

#### Hangzhou Esun Board Industry Co., Ltd.

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#### 杭州意尚板业有限公司

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#### Class B1 Fire-Rated Metal Composite Panel Core Materials and Panel Product Data Specifications

#### B1级防火金属复合板芯料及板材产品各项数据指标

No. / 序号	Test Item / 检验项目	Test Value / 检测值	
1	Bending Strength / 弯曲强度	137 MPa	
2	Bending Modulus of Elasticity / 弯曲弹性模量	3.98×10^4 MPa	
3	Shear Strength / 剪切强度	38.0 MPa	
4	Peel Strength / 剥离强度	13.8 N/mm	
5	Tensile Strength / 拉伸强度	4.9 MPa	
6	Coefficient of Thermal Expansion / 热膨胀系数	热膨胀系数 2.21×10^-5 ℃^-1	
7	Impact Resistance / 耐冲击性	50 kg.cm no paint peeling, no cracks / 不脱漆,无裂痕	
8	Boiling Water Resistance / 耐沸水性	/	
9	Heat Deflection Temperature / 热变形温度	13.8 N/mm	

	Test Item 检验项目	Requirements 技术要求	Test Results 检测结果	Item Conclusion 单项结论	
Combustion performance grade Class B1(B) 燃烧性能等级 B <sub>1</sub> (B)级	FIGRA என W/S 燃烧增长速率指数	≤120	≤7.5		
	Lateral Flame Spread Condition 火焰横向蔓延情况	The lateral spread of flame does not reach the long wing edge of the sample 火焰模向蔓延情况未达到试样长翼边缘	Meets requirements 符合要求		
	THR MJ 600s的总放热量	≤7.5	2.9	Compliant 符合	
	60s inner flame tip height 60s内焰尖高度	≤150	<150		
	There is no phenomenon of ignition of filter paper by burning drips within 60s 60s内无燃烧滴落物引燃滤纸现象	There is no phenomenon of ignition of filter paper by burning drips within 60s 60s内无燃烧滴落物引燃滤纸现象	Meets requirements 符合要求		

Sample description: The thickness of the sample is about 4mm, both sides are metal panels, and the thickness of the core material is 3.5mm.

Installation instructions: The sample shall be mechanically fixed on the substrate according to the provisions of (GB/T20284-2006 5.2.2.c), and the substrate shall be tightly attached to the back plate. The substrate is a calcium silicate board with a thickness of 9mm and a density of 900kg/m3. The backboard is a calcium silicate board with a thickness of 9mm and a density of 900kg/m3. Before the test, the sample shall be conditioned at a temperature of (21~25)°C and a relative humidity of (45~55)% for 48h to a constant weight. The fire-affected surface of the sample is any surface.

样品说明:样品厚度约为4mm,两侧为金属面板,芯材厚度3.5mm。

安装说明:试样按(GB/T20284-2006第5.2.2.c)条规定采用机械方式固定于基材,基材紧贴背板。基材为厚9mm,密度900kg/m³的硅酸钙板。背板为厚9mm,密度900kg/m³的硅酸钙板。样品试验前在温度为(21~25)℃,相对湿度(45~55)%条件下状态调节48h至恒重。试样受火面为任一表面。

# Technological Innovation Leads The New Trend Of Waterproof And Fireproof Boards

技术革新,引领防水防火板材新趋势





SUPER LONG
PLATE
超长板材



Stable Material Quality 材质稳定



Antibacterial and Mildew-Resistant 抗菌防霉



Fire-Retardant and Flame-Retardant 防火阻燃



# The Factory Covers An Area Of 10000 Square Meters.

## ABOUT E-SUN / 关于意尚

Hangzhou Esun Board Industry Co., Ltd. is located in Yuhang District, Hangzhou CityYiqiao Industrial Park. The standard factory covers an area of nearly 10,000 square meters, with an annual output value of over 100 million yuan, specializing in the production of new metal composite panels. Through the composite process, the shortcomings of various single materials are overcome and the advantages of a single material are brought into play. The product has light weight, good rigidity, strong nail-holding force, high surface flatness, no deformation or warping, good durability, good processability, environmental adaptability, and is aldehyde-free, environmentally friendly, waterproof and moisture-proof, fire-proof, anti-bacterial and anti-bacterial. Mildew and moth-proof, surface wear-resistant, stain-resistant and scratch-resistant, rich in colors (such as wood grain, stone grain, cloth grain, concave and convex grain, laser grain, mirror surface, distressed, brushed stainless steel, leather, bamboo weaving, imitation art paint, etc. Composite solid wood veneer, cork veneer) and other advantages. The use of prefabricated construction technology can be applied to various styles of outdoor decoration to achieve the integration of doors, walls, and cabinets. It can also realize special processes such as concave and convex surfaces, arc special shapes, perforated lighting, and ultra-high and ultra-wide. The company provides: R&D, measurement, design,One-stop service for production and installation.

Esun uses leading technology to improve the safety of interior decoration, in order to achieve carbon neutrality and meet carbon standards as scheduled. The new era environmental protection goals of energy conservation and emission reduction provide high-quality products that meet standards. With the goal of promoting "green technology and environmentally friendly building materials", we fully implement the ISO9001 quality management control system and environmental labeling product management system, vigorously promote the development of green technology and environmentally friendly building materials, and integrate the practical application experience of industry decoration systems to achieve environmentally friendly buildings, Harmony between nature and human habitation. Leveraging the national policy of "One Belt and One Road", we sell high-quality products to all over the world. Promote China's new technological capabilities and take further steps towards becoming an international enterprise.

杭州意尚板业有限公司,位于杭州市余杭区义桥工业园区。标准厂房占地面积近10000平方米,年产值过亿元,专业生产新型金属复合板材。通过复合工艺克服了各种单一材质的缺点,发挥单一材料的优点。产品具有质量轻、刚性好、握钉力大,表面平整度高、不变形不翘曲、耐久性好、加工性好、环境适应性,具有无醛环保、防水防潮、防火阻然、抗菌防霉防蛀、表面耐磨、抗污抗刮、色彩丰富(如木纹、石纹、布纹、凹凸纹、镭射纹、镜面、做旧、不锈钢拉丝、皮革、竹编、仿艺术漆,也可以复合实木皮、软木皮)等优点。采用装配式施工工艺可适用于各种风格的室外装修,实现门、墙、柜一体化,也可以实现凹凸面、圆弧异形、穿孔内打灯、超高超宽等特殊工艺。本公司提供:研发、测量、设计、生产、安装一条龙服务。

意尚用领先的技术提高室内装修安全性,为如期实现碳中和、碳达标、节能减排的新时代环保目标 提供达标且优质的产品。以推行"绿色技术、环保建材"为目标,全面实施ISO9001质量管理控制体系和环 境标志产品管理体系,大力推进绿色技术环保建材的发展,集行业装修系统的实际应用经验,实现环保建 筑、自然与人居的和谐。借力"一带一路"的国家方针,将优质产品销往世界各地,推广中国新技术力量, 向国际化企业进一步迈进。 The company has technical cooperation with the China Academy of Art, Zhejiang University Design Institute, China Power Construction East China Survey and Design Institute, Zhejiang Transportation Design Institute, Zhejiang Yasha Design Institute, and Zhejiang Architectural Design Institute., research Be fruitful. The company has obtained a number of patents and its technological breakthroughs have achieved remarkable results.

The company's products have been adopted by many well-known enterprises and major event venues, including the Huanglong Sports Center of the Hangzhou Asian Games, Future Science and Technology City Hospital, Alibaba Hangzhou Park, Hangzhou 5G Industrial Park, ByteDance Hangzhou Park, Starbucks, KFC and other large commercial places.

The products have been highly praised by many well-known companies and have improved the safety factor of stores and commercial places. Durability such as waterproofing and moisture-proofing has also been highly recognized. The antibacterial degree of the plates in the catering industry has reached the standards of the large chain food industry. enjoying a high reputation in the decorative materials industry, customers frequently repurchase and recommend To related companies, user feedback is outstanding.

公司与中国美院、浙江大学设计院、中国电建华东勘测设计研究院、浙江省交通设计研究 院、与浙江亚厦设计院、浙江省建筑设计研究院进行技术合作,研发成果丰硕。公司已获多项专 利,技术突破效果显著。

公司产品已被多个知名企业和重大赛事场所采用,其中包括杭州亚运会的黄龙体育中心, 未来科技城医院,阿里巴巴杭州园区,杭州5G产业园,字节跳动杭州园区,星巴克,肯德基等 大型商业场所。

产品受到众多知名企业的一致好评,提升了门店和商业场所的安全系数,在防水防潮等耐用度方面也得到了高度肯定,餐饮行业的板材抗菌度均达到连锁大型食品行业标准。在装饰材料行业中享有较高的口碑,客户频频回购,并推荐给相关企业,用户使用反馈出众。

#### PARTNERS / 合作伙伴















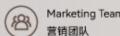


#### TEAM SIZE / 团队规模



High-tech Installer 高级安装人员





200+



Channel Partner 渠道合作伙伴

artner 200



Product Designor 产品设计师 **50**+





Huanglong Sports Center of the Hangzhou Asian Games 杭州亚运会的黄龙体育中心



Future Science and Technology City Hospital 未来科技城医院



Alibaba Hangzhou Park 阿里巴巴杭州园区



Hangzhou 5G Industrial Park 杭州5G产业园



Starbucks 星巴克



ByteDance Hangzhou Park 更好的字节跳动杭州园区 品牌视觉形象



KFC 肯德基

#### Antibacterial Protective Layer. 抗菌保护层 Designer-level Printing Texture Layer. 设计师级印刷纹理层 Fluorescent / Flame Retardant Plastic Physical Layer 萤光/阻燃可塑物理层

Esun wood grain metal plate subverts traditional perceptions and creates a natural. The main innovative three-layer structure design board core uses a double-sided aluminum plate sandwiched with a flame retardant layer/PE/heavy calcium/solid permeable layer. The surface layer of the board is made of PP diaphragm wood veneer, waterproof leather and other materials. Because the aluminum alloy material is different from ordinary wooden wall panels, it can well prevent common problems such as termite erosion, warping, and mildew. The design from one board to the top shows a fashionable and elegant artistic style, and the longest length can reach 6 meters. Esun's metal-coated panels were tested continuously for 30 days under professional measuring equipment. The formaldehyde emission amount was 0.013, which is lower than the formaldehyde emission of a glass of water. It can achieve rapid check-in within 48 hours. The surface layer of metal composite panels can use food-grade panels, which is suitable for various types of hospitals, restaurants and other places with high antibacterial requirements. The three-in-one technology of aluminum composite panels makes the panels less likely to crack. It is more difficult to deform due to bending during processing.

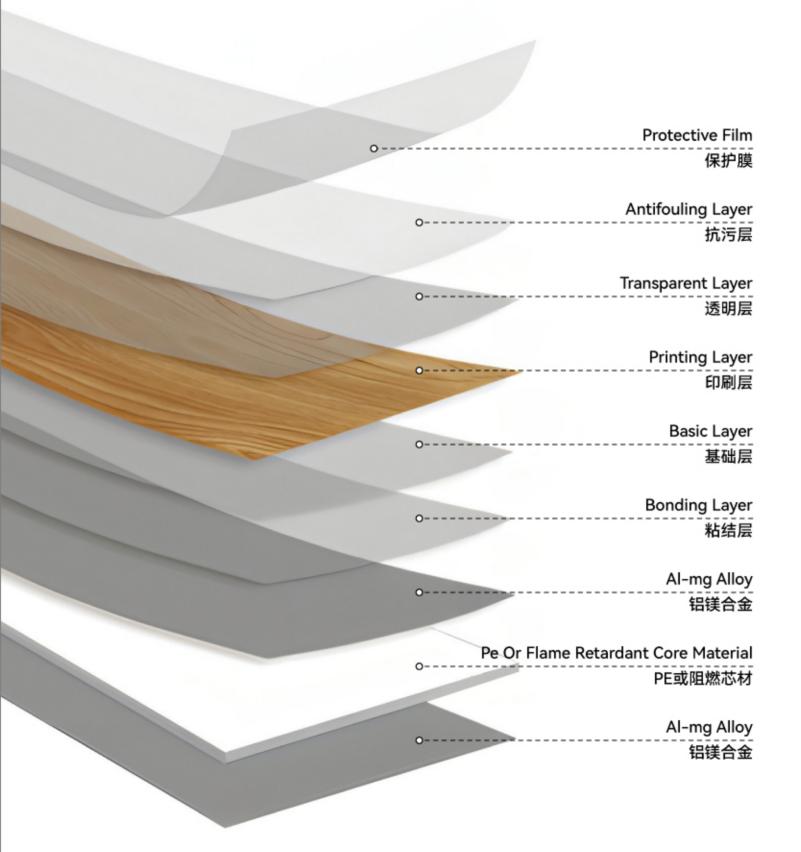
意尚木纹金属板,颠覆传统认知,自主创新的三层结构设计板芯,是使用双面铝板中夹阻燃层/PE/重钙/固态渗透层,板材的面层使用的是PP膜片木饰面,防水皮革等材质。由于铝合金材质跟普通木质墙板的墙的不同,可以很好的预防白蚁的侵蚀,翘曲变形、霉变等常见问题。一板到顶的设计,尽显时尚大气的艺术风格,最长可以达到超长6米。意尚金属覆膜板,在专业测量设备下30天连续检测,检测甲醛释放量为0.013,比一杯水的甲醛释放量还低,可以做到48小时急速入住。金属复合板采面层可使用食品级板材,适用于各类型医院、餐厅等对抗菌高要求的场所。铝复合板三合一的技术,使得板材不易开裂。加工过程中弯折,更不易变形。





# WALL PANEL STRUCTURE DRAWING

墙板结构图



# INDUSTRY PAIN POINT

传统行业九大痛点



Color Variation And Spots 色差与色斑



Priming Before Construction 施工前打底



Height Limitations 高度限制

#### 致力于更好的



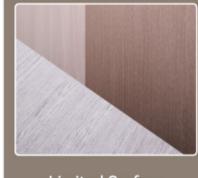
Complexity of Irregular Processing 异形加工难度



Lack of Finishing Accessories 收口配件缺失



Pliable and Prone to Cracking 易变形开裂



Limited Surface Material Options 面层材料单一



Low Installation Efficiency 安装效率低下



Inadequate Waterproof and Moisture-Proof Performance 防水防潮性能不足

Product specifications / 产品规格							
Products / 名称	Width / 宽度	Length / 长度	Thickness / 厚度				
Density snow board 密度雪弗板	<b>1220mm</b> (Large quantity can be customized 量大可定制)	<b>2440mm</b> (Large quantity can be customized 量大可定制)	6/9/12/15/18mm (Large quantity can be customized 量大可定制)				
SOFT PORCELAIN WOOD VENEER PANEL 软瓷木饰面板	<b>1220mm</b> (Large quantity can be customized 量大可定制)	2440mm (Large quantity can be customized 量大可定制)	1.8mm (Large quantity can be customized 量大可定制)				

Suitable for door panels, wall panels, cabinet bodies, ceilings, and partitions, it can achieve special processes such as concave and convex surfaces, curved irregular shapes, perforated internal lighting, and ultra-high and ultra-wide specifications.

适用于门板、墙板、柜体、天花板、隔断,可以实现凹凸面、圆弧异形、穿孔内打灯、超高超宽等特殊工艺。



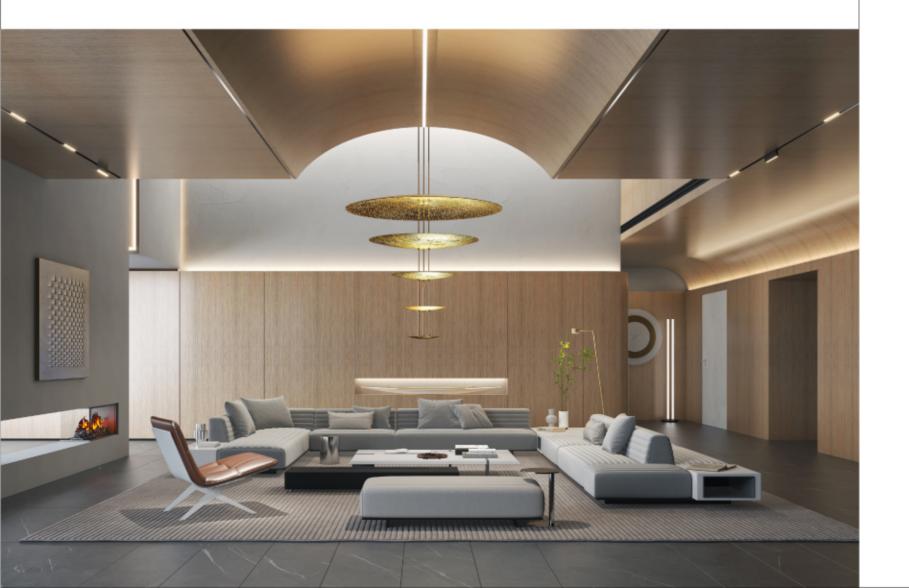




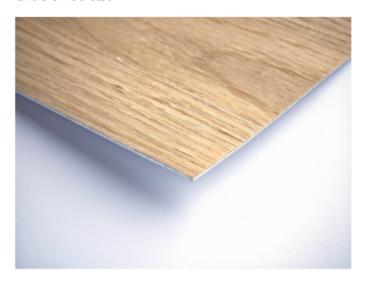


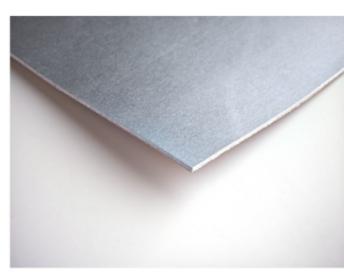


Waterproof and Moisture-Resistant 防水防潮



### SOFT PORCELAIN WOOD VENEER PANEL 软瓷木饰面板

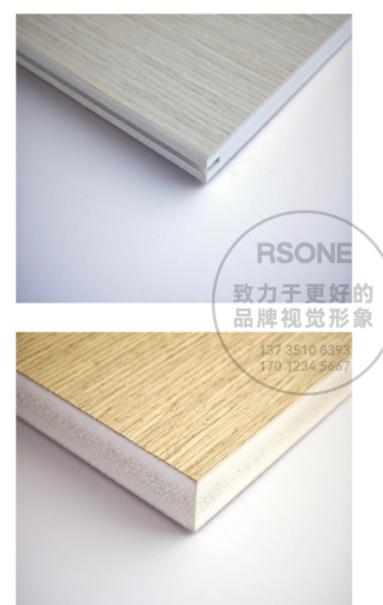




Density snow board 密度雪弗板







# **BASEMENT**

地下室



Specifications / 规格: 1220\*2440mm Thickness / 厚度: 6/9/12/15/18mm

Color / 颜色:Bump 凹凸纹























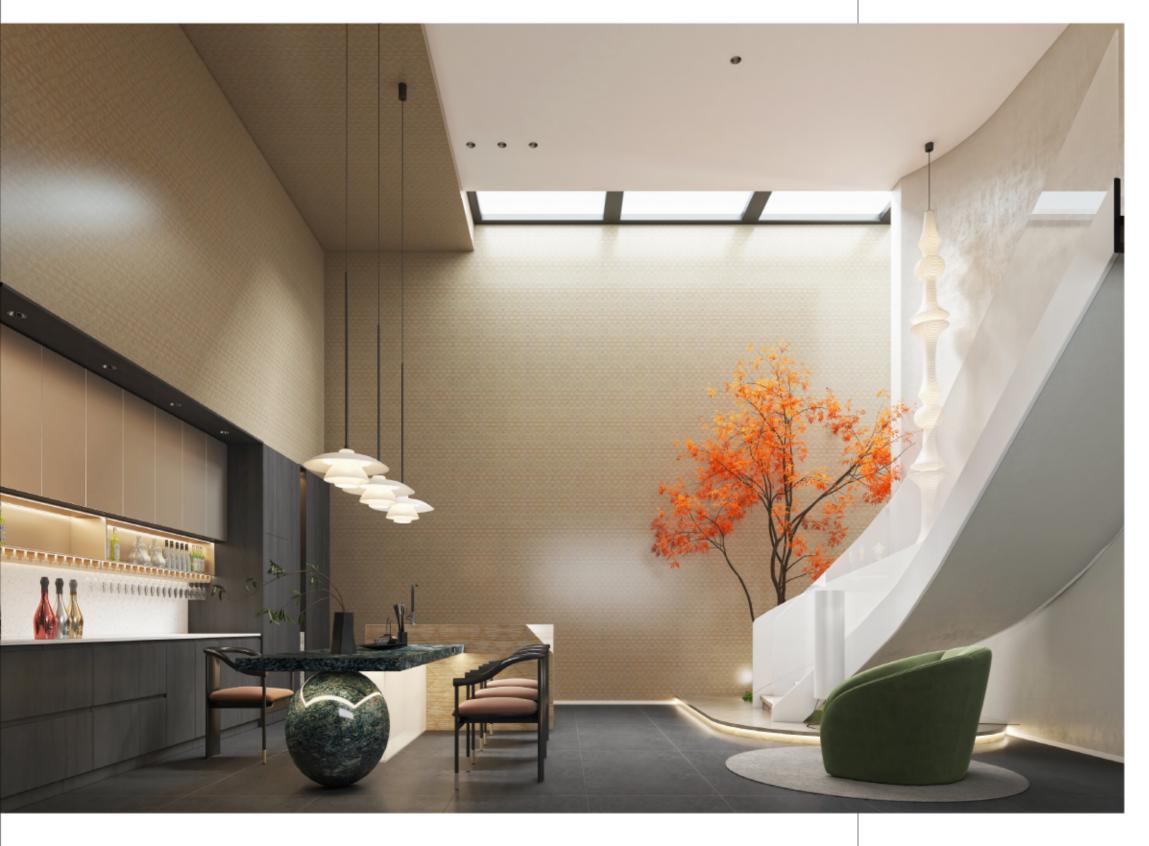


WALLBOARD 门板

墙板

THE CEILING 天花板

THE PARTITION 隔断





Specifications / 规格: 1220\*2440mm Thickness / 厚度: 6/9/12/15/18mm Color / 颜色: Plaid 格子纹(Custom定制)

# **TOOLING**

工装







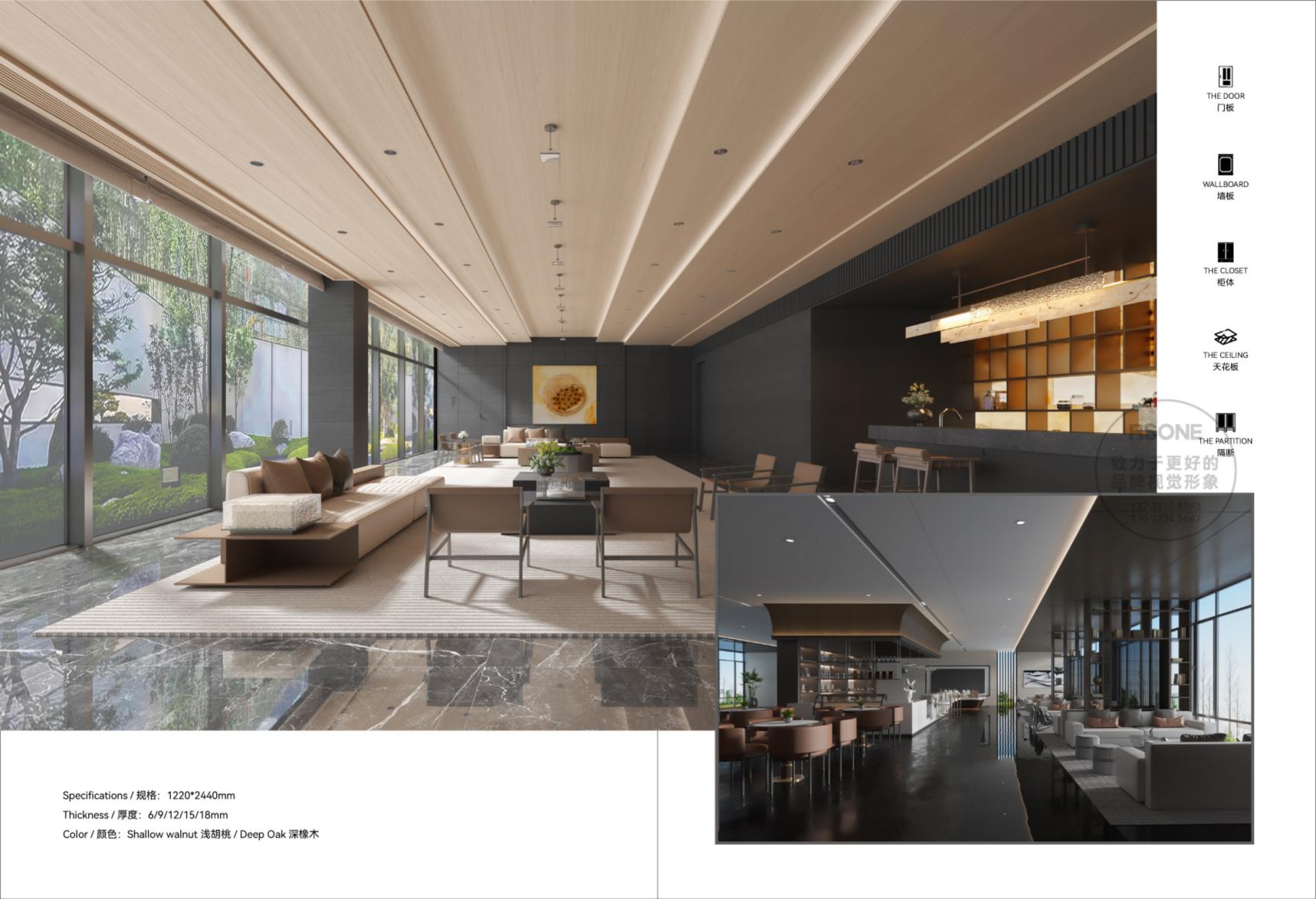








Specifications / 规格: 1220\*2440mm Thickness / 厚度: 6/9/12/15/18mm Color / 颜色: Tech Oak 科技橡木





















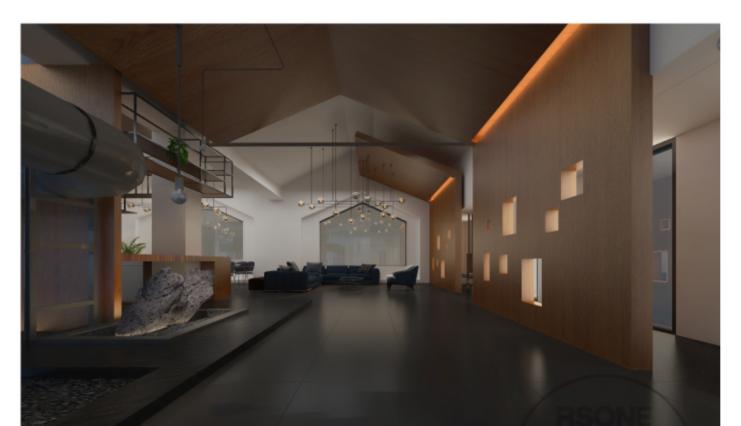


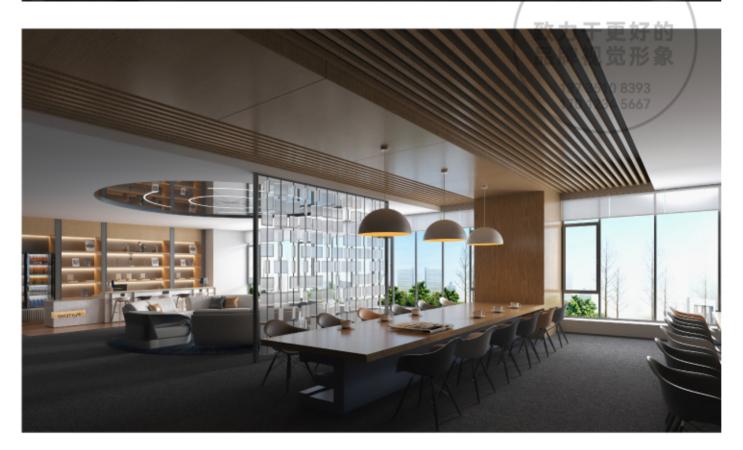
柜体





LLBOARD 墙板 THE CEILING 天花板





# **HOME IMPROVEMENT**

家装





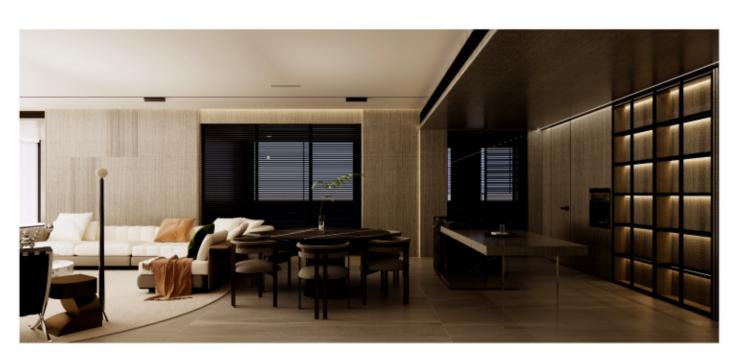












Specifications / 规格: 1220\*2440mm Thickness / 厚度: 6/9/12/15/18mm Color / 颜色: Cloth gray 布纹灰

137 3510 8393 170 1234 5667



Specifications / 规格: 1220\*2440mm Thickness / 厚度: 6/9/12/15/18mm Color / 颜色: Striped gray 条纹灰

