UL GREENGUARD

UL GREENGUARD Certification Program
Demonstrating products support healthy indoor air
Low-emitting indoor product certification

Start your green and healthy building journey here

To learn more, visit: UL.com/Environment
Or contact us:

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GREENGUARD
PRODUCT CERTIFIED FOR
LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818
GOLD

Empowering Trust™

Content

UL GREENGUARD
Certification Program

(Hereinafter referred to as: GREENGUARD)

Overview

Interior products have a significant impact on indoor air quality, and can emit hundreds of chemicals into the air that building occupants breathe.
GREENGUARD Certification helps ensure compliance that products are low-emitting, and contribute to healthier interiors.

Representative samples of products that have achieved GREENGUARD Certification have been tested and certified to meet some of the world's most rigorous, third party chemical emissions standards — helping reduce indoor air pollution and the risk of chemical exposure while aiding in the creation of healthier indoor environments.

GREENGUARD Certification has been widely adopted as a trusted standard for low-emitting products. In fact, more than 400 green building codes, standards, guidelines, procurements policies, and rating systems recognize or reference
GREENGUARD Certified products. GREENGUARD Certified products are required to undergo regular compliance testing on critical components.

Scope

All indoor products, including:

- · furniture
- · flooring
- · window treatment
- · surfacing materials
- · paint
- · building materials
- · doors
- · mattress
- · cabinet
- · ceiling systems
- · adhesives
- · children product
- · Electronic appliances

Classify

Single Product certification

Single Product Certification means that if a single product passes the test and meet the strictest standard, only this product can use the GREEN-GUARD Mark.

All Products Certification

All Products Certification covers all kinds of products.

GREENGUARD Advantages:

UL GREENGUARD Certification delivers comprehensive value to help you gain a competitive edge and win in the marketplace.

GREENGUARD Certification provides a competitive advantage in an increasingly muddled green marketplace by serving as a health-based differentiator. Here are 10 reasons why GREENGUARD Certification delivers this compelling value better than the alternatives.

1 Top Recognition

UL Mark is trusted and accepted by 88% of U.S. Built Environment Authorities. Additionally, 66% of U.S. retailers express a preference for the UL Mark over other TIC marks.

2 High Acceptance

GREENGUARD Certified products are recognized, referenced or preferred by more than 450 federal purchasers, retailers, green building rating tools,and building codes around the world. UL's public affairs and outreach teams are dedicated to enhancing market adoptions, setting us apart as a true partner.

3 Reputation Management

UL and our services are backed by UL's long time legacy of trust since the founding year of 1894. We are truly committed to enhancing safe living and working environments for people worldwide.

4 Stringent Standards

GREENGUARD Certified products meet stringent chemical emissions requirements, such as being screened for more than 10,000 volatile organic compounds (VOCs). Products undergo routine monitoring and annual testing to maintain certification. The sound science, robust certification requirements, and third-party status that back the GREENGUARD Certification program differentiate certified products in the marketplace.

5 Health Impact

People spend 90% of their time indoors*, where air pollution levels are 2 to 5 times higher than those found outdoors*. The largest source of this pollution is volatile organic compound (VOC) emissions from building materials and furnishings. GREENGUARD Certification helps ensure compliance that products are low-emitting, and contribute to healthier indoor environment.

6 Comprehensive Suite of Services

In addition to GREENGUARD Certification, UL offers product emissions testing, UL ECOLOGO® Certification for multiattribute product sustainability, single attribute environmental claims validations, waste to landfill validation, Environmental Product Declarations, organizational sustainability certifications, and advisory/consulting services. This extensive portfolio allows us to help you tell your sustainability story in all the ways that are meaningful to you and your customers.

7 Greater Timeline Predictability

We are investing in additional staff and infrastructure resources to make the process easier, faster, and more predictable so you can build GREENGUARD certification into your new product launch timelines.

8 Cost Eficiencies

Maintaining ecolabels from multiple certifiers is costly, and potential harm to your brand's reputation from misuse of environmental claims is even more costly. The new GREENGUARD Mark is the only mark you need and can assist with avoiding greenwashing.

9 Robust Customer Support

From educational outreach to specifiers, building owners and facility managers, to training programs for your sales staff, to integrated marketing communications initiatives, UL provides a robust support team dedicated to maintaining and increasing the value of GREENGUARD Certification.

10 Environmental Leadership

GREENGUARD Certification is recognized and referenced in more than 400 building programs, standards and specifications around the world.

66% of U.S. retailers express a preference for the UL Markover other TIC marks.

* EPA "The Inside Story: A Guide to Indoor Air Quality," 2009.

Certification Types

GREENGUARD Certification is an internationally recognized product emissions certification and labeling program for manufacturers of low-emitting indoor products, furnishings and materials. Products can be certified under two different standards: GREENGUARD Certification and GREENGUARD Gold Certification.

GREENGUARD Certification is divided into two levels:

· GREENGUARD Certification
· GREENGUARD Gold Certification

To date, more than 900 manufacturers have volunteered to participate in GREEN-GUARD Certification, with a total of more than 50,000 certified products.

GREENGUARD Certification

- GREENGUARD Certification is the first voluntary North American product emissions certification created specifically for commercial building products.This certification verifies that products meet stringent chemical emission limits originally developed as purchasing specifications for commercial building products for the U.S. Environmental Protection Agency（EPA）the State of Washington. GREENGUARD Certified products are compliant with stringent emission levels for over 360 VOCs, plus a limit on the total of all chemical emissions combined (TVOC). Furniture products that are GREENGUARD Certified are also compliant with the BIFMA X7.1 standard.

- GREENGUARD Certification Program tests building materials, furnishings, furniture, etc. for chemical emissions (VOCs, formaldehyde, etc.) by applying Dynamic Environmental Chambers. GREENGUARD certified products can be searched in SPOT (the UL sustainable product database) and will not pollute indoor air quality.

Certification Standard

Applicable to All Products		
Parameter	Full Levels (Applicable for Building Construction Materials and finishes, Wood Finishes, Countertops, Casework, Visual Display Products, and Furniture Workstations, Casegood Systems and Movable Walls)	Full Levels (Applicable for OEM Materials, Mattresses and Bedding, Seating, Individual Casegoods,Tables, Workstation Components, Shelving,and Children's Furniture)
Individual VOCs	≤1/10 TLV	≤1/10 TLV
Total VOCs(TVOC)	≤ 0.5 mg/m³	≤0.25 mg/m³
Formaldehyde	≤0.05 ppm	≤0.025 ppm
Total Aldehydes	≤0.1 ppm	≤0.05 ppm

Listing of measured carcinogens and reproductive toxins as identified by California Proposition65, the U.S. National Toxicology Program(NTP), and the International Agency on Research on Cancer(IARC) must be provided.

Applicable to Specific Products Only		
Phenylcyclohexene	≤0.0065 mg/m³	≤0.0033 mg/m³
RespirableParticles	≤0.05 mg/m³	≤0.025 mg/m³

GREENGUARD Gold Certification

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• GREENGUARD Gold Certification includes safety factors to account for sensitive individuals (such as children and the elderly) and helps demonstrate that a product is acceptable for use in environments such as schools and healthcare facilities. In addition to limiting emissions of over 360 VOCs and total chemical emissions,GREENGUARD Gold Certified products must also comply with requirements of the State of California's Department of Public Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1 (2010)" (also known as California Section 01350).

Certification Standard

Parameter	Full levels
Individual VOCs	$\leqslant 1/100$ TLV and $\leqslant 1/2$ CA chronic REL (Office Seating: $\leqslant 1/100$ TLV and $\leqslant 1/4$ CA chronic REL)
Total VOCs	$\leqslant 0.22$ mg/m^3
Formaldehyde	$\leqslant 0.0073$ ppm/7.3 ppb (Office Seating: $\leqslant 0.00365$ ppm/3.65 ppb)
Total Aldehydes	$\leqslant 0.043$ ppm/43 ppb
1-Methyl-2- pyrrolidinone	$\leqslant 0.16$ mg/m^3 (Office Seating: $\leqslant 0.08$ mg/m^3)

Certification Process

Number	Process	Time	Note
a	Collect information of product and confirm the program	2 weeks	Fill out the manufacturer questionnaire and get the price estimate.
b	Manufacturer Review	1-2 days	The review focuses on productive technology and raw materials.
c	Profile Test	3-4 weeks	Select components or raw materials for test
d	Certification Test	3-4 weeks	Select the representative sample for certification test
e	Issue certificate	1 - 2weeks	Issue certificate and authorize use of GREENGUARD Mark
f	Annual re-certification and quarterly quality monitoring test		Undergo both annual re- certification and quarterly quality monitoring test to maintain this elite credential

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Testing Program

Testing

The test for interior products, building materials is Using Dynamic Environmental Chambers to test volatile organic compounds. This test may be performed on a product to see if it can meet the standard or to obtain a test report.

Testing methods

The methods, and others used by the GREENGUARD Certification programs, follow guidance of ASTM Standards D5116 and D6670, the U.S. Environmental Protection Agency's (EPA) testing protocol for furniture, the state of Washington's protocol for interior furnishings and construction materials, Germany's Blue Angel programs, California's Department of Public Health Services (CDPH) Standard Practice for Specification Section 01350 and the ISO 16000 environmental testing series.

Products are tested in dynamic environmental chambers where air flow is modeled to simulate actual product use. Measurements for chemical and particle emissions are taken at intervals during testing. Most building materials and furnishings are required to meet allowable emission levels within 7 to 14 days of installation. And we test formaldehyde and TVOC and calculation emissions.

Scan QR code
Learn more

SPOT connects Purchasers
with the most credible product information

Gain insight into the green purchasing market

Product Manufacturers & Brand Owners

Demonstrate compliance with green credits and sustainable purchasing policies

Increased visibility for products

Streamline sustainable product selection in BIM design with a free Revit, AutoCAD, and SketchUp add-in

Find products that comply with a sustainable purchasing policy

Product information submitted to SPOT by manufacturers and partners and curated by UL for credibility.

Architects & Designers

Professional Purchasers & Government

Find products that comply with a LEED Existing Building and Operations credits

Easily find products that comply major green building rating schemes such as LEED

Find products that meet EPA, GSA and DOD purchasing guidelines

REGISTER FOR AN ACCOUNT

spot.ul.com

Sustainable Products Database

- All GREENGUARD certified products are featured in SPOT.

- SPOT is the only sustainable product database linked by the GSA and DOD.

- UL SPOT is a trusted sustainable product database that can provide architectural designers or professional procurement with comprehensive attribute information from product environmental protection attributes, functionality, safety, and even manufacturer technical specifications, thereby greatly improving the efficiency of finding sustainable products and ultimately transformed into company benefits.

- SPOT is by far the world's largest sustainable product database, and the most comprehensive and rigorous database of low-emitting products and green building materials. It provides material usage guidelines for users who are committed to green construction and environmental protection.

- SPOT currently covers more than 130,000 products, and users can search for these products through standard format: numbers, manufacturers, certification categories (such as GREENGUARD Certification, GREENGUARD Certification for Homes) or Rating Systems/Sustainable Credits (such as LEED，BREEAM，WELL，Fitwel，CALGreen Code，ASHRAE 189.1 and more).

- So far, more than 150,000 unique visitors from around the world，including renowned architects, developers and owners, visit SPOT.

- SPOT is the only sustainable product database linked by the GSA and DOD.

SPOT is now more than 130,000 product families strong!

Join SPOT. It's free!

Create account

Register for a free account at： spot.ul.com

Related services and resources

Learn about exposure methods, common VOCs and tips to improve indoor air quality.

GREENGUARD Recognition

GREENGUARD Certification is recognized and referenced in more than 400 building programs, standards and specifications around the world, including WELL, fitwel®, LEED®, CHPS, ASHRAE, Green Globes, NAHB, IgCC, and more.

UL continues to add programs.

The GREENGUARD mark leverages the trusted reputation of UL (UL Mark is trusted and accepted by 88% of U.S. Built Environment Authorities. 66% of U.S. retailers express a preference for the UL Mark over other TIC marks.)
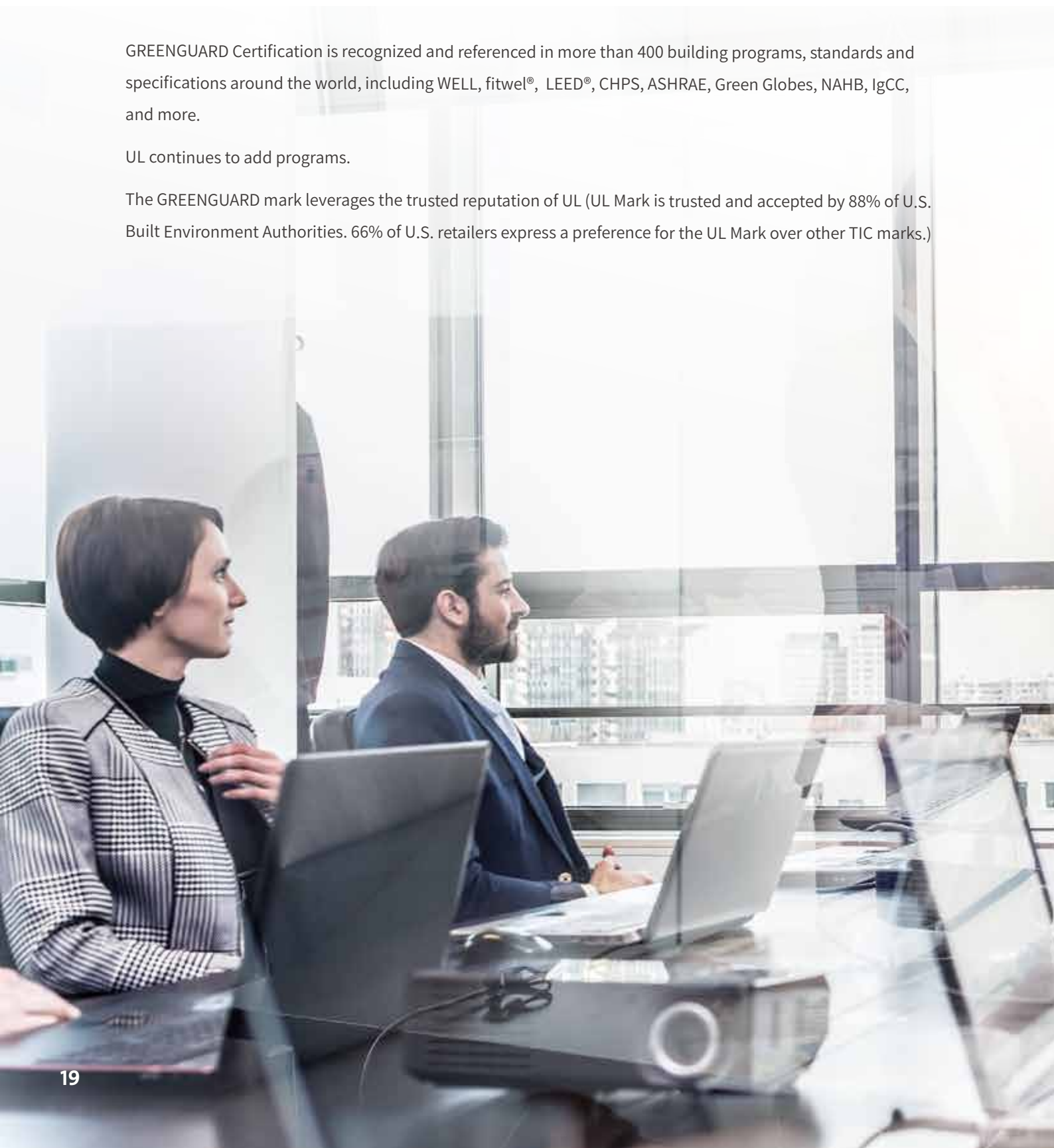
US Department of Defense   Singapore BCA Green Mark   State of California   ASHRAE 189.1

GREENGUARD and Green Building

GREENGUARD Gold

LEED v4 BD&C	LEED v4 BD&C Low-Emitting Materials Paints and Coatings LEED v4 BD&C Low-Emitting Materials Adhesives LEED v4 BD&C Low-Emitting Materials Flooring LEED v4 BD&C Low-Emitting Materials Wall Systems LEED v4 BD&C Low-Emitting Materials Ceiling Systems LEED v4 BD&C Low-Emitting Materials Insulation LEED v4 BD&C Low-Emitting Materials Furniture
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LEED v4.1 BD&C	LEED v4.1 ID&C Low-Emitting Materials Paints and Coatings LEED v4.1 ID&C Low-Emitting Materials Adhesives LEED v4.1 ID&C Low-Emitting Materials Flooring LEED v4.1 ID&C Low-Emitting Materials Wall Systems LEED v4.1 ID&C Low-Emitting Materials Ceiling Systems LEED v4.1 ID&C Low-Emitting Materials Insulation LEED v4.1 ID&C Low-Emitting Materials Furniture
LEED v4.1 O&M	LEED v4.1 O&M Purchasing Option 2 Paints and Coatings LEED v4.1 O&M Purchasing Option 2 Adhesives LEED v4.1 O&M Purchasing Option 2 Flooring LEED v4.1 O&M Purchasing Option 2 Wall Systems LEED v4.1 O&M Purchasing Option 2 Ceiling Systems LEED v4.1 O&M Purchasing Option 2 Insulation LEED v4.1 O&M Purchasing Option 2 Furniture

GREENGUARD

LEED v4 / v4.1 BD&C / ID&C / O&M	LEED v4 BD&C Low-Emitting Materials Furniture LEED v4.1 BD&C Low-Emitting Materials Furniture LEED v4 ID&C Low-Emitting Materials Furniture LEED v4.1 ID&C Low-Emitting Materials Furniture LEED v4.1 O&M Purchasing Option 2 Furniture

GREENGUARD and Healthy Building

fitwel®

- 6.3 Adopt and Implement an Indoor Air Quality Policy for the Workplace criteria requires low-emitting permanently installed products and furniture and GREENGUARD Gold is the first compliance pathway recognized

- 6.4 Adopt and implement a Green Purchasing Policy focuses on green cleaning products and UL ECOLOGO® Certification is one of the first compliance pathways recognized

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IMPACT. VIEW SPECIFIC
ATTRIBUTES EVALUATED:
UL.COM/EL
UL 2759

CERTIFIED
PRODUCT LENS MATERIALS
TRANSPARENCY AND
DISCLOSURE.
VIEW SPECIFIC INGREDIENTS
AND EVALUATIONS:
UL.COM/PL

WELL v2 (Pilot)

X11 Long-Term Emission Control

Part 1—Furniture Emissions： GREENGUARD Gold shows compliance
Part 2— Flooring and Insulation： GREENGUARD Gold shows compliance

X12 Short-Term Emission Control

Part 1 – Adhesives & Paints emissions： GREENGUARD Gold shows compliance
Part 2 – Adhesives & Paints content： UL ECOLOGO® Certification shows compliance

X14 Material Transparency

Ingredient transparency down to 1000ppm; Product Lens™ Certification shows compliance

X09 Cleaning Products and Protocol

Part 1— carcinogenic, mutagenic, reprotoxic substance minimization, skin and respiratory irritation minimization and systemic toxicity/organ effects; some UL ECOLOGO® standards show compliance

Asia Pacific Representative Companies

A&A Green Phoenix Group Joint Stock Company

Datumstruct (CFS) Pte Ltd

Guangdong Carpoly Technology Materials Co., Ltd.

SKSHU PAINT CO.,LTD

Akzo Nobel Swire Paints (Shanghai) Ltd

Dongguan Lamex Furniture Co. Ltd

KESHUN WATERPROOF TECHNOLOGY CO.,LTD

Zhejiang Sunon Furniture Manufacture Co., Ltd

Aurora (China) Co., Ltd

Dongguan zhaosheng furniture industrial co ltd-GG

Maco Group Corporation

Shenzhen Changjiang Furniture Co., Ltd

Armacell Asia Pte Ltd

Ekowood Malaysia Sdn. Bhd

Merryfair Chair System Sdn Bhd

Shyange Paint VietNam CO.,LTD.

Beijing jinyu tiantan Furniture Co.,Ltd.

Guangdong Huarun Paints Co.,Ltd

Novah (Shanghai) System Technology Corp., Ltd

SCG Ceramics Public Company Limited

Benel Singapore Pte Ltd (SINGAPORE)

Benithem Sdn. Bhd.

Guangdong Bardese Chemical Co.,Ltd

Nippon Paint (CHINA) Co., Ltd

Vanachai Group Public Company limited

CASABLANCA VIETNAM JSC.

Guangzhou Victory Industry Co., Ltd

Novalis International (Shanghai) Ltd.

YUNG CHI PAINT & VARNISH MFG CO.,LTD (TAIWAN)

Comfordy Co Ltd.GG

Guangzhou Zhisheng Quama Furniture Co Ltd

ONLEAD GROUP CO.,LTD

ZHANGJIAGANG ELEGANT HOME-TECH CO., LTD.