FloorScore[®]

2023 Renewal Certification Assessment

SCS Environmental Certification Services

Prepared for:

Qingdao Lvzhichao New Material Co., Ltd

Engineered Hardwood Flooring

Manufactured by Qingdao Lvzhichao New Material Co., Ltd Dachang Town, Huangdao District, Qingdao City, Shandong Province, China



FloorScore® Renewal Certification Assessment

SCS Global Services, Environmental Certification Services completed a renewal FloorScore certification assessment of Qingdao Lvzhichao New Material Co., Ltd's Engineered Hardwood Flooring products manufactured in Dachang Town, Huangdao District, Qingdao City, Shandong Province, China. The lead auditor has completed a full assessment of the quality management assessment of each manufacturing site and product emissions review to determine conformance to SCS EC 10.3 – 2014 Indoor Air Quality Performance Standard and CA 01350 (Standard Method v1.2, effective April 1, 2017). The results of the assessment are included within this assessment report.

This certification assessment has been completed in accordance with SCS' quality management system, ISO 19011 standard auditing practices, ISO/IEC 17065 and has been approved by the program manager. If there is a disagreement with the certification decision, please contact the program manager/quality manager directly.

AUDITOR INFORMATION					
Wang Chuan, AuditorLead Auditor Namewangchuan@woodbasedpanel.com+86 13641135010			Dec 12, 2023		
SCS FINAL REVIEWER SIGNATURE					
SCS Decision Maker	Rob Emelander, Program Manager remelander@scsglobalservices.com +1.616.502.6090				
Signature	MEN	Date	Dec. 13, 2023		

Authorized Signatures

EXECUTIVE SUMMARY

ASSESSMENT SCOPE

Qingdao Lvzhichao's Engineered Hardwood Flooring assessment scope is detailed in the work order QLNM-23-01. A change of scope was required to correct the address as below:

Dachang Town, Huangdao District, Qingdao City, Shandong Province, China.

INDOOR AIR QUALITY CERTIFICATION SUMMARY

The following table details the conformance for products that have met FloorScore[®] product certification requirements. Products that have met FloorScore[®] certification also comply with the following criteria: USGBC LEED 2008, 2009 and v4 for Low-Emitting Materials (Flooring); Collaborative for High Performance Schools (CHPS) 2009 Criteria, EQ2.2.3; ANSI/ASHRAE/USGBC/IES Standard 189.1-2014, Section 8.4.2.3: Floor Covering Materials; BREEAM International and BREEAM UK; Green Guide for Health Care 2.2 EP 3.3 and EQ 4.3; and WELL Building Standard 4.3.a: Air.

PRODUCT CATEGORY	PRODUCT LINE(S)	QUALIFICATIONS	CERTIFICATE NUMBER	CERTIFICATION PERIOD
Engineered Hardwood Flooring	Multi-Layer Engineered Hardwood Flooring (Maximum thickness: 19mm)	TVOC Range: 0.5 mg/m ³ or less	SCS-FS-07520	Jan 1, 2024 to Dec 31, 2024

PRODUCT ASSESSMENT SUMMARY

The following table indicates if a Non-Conformance Report (NCR) / Opportunity for Improvement (OFI) /New Information Request (NIR) is issued based on deficiencies found in the documentation or other supplemental information provided to meet both CDPH/EHLB Standard Method v1.2 and the Quality Management System requirements. All NCRs must be closed before certification may be issued.

NCR/ OFI/ NIR-#	STANDARD REQUIREMENT	AUDITOR FINDINGS	DUE DATE	STATUS
NCR #1	SCS-EC-10.3-2014 Section 6.5.2	The product to be matched did not have a regional identification.	Dec 11, 2023	Closed
NIR #1	SCS-EC-10.3-2014 Section 6.5.1	Due to limited business travel by COVID-19, the onsite audits required for initial certification were not able to be scheduled prior to issuing certification. The auditor will work with the client to ensure that the first audit is scheduled within the initial year of certification.	Dec 11, 2023	Closed

MANUFACTURING ONSITE AUDIT SUMMARY

The table below indicates the entire scope of applicable site audits, the status of site audits completed, conformance status, and rationale for site audit selection for initial and renewal years.

MANUFACTURING	DATE OF LAST	STATUS OF	AUDITOR RATIONALE
SITE	ONSITE AUDIT	NCR/NIR	
Dachang Town, Huangdao District, Qingdao City, Shandong Province, China	Sep 5-6, 2023	1 NCR and 1 NIR finished closing.	This site continues to demonstrate the ability to control production through a quality management system and manufactures products considered to be a low priority for emissions testing. Therefore, the site is also considered a low priority and does not require a renewal onsite audit at this time. The site will be re-evaluated for an onsite during the 2027 assessment.

1.0 Product Category(ies) Assessment

The following tables provide a progressive review on how products were selected to represent the emission profile for the product category, actual emissions results, and overall product certification results.

1.1 PRODUCT TESTING SAMPLE SELECTION

The following product sample selection is based on the product formulations, ingredients/materials, production processes and known production variability.

PRODUCT CATEGORY	MANUFACTURING SITE	PRODUCT LINE	PRODUCT MODEL/SKU NO.	SUPPORTING DOCUMENTATION	AUDITOR RATIONALE
Engineered Hardwood Flooring	Qingdao City, China	Multi-Layer Engineered Hardwood Flooring/ 19mm	23-T-TG7O-407	Date Request Form NOC Form	The products have the same formulation and ingredient in the product group. So the worst case was selected based on the thickness of product.

1.2 PRODUCT EMISSIONS RESULTS

The table(s) below summarize(s) the product emissions history results for the individual volatile organic compounds (VOCs) tested for compliance to CA Specification 01350 (Standard Method v1.2, effective April 1, 2017) private office and school classroom parameters when modeled as flooring. The highlighted row indicates the current emissions results.

1.2.1 Engineered Hardwood Flooring

MANUFACTURING SITE	PRODUCT LINE	LAB REPORT NUMBER AND DATE	CREL VOCs	EF (μg/m²) at 96 hrs	PRIVATE OFFICE* RESULTS	SCHOOL CLASSROOM** RESULTS	TVOC RANGE
Qingdao City, China	Multi-layer Engineered Hardwood Flooring/ 18.7mm	IAQ-2021-104-FS/ 211116	Formaldehyde	3.75	PASS	PASS	-

Qingdao City, China	Multi-layer Engineered Hardwood Flooring/ 18.7mm	IAQ-2021-104-FS/ 211116	Acetaldehyde	6.60	PASS	PASS	-
Qingdao City, China	Multi-layer Engineered Hardwood Flooring/ 18.7mm	IAQ-2021-104-FS/ 211116	TVOC	140.10	-	-	0.5mg/m ³ or less
Qingdao City, China	Multi-Layer Engineered Hardwood Flooring/ 19mm	IAQ-2023-085-FS/ 231018	Acetaldehyde	5.94	PASS	PASS	-
Qingdao City, China	Multi-Layer Engineered Hardwood Flooring/ 19mm	IAQ-2023-085-FS/ 231018	TVOC	38.64	-	-	0.5mg/m ³ or less

The results for Qingdao Lvzhichao's Engineered Hardwood Flooring products manufactured in Qingdao City, China demonstrate that all 35 targeted CREL VOCs listed in CDPH/EHLB Standard Method V1.2 are below 70% of the maximum allowable limits. Therefore, these products are considered **Low Priority**. Low Priority products require renewal testing every two years after the 2023 certification. The TVOC results also demonstrate a TVOC range of 0.5 mg/m³ or less.

1.3 Lab Testing Requirements

The table below is a checklist of the standard requirements for product testing and report results according to CA 01350 (Standard Method v1.2) and SCS EC10.3-2014.

REQUIREMENT	SUPPORTING DOCUMENTATION	AUDITOR KEY FINDINGS	ASSESSMENT RESULT
Laboratory is a qualified ISO 17025 certified laboratory.	IAQ-2023-085-FS	The sample was tested by BQI, an ISO 17025 certified lab.	No Issues
[Reference: SCS-EC10.3-2014-Section 6.3.2]			
The manufacturer has submitted results in accordance with CDPH/EHLB Standard Method V1.2. [Reference: SCS-EC10.3-2014-Section 6.3]	IAQ-2023-085-FS	Results have been submitted in accordance with CDPH/EHLB Standard Method V1.2. Please see the attachment.	No Issues

Samples for testing are selected by a SCS auditor or a person authorized by SCS. [Reference: SCS-EC10.3-2014-Section 6.2]	DRF	The sample was collected by Li Yan and packaged by client.	No Issues NCR NIR OFI
The samples are selected from a production lot that is representative of the processes and quality the manufacturer intends to present to the market. [Reference: SCS-EC10.3-2014-Section 6.2.4]	Chain of custody form	The sample selected is representative of the finished product intended for the market.	No Issues NCR NIR OFI
Manufacturer has submitted their nominations for test groups and worst case models accompanied by supportive data in the form of calculations, test results, formulations, and written explanation. [Reference: SCS-EC10.3-2014-Section 6.2]	DRF	The products have the same formulation and ingredient in the product group. So the worst case was selected based on the thickness of product.	No Issues NCR NIR OFI
Samples submitted to the laboratory are in conformance with CDPH/EHLB Standard Method V1.2. [Reference: SCS-EC10.3-2014-Section 6.2]	Chain of custody form	The samples were submitted in conformance with CDPH/EHLB Standard Method V1.2. Please see the attachment.	No Issues NCR NIR OFI

1.4 Quality Management System

Please refer to Qingdao Lvzhichao_2023_FS_OSA_RPT for detailed findings of the onsite audits conducted. The table below includes a review of the ongoing maintenance of the manufacturer's quality management system in accordance to SCS EC10.3-2014.

	REQUIREMENT	SUPPORTING DOCUMENTATION	AUDITOR KEY FINDINGS	CONFORMANCE ISSUE
1	QMS Certification Valid ISO 9001 or comparable certification was submitted (if applicable)	DRF	ISO 9001 without certificate.	No issue
2	Internal/External Audits Evidence of no outstanding NCRs were provided.	attachment 3	Reviewed the last internal audit report which was conducted from Aug 4 to Aug 5, 2023. No NCR in the audit.	No issue OFI NIR NCR
3	Production Flow Chart [Reference: SCS-EC10.3-2014-Section 6.5]	NOC Form	The semi-finished product was used as the material.	No issue
4	Production Variability [Reference: SCS-EC10.3-2014-Section 6.5]	DRF	No change	No issue
5	Product Line Identification and Traceability [Reference: SCS-EC10.3-2014-Section 6.5]	DRF	No change	No issue
6	Production Control [Reference: SCS-EC10.3-2014-Section 6.5]	DRF	Interviewed Ms. Li. No customer complaint received.	No issue

1.5 FloorScore[®] Logo Review

The table below includes a review of the ongoing FloorScore[®] logo usage

	REQUIREMENT	SUPPORTING DOCUMENTATION	AUDITOR KEY FINDINGS	CONFORMANCE ISSUE
1	Logo Use-Website Are SCS Indoor Air Quality logos used on the company website? (If yes, provide a link to the website.) [Reference: SCS-EC10.3-2014-Section 5.4]	DRF	Interviewed Ms. Li and searched from the net. No website used.	No issue
2	Logo Use-Marketing Collateral Are SCS Indoor Air Quality logos used on "off- products" such as brochures, price lists, or leaflets? (If yes, provide a sampling of logos used on off-products.) [Reference: SCS-EC10.3-2014-Section 5.4]	attachment 1	Reviewed the showroom. The logo used correctly.	No issue
3	Logo Use-On Product Packaging Are SCS Indoor Air Quality logos used on products such as product packaging or labels? (If yes, provide an example of a logo used on products.) [Reference: SCS-EC10.3-2014-Section 5.4]	attachment 2	Reviewed the package. The logo used correctly.	No issue

APPENDIX

A.1 Renewal Audit Recommendations

A.1.1 Renewal Sample Selection

The following table represents suggested sample selections for emissions testing. The frequency and required number of samples is dependent on the quality management systems review per manufacturing site and emissions history review completed during each renewal assessment by the auditor.

PRODUCT CATEGORY	MANUFACTURING SITE	PRODUCT LINE	PRODUCT DETAILS	Renewal YEAR	AUDITOR RATIONALE
Engineered Hardwood Flooring	Qingdao City, China	Multi-Layer Engineered Hardwood Flooring	19mm	2024	This product is considered Low Priority. Low Priority products require renewal testing every two years after the 2022 renewal audit.