obtainable from: Zhejiang Kingdom New Material Group Co., Ltd.

. Information in case of emergency: Zhejiang Kingdom New Material Group Co., Ltd.

No. 38, Desheng Road, Heshan Industrial Park, Heshan Town, Tongxiang City, Zhejiang Province, China

Tel: 86-573-89383298

2Hazards identification

. Classification of the substance or mixture

. Classification according to EU Directives 1272/2008/EC

This product is not classified as dangerous according to EC criteria.

. Label elements

. Labelling according to EC Directives

This product is not classified as dangerous according to EC criteria.

3 Composition/information on ingredients

. Chemical characterization: Under normal conditions of use and handling, this product is not expected to create any health or safety hazards.

. Description: Mixture of substances listed below with additions.

Product Name:		CAS Number	Approximate(%)by Wt.Or Vol.
Base Layer	PVC	9002-86-2	15-25%
	CaCO3	471-34-1	65-75%
	Mixture	---	3-8%
Warelayer (PVC)		9002-86-2	3-6%
Priting Film (PVC)		9002-86-2	0.5-1.5%
UV Coating		---	0.1-0.3%
Pressure sensitive adhesive		---	0.1-0.3%
Ixpe foam film		---	0.5-1%

4 First aid measures

Persons using these products should consult a physician or other medical professional if an accident involving these

products in injury. Specific first-aid measures are as follows:

*·**Eye Contact:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.*

*·**Skin Contact:** If irritation occurs, flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.*

*·**Ingestion:** Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Get medical aid if irritation or symptoms occur.*

*· **Inhalation:** Not Applicable*

*-**Medical conditions aggravated by exposure:** No medical conditions are known to be aggravated by these products.*

*-**Recommendations to physicians:** Not Applicable*

5 Fire-fighting measures

***General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.*

*. **Flammable class:** Not determined*

*. **Suitable extinguishing media:** Water, CO2, Dry Chemicals, Foam-Fog*

*. **Fire/Explosion Hazards:** Negligible fire hazard when exposed to heat or flame.*

*. **Fire Fighting Procedure:** Wear self contained breathing apparatus meeting NIOSH standards.*

*. **Other information:** Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to products of combustion exists.*

6 Accidental release measures

*. **Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.*

*. **Large Spill:** Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow evacuating through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.*

7 Handling and storage

The regulations relating to storage remises apply to workshop where the product is handled:

*. **Handling:** Apply good manufacturing practice & industrial hygiene practices. Observe good personal hygiene, and do not eat, drink or smoke whilst handling. Wear protective goggles and gloves when handling material. Clean cloths must be worn. Observe all warnings and precautions listed for the product.*

*. **Storage:** Store in tightly closed original container, in a cool & dry area away from heat sources & protected from light. Avoid dust formation and control ignition sources. Keep air contact to a minimum.*

*. **Further information about storage condition:** None.*

8 Exposure controls/personal protection

. Ventilation and Engineering controls:

No special ventilation and engineering controls are required for handling of these products.

. Respiratory Protection:

No special respiratory protection is required for use of these products. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHS Standard, applicable U.S. State regulations, or the Canadian CSA standard.

. Body Protection:

No special protective clothing is required.

. Protective Gloves:



Protective Gloves

Rubber or plastic acid-resistant gloves with elbow-length gauntlet.

.Eye Protection:



Tightly sealed goggles

Chemical goggles or face shield.

9 Physical and chemical properties

.General Information	
Form:	Solid
Color:	color
Odor:	Odor
.Change in condition	
Melting point/Melting range:	Not available
Boiling point/Boiling range:	Not available
.Flash point:	Not available
.Self-igniting:	Product is not self-igniting
.Danger of explosion:	Not available
.Density:	Not available
.Relative density:	Not available
.Vapor density:	Not available
.Evaporation rate	Not available
.Solubility in/Miscibility with	
Water:	Not miscible or difficult to mix
.PH-Value:	Not available

.Viscosity:	
Dynamic:	Not available

10 Stability and reactivity

. Chemical Stability: Stable under normal temperatures and pressures.

. Decomposition Products: Products of thermal decomposition can include produce related gases (e.g. carbon oxides, and various hydrocarbons). Refer to the NFPA manual for more specific information.

. Materials with which substance is incompatible: None known.

. Hazardous Polymerizations: Will not occur.

. Conditions to Avoid: Avoid exposure or contact to extreme temperatures, incompatible chemicals.

11 Toxicological information

. Toxicity to Animals:

LD50: Not available.

LC50: Not available.

. Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified NONE by NTP, NONE by OSHA. 3 (Not classifiable for human.) by IARC.

. Other Toxic Effects on Humans: None

. on the skin: Irritant to skin and mucous membranes if soluble

. on the eye: Sensitizing effects known.

.Carcinogenicity: None Determine.

.Mutagenicity: None Determine.

.Teratogenicity: None Determine

12 Ecological information

. Instability: Not applicable.

. Persistence/Degradability: Like plastic in the long term.

. Environmental Precautions: It must be disposed of by incineration or in an authorized waste deposit.

13 Disposal considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

. Waste Disposal Methods: Disposal must be done as territory and /or local government regulations. Waste management information will help to receive the best results.

. Disposal of packaging: Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment

14 Transport information

.DOT Classification: Not a DOT controlled material (United States).

. Identification: Not applicable.

. Special Provisions for Transport: Not applicable.

. Marine Pollutant: Not applicable

15 Regulatory information

. Sara reporting requirements: Not applicable as an article. The components of these products do not have requirements as pure compounds; if dusts from the product are produced, SARA requirements may be applicable.

. Sara threshold planning quantity: There are no specific threshold planning quantities for the components of these products. None of the ingredients is listed.

. TSCA (Toxic substances Control ACT): There are articles and are not subject to the requirements of TSCA.

. California Safe drinking water and toxic enforcement act (Proposition 65): No component of these products is on the proposition 65 lists.

16 Other information

The contents and format of this MSDS/SDS are in accordance with REGULATION (EC) No 1907/2006 and Regulation (EU) 2021/2030, REGULATION (EC) No 1272/2008.

****

DISCLAIMER OF LIABILITY

The information in this MSDS/SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handing, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS/SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS/SDS information may be applicable.

****

End of document

**********The End**********

***SCS Global Services** does hereby certify that an independent assessment has been conducted on behalf of:*

Zhejiang Kingdom New Material Group Co., Ltd.

No. 38, Desheng Road, Heshan Industrial Park, Heshan Town, Tongxiang City, Zhejiang, China

For the following product(s):

Vinyl Tile:

Vinyl Dry Back (2mm to 3mm), Loose Lay (5mm), Vinyl Click (5mm), WPC (7.5mm), ESPC (5.5mm)



The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

NSF/ANSI 332 Resilient Flooring: Platinum

Conforms to the NSF/ANSI 332-2015 Sustainability Assessment for Resilient Floor Coverings

Registration # SCS-RF-05179
Valid from: December 8, 2023 to December 31, 2026

SCSglobal SERVICES

Nicole Munoz, Vice President
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