

**TECHNICAL DATA SHEET**

<b>PHYSICAL PROPERTIES &amp; PACKAGING (SPC FLOORING – 6.5 MM / 0.5 MM)</b>	
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	5.0 mm
THICKNESS - WEAR LAYER	0.5 mm (20 mil)
PROFILE	Unilin click
FINISH	Polyurethane acrylate coating, painted bevel edge
UNDERLAYMENT	1.5mm 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	15 Pallets/20’ container (20,376 Sq.Ft. / 1,890 Sqm)

<b>STANDARDS — MANUFACTURING &amp; USAGE (ASTM F3261)</b>			
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
ASTM F1515	Resistance to Light	Average ΔE ≤ 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 <sup>2</sup>	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

<b>CHEMICAL RESISTANCE</b>	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 <sub>2</sub> SO <sub>4</sub> )	0	0	0
Household ammonia solution (5% NH <sub>4</sub> 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

## CERTIFICATIONS

### CERTIFICATE OF COMPLIANCE



**GREENGUARD**  
PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS  
UL COM/CGG  
UL 2818  
**GOLD**

**ROYAL CRYSTAL JOINT STOCK COMPANY**

See product list below

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



UL includes representative samples of the identified product, process or facility to the identified Standard or other requirements in accordance with the agreement and any applicable program service terms in place between UL and the Client (collectively "Agreement"). The Client is authorized to use the UL logo for the identified Product, process or facility to identify this certification, in accordance with the terms of the Agreement. The Certificate is valid for the identified data unless there is non-compliance with the Agreement. This certificate is subject to modification, suspension and withdrawal by UL and SPCF LLC, in accordance with the Agreement.

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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

Holder 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 Chiuang, Head of Compliance & Risk - Asia Pacific**

Original Registration Date: **19/05/2021** Effective Date: **19/05/2021**  
Latest Revision Date: **19/05/2021** 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 certificate holder. In addition, conditions can be governmental bodies. Further details can be obtained at www.bsi.org.uk. Further conditions regarding the location of the certificate and the applicability of ISO 9001:2015 requirements may be constructed according to the organization. The certificate is valid only if produced original copies are in compliance with the requirements. Information and Contact: BSI, Customer Care, Easy Access, Royal Victoria Road, Milton Keynes MK9 1PW, UK. Tel: +44 (0)1908 890000. BSI Assurance Ltd, Limited, registered in England under number 7800701 at 389 Chiswick High Road, Uxbridge, UK. A member of the BSI Group of Companies.

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/m<sup>3</sup> (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>.






PRODUCT CERTIFICATION BODY



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

**intertek**  
Real Quality. Real Trust.

## 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  
Đường Số 8, KCN Nhon Trach II - Nhon Phu, Thị 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 security measures, as published by the U.S. Bureau of Customs and Border Protection and other relevant 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. Security Program Security
4. Cybersecurity
5. Commodity and Materials of International Traffic Security
6. Data Security
7. Physical Security
8. Agricultural Security
9. Physical Access Controls
10. Physical Security
11. Personnel Security
12. Education, Training and Awareness

**Registration Number**  
F\_JAR\_169091\_GSV-R1

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

**Request Note**  
QIV Program Manager, Intertek

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


Intertek's QIV integrates multiple global supply chain security initiatives, including C-PEAT's Customs Trade Partnership Against Terrorism, IPI, Partners in Protection and AEO (Authorized Economic Operator).



**SMETA**

## Sedex Members Ethical Trade Audit Report

Version 6.1







## TEST CERTIFICATE

FOR PERFORMANCE CHARACTERISTICS OF CONSTRUCTION PRODUCTS FOR THE CE MARKING

CE TEST CERTIFICATE

FOR PERFORMANCE CHARACTERISTICS OF CONSTRUCTION PRODUCTS FOR THE CE MARKING

CE

FLO-22-11-21-01

**Products:** SPC Flooring Collection: (3,4 - 8,5) mm with and without DPE (1,0 - 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-labelling) 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 11935-2:2010, Classification according to EN 13501-1:2018		Reaction to fire class
- Critical heat flux	11,1 kW/m <sup>2</sup>	B <sub>s1</sub> -s1*
- Smoke production	457 %*min	class O5
Sliding behaviour according to EN 13893:2008	μ = 0,38	class E1
Formaldehyde emission according to EN 717-1:2005	< 100 (µg/l)	
Thermal resistance according to EN 12667:2001	≤ 0,0538 (m <sup>2</sup> K)/W	≤ 0,05 (m <sup>2</sup> K)/W
Thermal conductivity according to EN 12667:2001	0,125 W/(m*K)	0,12 W/(m*K)

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

Dresden, 21/11/2022

  
Head of laboratory

  
  
Engineer in charge