

# Indoor Air Quality - Furniture

## 2022 Renewal Certification Assessment

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*SCS Environmental Certification Services*

Prepared for:

**AMQ Solutions, LLC**

*Headquartered in Santa Clara, CA*

### **Benching, Accessories, and Seating**

**Project Work Order: AMQ-21-01**

**September 20, 2022**



## Indoor Air Quality Renewal Certification Assessment

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SCS Global Services, Environmental Certification Service completed an Indoor Air Quality certification assessment of AMQ Solutions, LLC's benching, accessories, and seating products manufactured in Santa Clara, CA. 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, CDPH/EHLB Standard Method (CA 01350) v1.2-2017 and ANSI/BIFMA M7.1/X7.1 Furniture Emission Standard. 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 Lead Auditor directly.

## Authorized Signatures

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AUDITOR INFORMATION			
Lead Auditor	Holly Bajko, Sr. Technical Specialist hbajko@scsglobalservices.com +1.831.421.1200	Date	September 20, 2022
SCS FINAL REVIEWER SIGNATURE			
SCS Decision Maker	Erik Hanba, Operations Director ehanba@scsglobalservices.com +1.510.421.1540		
Signature		Date	September 20, 2022

## Executive Summary

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### Assessment Scope

AMQ Solutions, LLC's products and associated manufacturing site assessed for Indoor Advantage™ Gold certification is detailed in the associated work order, AMQ-21-01. A **CHANGE OF SCOPE** was required to provide a 3-month extension due to testing delays, which is outlined in the work order, AMQ-22-02.

### Quality Management System Review

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No changes were made to the client's Quality Management System per the Document Request Form submitted.

## Certification Assessment Results

### Emissions Summary and Recommendations

Tested Product/Material	ZILO
Lab Report #	1196-003-02AA-Jul2922
Manufacturing Site(s)	Booho Chair One Co., Ltd
Model Type	Seating
Sample Result Summary	Product continues to comply with all indoor air quality emissions criteria.
Sample Plan Rationale	The seating sample was the expiring worst-case representative.
Reference Documentation	AMQ Solutions_2022_IAQ_WKBK_seating.xls

	Indoor Advantage™		Indoor Advantage™ Gold							
	ANSI/BIFMA M7.1/X7.1 (ANSI/BIFMA e3 7.6.1) Seating Parameters		ANSI/BIFMA e3 7.6.2 Seating Parameters		CA 01350 Office Seating Scenario		CA 01350 School Classroom Scenario		ANSI/BIFMA e3 7.6.3 Seating Parameters	
Compound Concentration (µg/m³)	Modeled	Maximum Allowable	Modeled	Maximum Allowable	Modeled	Maximum Allowable	Modeled	Maximum Allowable	Modeled	Maximum Allowable
Dimethylformamide (N,N-)	--	--	1.68	40	1.68	40	2.94	40	--	--
Formaldehyde	0.26	30.71	0.52	16.5	0.52	9	0.90	9	0.52	9
Phenylcyclohexene (4-PCH)	0.00	6.50	--	--	--	--	--	--	--	--
TOTAL VOC	6.83	250	--	--	--	--	--	--	--	--
TOTAL Aldehydes (ppb)	0.21	50	--	--	--	--	--	--	--	--
RESULT	PASS		PASS		PASS		PASS		PASS	

Tested Product/Material	3F
Lab Report #	1196-003-01A-Jul2922
Manufacturing Site(s)	Jiangsu Burgeree New Technology Materials Co., Ltd
Model Type	Individual Furniture Component
Sample Result Summary	Product continues to comply with all indoor air quality emissions criteria.
Sample Plan Rationale	The accessories sample was the expiring worst-case representative.
Reference Documentation	AMQ Solutions_2022_IAQ_WKBK_3F Screen.xls

			Indoor Advantage™		Indoor Advantage™ Gold				
			168-hour Maximum Allowable		336-hour Maximum Allowable				
Compound Emission Factor (µg/m²-hr)	168-hour Actual	336-hour Predicted	ANSI/BIFMA M7.1/X7.1 (ANSI/BIFM A e3 7.6.1) Open Plan	ANSI/BIFMA M7.1/X7.1 (ANSI/BIFM A e3 7.6.1) Private Office	CA 0135 0 Open Plan	ANSI/BIFM A e3 7.6.2 Open Plan	ANSI/BIFM A e3 7.6.2 Private Office	ANSI/BIFM A e3 7.6.3 Open Plan	ANSI/BIFM A e3 7.6.3 Private Office
Formaldehyde	0.00		42.3	85.1	6.2	11	23	6.2	12.5
Phenylcyclohexene (4-PCH)	0.00	--	4.5	9.0	--	--	--	--	--
TOTAL VOC	0.00	--	345	694	--	--	--	--	--
TOTAL Aldehydes (in µmol/m²-hr)	0.00	--	2.8	5.7	--	--	--	--	--
RESULT			PASS	PASS	PASS	PASS	PASS	PASS	PASS

## Lab Testing Requirements

The table below is a checklist of the standard requirements for product testing and report results according to SCS EC10.3-2014 Indoor Air Quality Performance Standard and ANSI/BIFMA M7.1/X7.1.

REQUIREMENT	SUPPORTING DOCUMENTATION	AUDITOR KEY FINDINGS	CONFORMANCE ISSUE
Laboratory is a qualified ISO 17025 certified laboratory. [Reference: SCS-EC10.3-2014-Section 6.3.2]	1196-003-01A-Jul2922.pdf 1196-003-02AA-Jul2922.pdf	Berkeley Analytical is an SCS-approved lab.	<input checked="" type="checkbox"/> No issue <input type="checkbox"/> OFI <input type="checkbox"/> NIR <input type="checkbox"/> NCR
The manufacturer has submitted results in accordance with ANSI/BIFMA M7.1/X7.1 [Reference: SCS-EC10.3-2014-Section 6.3.3]	1196-003-01A-Jul2922.pdf 1196-003-02AA-Jul2922.pdf	Requirement met.	<input checked="" type="checkbox"/> No issue <input type="checkbox"/> OFI <input type="checkbox"/> NIR <input type="checkbox"/> NCR
Samples for testing are selected by a SCS auditor or a person authorized by SCS. [Reference: SCS-EC10.3-2014-Section 6.2]	Email: AMQ Solutions 2022 Sample Plan	Samples were selected by an SCS Lead Auditor.	<input checked="" type="checkbox"/> No issue <input type="checkbox"/> OFI <input type="checkbox"/> NIR <input type="checkbox"/> NCR
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]	1196-003-01A-Jul2922.pdf 1196-003-02AA-Jul2922.pdf	Small and mid-scale samples are representative of the typical production process.	<input checked="" type="checkbox"/> No issue <input type="checkbox"/> OFI <input type="checkbox"/> NIR <input type="checkbox"/> NCR
Samples submitted to the laboratory are in accordance with ANSI/BIFMA M7.1/X7.1. [Reference: SCS-EC10.3-2014-Section 6.2]	1196-003-01A-Jul2922.pdf 1196-003-02AA-Jul2922.pdf	Requirement met.	<input checked="" type="checkbox"/> No issue <input type="checkbox"/> OFI <input type="checkbox"/> NIR <input type="checkbox"/> NCR

## Indoor Air Quality Certification Summary

The following table details the conformance and product categories that have met Indoor Advantage™ Gold product certification requirements. Products that have met Indoor Advantage™ Gold certification also comply with the following criteria: Collaborative for High Performance Schools (CHPS) 2009 Criteria, EQ2.2.3; and USGBC LEED 2009 and V4 criteria for low emitting materials (Furniture).

**The certification date range for the products certified below is September 28, 2022 through June 27, 2023.**

CERTIFICATE NUMBER	PRODUCT CATEGORY	CERTIFICATE CHANGES	CONFORMANCE	QUALIFICATIONS
SCS-IAQ-05030	Benching	None	(No Change) Indoor Advantage™ Gold Indoor Air Quality Certified to SCS-EC10.3-2014 v4.1 Conforms to the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2021) and ANSI/BIFMA e.3-2019 (Credits 7.6.1, 7.6.2, 7.6.3) for the open plan and private office workstation parameters.1 Also, conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for the open plan1 and school classroom parameters.2 1 Modeled as Individual Furniture Components 2 Modeled as Pupil Desks	<i>(No Change) Frosted glass panel option only, excludes fabric panel options</i>
SCS-IAQ-05623	Accessories	None	(CHANGE) Indoor Advantage™ Gold Indoor Air Quality Certified to SCS-EC10.3-2014 v4.1 Conforms to the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2021) and ANSI/BIFMA e.3-2019 (Credits 7.6.1, 7.6.2, 7.6.3) for the open plan and private office workstation parameters.1 Also, conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for the open plan parameters.1 1 Modeled as Individual Furniture Components	None
SCS-IAQ-05624	Seating	None	(No Change) Indoor Advantage™ Gold Indoor Air Quality Certified to SCS-EC10.3-2014 v4.1 Conforms to the ANSI/BIFMA Furniture Emissions Standard (M7.1/X7.1-2011 R2021) and ANSI/BIFMA e.3-2019 (Credits 7.6.1, 7.6.2, 7.6.3) for seating parameters.1 Also, conforms to the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 for seating1 and school classroom2 parameters. 1 Modeled as Office Seating 2 Modeled as Pupil Seating	None

## Product Conformance Summary

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No production or quality management system conformance issues were identified in this audit. The client continues to perform as a low-risk manufacturer and has reported reduced emission profile for this renewal assessment by submitting samples that have followed a typical manufacturing procedure versus a rush production procedure.

## Appendix – Renewal Audit Recommendations

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### 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. At minimum, the recommended sample plan is based on renewal testing at a three-year frequency, unless there have been changes to the materials, production or quality management system that could increase the emissions profile of the representative product for each product category.

Testing should not be required during the 2023 assessment pending no major material production, supplier, or quality management changes.

PRODUCT CATEGORY	PRODUCT LINE/MATERIAL	PAST LAB RESULT	RENEWAL YEAR	AUDITOR RATIONALE
Benching	18mm FSC LPL	158224040c 001 1/7/2020	2024	The worst-case for AMQ Solutions, LLC's benching products is the Steelcase 18mm LPL worksurface. Steelcase tested the worksurface in 2021 and will need to retest in 2021 renewal assessment.
Seating	ZILO Chair with leather upholstery	1196-003-02AA- Jul2922	2025	Worst-case test results expire after three years. This sample will need to be retested prior to the 2025 renewal assessment.
Accessories	ACTIV DT RISER	N/A	2025	The 3F screen has exhibited consistent low emissions. A new worst-case representative has been selected for the accessories category to be tested in 2025.