

TECHNICAL DATA SHEET

PHYSICAL PROPERTIES & PACKAGING (SPC FLOORING – 8.0 MM / 0.5 MM)	
USE	Commercial & Residential (<i>please refer to Recommended Usage for Commercial Recommended Areas</i>)
SIZE	9 “1/6 x 60”. (230mm x 1524 mm)
THICKNESS CORE	6.0 mm
THICKNESS - WEAR LAYER	0.5 mm (20 mil)
PROFILE	Unilin click.
FINISH	Polyurethane acrylate coating, painted bevel edge
UNDERLAYMENT	2.0mm IXPE 15X
COVERAGE - CARTON	6 planks/carton (22.64 Sq.Ft. / 2.1 Sqm)
COVERAGE - PALLET	60 cartons/pallet (1,358.4 Sq.Ft. / 126 Sqm)
COVERAGE - CONTAINER	13 Pallets/20’ container (17,659.2 Sq.Ft. / 1,638 Sqm)

STANDARDS — MANUFACTURING & USAGE (ASTM F3261)			
STANDARD	DESCRIPTION	REQUIREMENTS	RESULTS
ASTM F3261	Physical Characteristics / Tolerances	Refer to Standard	Passes Requirements
ASTM F1914	Residual Indentation	Average: < 0.007% (0.18mm)	Passes Requirements
ASTM F1914	Surface integrity	No Puncture through wear layer / De1cor layer	Passes Requirements
ISO 23999	Dimensional Stability	≤ 0.2% / lineal ft. (305mm)	Passes Requirements
ISO 23999	Curling	≤ 0.080 in. (2.0mm)	Passes Requirements
ASTM F925	Chemical Resistance	No More Than Slight Change	Passes Requirements
ASTM F1514	Resistance to Heat	Average ΔE ≤ 8.0	Passes Requirements



ROYAL CRYSTAL JOINT STOCK COMPANY

Address: Street No.8, Nhon Trach II, Nhon Phu Industrial Park, Hiep Phuoc ward, Nhon Trach district, Dong Nai province, Vietnam

ASTM F1515	Resistance to Light	Average $\Delta E \leq 8.0$	Passes Requirements
ASTM F3261	Thickness Swell	Max 2% without Pad Max 5% with Pad	Passes Requirements
ASTM 970	Static loading without pad	≤ 0.005 in (0.13mm) loading 250lb/in ²	Passes Requirements

STANDARDS — SAFETY & PERFORMANCE

STANDARD	DESCRIPTION	REQUIREMENTS	RESULTS
ASTM E648	Critical Radiant Flux (Radiant Panel)	Class I: > 0.45 W/Sq. cm	Passes Requirements
ASTM E662	Smoke Density	Flaming & Non-Flaming < 450	Passes Requirements
CDPH Standard Method v1.2	VOCs/TVOCs, Formaldehyde	Refer to Standard	Passes Requirements
REACH SVHC 223	Substances of Very High Concern	Per Substance: $< 0.1\%$ weight/weight	Passes Requirements
ASTM F963	Heavy Metals	Refer to Standard (Table 1)	Passes Requirements
CPSC-CH-C1001-09.4	Phthalates	Per CPSIA4 $< 0.1\%$ per Substance	Passes Requirements
ASTM D2047	Coefficient of Friction / Slip Resistance	N/A (No Official Requirements)	≥ 0.6 (wet)

STANDARDS — SOUND

ASSEMBLY	RESULTS		NOTE
	ASTM E90	ASTM E492	
6" Concrete Slab	STC 52	IIC 55	Results of configuration: core 4.3mm, pad 1mm
8" Concrete Slab + Ceiling		IIC 71	Results of configuration: core 4.3mm, pad 1mm

CHEMICAL RESISTANCE

ASTM F925-13(2020)

Reagent	Rating		
	Surface attack	Color change	Surface dulling
White vinegar (5% acetic acid)	0	0	0
Rubbing alcohol (70% isopropyl alcohol)	0	0	0
White mineral oil (medicinal grade)	0	0	0
Sodium hydroxide solution (5% NaOH)	0	0	0
Hydrochloric acid solution (5% HCl)	0	0	0
Sulfuric acid solution (5% H ₂ SO ₄)	0	0	0
Household ammonia solution (5% NH ₄ OH)	0	0	0
Household bleach (5.25% NaOCl)	0	0	0
Olive oil (light)	0	0	0
Kerozene (K1)	0	0	0
Unleaded gasoline (regular grade)	0	0	0
Phenol (5% active phenol)	0	0	0

RESULTS OF TOXID CHEMICAL

1. Phthalates content

Test Method: Organic solvent extraction, analyzed by GCMS

Test Result:

Test No.				T001
Material No.				M001
Test Parameter	CAS NO	Unit	RL	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.
Diisobutyl phthalate (DIBP)	84-69-5	%	0.005	n.d.
Di-n-pentyl phthalate (DnPP)	131-18-0	%	0.005	n.d.
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.005	n.d.
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.005	n.d.
Diisopentyl phthalate (DiPP)	605-50-5	%	0.005	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
 RL = Reporting Limit
 NA = Not Applicable
 % = percentage

4. Vinyl Chloride

Test Method: EN ISO 6401:2008

Test result

Test No.	Material No.	Test Parameter	Unit	RL	Test Result
T001	M001	Vinyl chloride monomer	mg/kg	1	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
 RL = Reporting Limit
 ppm = part per million
 mg/kg (milligram per kilogram) is equal to ppm
 NA = not applicable

2. Total heavy metal content

Test Method: ASTM F963-17 (CPSC method)

Test Result :

Test No.				T001
Material No.				M001
Test Parameter	CAS NO	Unit	RL	Result
Antimony	7440-36-0	mg/kg	10	n.d.
Arsenic	7440-38-2	mg/kg	10	n.d.
Barium	7440-39-3	mg/kg	10	n.d.
Cadmium	7440-43-9	mg/kg	10	n.d.
Chromium	7440-47-3	mg/kg	3	n.d.
Lead	7439-92-1	mg/kg	10	n.d.
Mercury	7439-97-6	mg/kg	0.3	n.d.
Selenium	7782-49-2	mg/kg	10	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
 RL = Reporting Limit
 mg/kg = milligram per kilogram

5. Formaldehyde

Test Method: EN ISO 14184-1:2011

Test Result:

Test No.			T001
Material No.			M001
Test Parameter	Unit	RL	Result
Formaldehyde content	mg/kg	10	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
 RL = Reporting Limit
 ppm = part per million
 mg/kg (milligram per kilogram) is equal to ppm
 NA = not applicable



ROYAL CRYSTAL JOINT STOCK COMPANY

Address: Street No.8, Nhon Trach II, Nhon Phu Industrial Park, Hiep Phuoc ward, Nhon Trach district, Dong Nai province, Vietnam

CERTIFICATIONS

CERTIFICATE OF COMPLIANCE



ROYAL CRYSTAL JOINT STOCK COMPANY

See product list below



ROYAL CRYSTAL JOINT STOCK COMPANY

See product list below

UL 2818 - 2013 Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

UL is a United States representative sample of the identified product, process or facility to the identified Standard or other requirement in accordance with the agreement and any applicable program under terms in place between UL and the Client (collectively "Agreement"). The Client is authorized to use the UL Mark for the identified Product, process or facility in accordance with the terms of the Agreement. The Client is not authorized to use the UL Mark for any other product, process or facility. This certification is not a warranty, endorsement, or approval of any quality or value of the product, process or facility. The Client is responsible for the accuracy of the information provided. The Client is responsible for the accuracy of the information provided. The Client is responsible for the accuracy of the information provided.

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Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that: **ROYAL CRYSTAL JOINT STOCK COMPANY**
 Road No. 8, Nhon Trach II Industrial Park - Nhon Phu, Hiep Phuoc Town, Nhon Trach District, Dong Nai Province, Vietnam

Holds Certificate Number: **FH 746110**

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

Manufacturing of stone plastic composite vinyl flooring.

For and on behalf of BSI: Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: **18/05/2021** Effective Date: **18/05/2021**
 Latest Revision Date: **18/05/2021** Expiry Date: **18/05/2024**

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This certificate was issued electronically and remains the property of BSI and is issued to the conditions of contract. An electronic certificate can be downloaded at www.bsigroup.com/BSI-Certificates or by telephone on +44 (0)1223 994300. Further information regarding the scope of this certificate and the applicability of ISO 9001:2015 requirements may be obtained by contacting the registration. This certificate is valid only if provided original copies are in use. BSI is not responsible for the accuracy of the information provided. BSI is not responsible for the accuracy of the information provided. BSI is not responsible for the accuracy of the information provided.

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

Royal Crystal Joint Stock Company

United States

For the following product(s):

Vinyl Tile:
 Stone Plastic Composite (SPC) Floor with EVA underlayment
 Stone Plastic Composite (SPC) Floor with IXPE underlayment
 Vinyl Tile Flooring with no underlayment
(Maximum thickness: 6.5mm)

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

FloorScore®
 Indoor Air Quality Certified to SCS-EC10.3-2014 v4.1
 Conforms to the CDPH/EHLB Standard Method v1.2-2017 (California Section 01350), effective April 1, 2017, for the school classroom and private office parameters when modeled as flooring.
 Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than/equal to 0.5 mg/m³ (in compliance with CDPH/EHLB Standard Method v1.2-2017)

Registration # SCS-FS-06263
 Valid from: August 1, 2023 to July 31, 2024

SCS Global Services is currently the only certification body approved by the Resilient Floor Covering Institute (RFCI) to provide FloorScore® product certification; certified products are only listed on the SCS Green Products Guide, <http://www.scsglobal.com/certified-green-products-guide>.






ANAB National Accreditation Board
ACCREDITED
PRODUCT CERTIFICATION
ENVIRONMENTAL

Stanley Mathuram

Stanley Mathuram, PE, Executive Vice President
 SCS Global Services
 2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA



RECORD OF PARTICIPATION

ROYAL CRYSTAL JOINT STOCK COMPANY
CÔNG TY CP HOÀNG GIA PHA LÊ

Road 8, Nhon Trach II Industrial Park - Nhon Phu, Hiep Phuoc Town, Nhon Trach District, Dong Nai Province, Vietnam
Quang Số 8, KCN Nhon Trach II - Nhon Phú, Th trấn Hiệp Phước, Huyện Nhon Trach, Tỉnh Đồng Nai, Việt Nam

Has been assessed by Intertek as conforming to the requirements of:

Global Security Verification

This document certifies that the named facility has voluntarily participated in the Global Security Verification Program. A comprehensive supply chain security verification of the named facility was conducted by an independent third party to determine appropriate minimum security measures, as published by the U.S. Bureau of Customs and Border Protection and other non-national mutually recognized supply chain security programs, are implemented and maintained throughout the facility. Specifically, this verification focused on existing processes, procedures and infrastructure related to the following areas of supply chain security:

1. Security Vision and Responsibility
2. Risk Assessment
3. Supplier Partner Security
4. Cybersecurity
5. Commodity and Treatments of International Traffic Security
6. Load Security
7. Procedural Security
8. Physical Security
9. Physical Access Control
10. Physical Security
11. Personnel Security
12. Personnel Security
13. Education, Training and Awareness

Registration Number
F_JAR_169091_GSV-R1

Audit Date: June 28, 2023
Issue Date: July 5, 2023
Expiry Date: July 4, 2024

Raphele Sore
GVV Program Manager, Intertek

Guillaume Gagnac
Global Vice President,
Technical Management & Quality,
Business Assurance, Intertek

Intertek's GSV program uses multiple global supply chain security verifications, including C-PEAT (Customs Trade Partnership Against Terrorism), RFP (Resilient in Production) and AEOI (Authorized Economic Operator).




Sedex Members Ethical Trade Audit Report

Version 6.1






CE TEST CERTIFICATE

FOR PERFORMANCE CHARACTERISTICS OF CONSTRUCTION PRODUCTS FOR THE CE MARKING

FLO-22-11-21-01

Products: SPC Flooring Collection; (3,4 - 8,5) mm with and without DPE (L0 - 2,0) mm and EVA (1,0 - 2,0) mm underlay material

Client: Royal Crystal Joint Stock Company
Dong Nai Street No. 8, Nhon Trach Industrial Zone II
Nhon Phu, Hiep Phuoc Town, Nhon Trach District
Dong Nai Province / Vietnam

Order: Testing and classification of selected properties according to EN 14041:2004+AC2005+AC2006

Test report: 2720452, 2722282

Test results: The above mentioned SPC Flooring Collection can be classified regarding to the tested properties according to EN 14041:2004+AC2005+AC2006 (CE-labeling) as follows:

Properties	Results	Declaration according to EN 14041:2004+AC2005+AC2006
Reaction to fire performance according to EN ISO 9239-1:2010 and EN ISO 11925-2:2020, Classification according to EN 13501-1:2018	11,1 kW/m ²	Reaction to fire class
- Critical heat flux	457 W/m ²	BS-d1*
- Smoke production	μ = 0,38	class OS
Sliding behaviour according to EN 13895-2:2008	< LOD (96 h)	class E1
Formaldehyde emission according to EN 717-1:2005	≤ 0,058 (m ³ /VW)	≤ 0,05 (m ³ /VW)
Thermal resistance according to EN 12667:2001	0,125 (W/m ² K)	0,12 (W/m ² K)
Thermal conductivity according to EN 12667:2001		

* Valid on wooden or mineral subfloor in end use application, using adhesives or not.
LOD = Limit of Detection

Dresden, 21/11/2022



R. Sore
Head of laboratory

J. Gagnac
Engineer in charge