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**金属复合板**  
METAL COMPOSITE PANEL





## 企业简介

### CORPORATE PROFILE

浙江众邦新型金属材料有限公司是国内专业从事金属复合板研发制造的新兴企业，座落在浙江省湖州市长兴县。该地区位于长三角腹地，配套成熟，经济发达，交通便利，毗邻上海港、宁波港，连通沪宁杭经济沃土。

为了满足客户的差异化需求，公司引进了全套国际先进的台湾技术2米宽幅多功能复合线。该生产线全程数字化编程控制，除了自动化程度高，生产效率快，尺寸控制精确等传统优点外，还加入了改良后的两辊共挤复合工艺，大幅提升了金属复合板的剥离强度，实现产品的多元竞争优势。

作为新兴企业，公司力主创新，努力实现了金属复合板产品的生产能力全覆盖，可满足客户的一站式采购需求。产品包括A2、B级防火铝复合板，广告打印铝复合板，工业用铝复合板（电视机背板，乒乓球桌板，电梯轿厢，车厢板等），2030mm超宽铝复合板，6-15mm超厚铝复合板，铜塑复合板，不锈钢复合板，钛锌复合板等。

产品的各项性能指标经多家中外检测机构的检测，获得通过了ISO9001质量管理体系和ISO14000环保体系认证，CE、SGS、PSB、ROHS等多项国内国际认证，达到美国ASTM标准。

公司以“以诚待人，以信取信”的经营理念，结合国家“中国制造2025”战略与“一带一路”战略的实施，坚持高起点，高品质，与所有的合作伙伴一路同行，积极提升，稳中谋变，实现全球域内的共商、共联、共创、共赢。

Zhejiang Zhongbang New Metal Materials Co., Ltd. is a newly-rising enterprise specialized in the development research and manufacturing of the metal composite panels. Our industrial park located in Changxing, Huzhou, Zhejiang, which is the hinterland of the Yangtze River Delta. Yangtze River Delta has the mature supporting facilities, highly developed economic environment, convenience transportation, nearby Shanghai and Ningbo port.

Zhejiang Zhongbang New Metal Materials Co., Ltd has introduced advanced Taiwan technology 2030mm width multifunction metal composite panels production line to meet our customers' differentiated needs. The production line is fully control by the digital programming with high degree of automation; fast speed production; precise control the production specification. Besides, the improved two rollers lamination technology have highly increase the peel strength of the metal composite panels, realized the competitive advantages of product diversification.

As the newly-rising enterprise, Zhejiang Zhongbang New Metal Materials Co., Ltd mainly focus on the innovation and production of the metal composite panels, provide our customers one step solution. Our products include: A2, B fire proof ACP, advertising printing ACP, industrial ACP (TV backboard, Table tennis table panel, Elevator cage panel, carriage panel), 2030mm super width ACP, 6-15mm thickness ACP, copper composite panels, stainless steel composite panels, titanium zinc composite panels.

The performance index of the product has been tested by many Chinese and foreign inspection institutions. It has passed ISO9001 Quality Management System and ISO14000 Environment System Certification, CE, SGS, PSB, ROHS and many other domestic and international certification, and also reach USA ASTM standard.

Our company adheres to "sincere with people, acquired the trust with credit", combine with "made in china 2025 strategy" and "the belt and road strategy" continuing to keep on the high starting point, high quality principle. Try the best to expend with our business partners to achieve our win-win cooperation goals.





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## 生产设备 Production Equipment



## 检测设备 Test Device

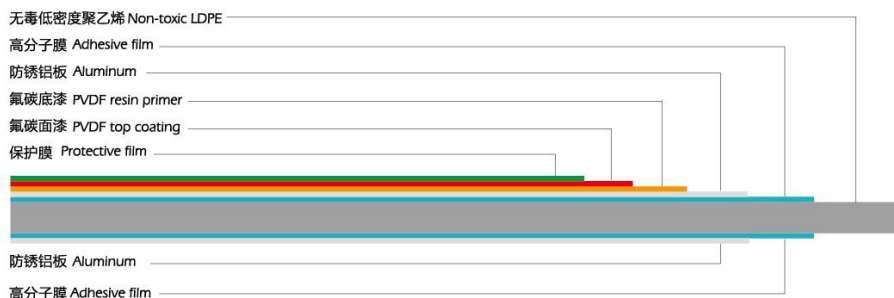


## 包装装柜 Packing



## 铝塑复合板 Aluminium Composite Panel

### 产品结构图 Product Structure Diagram



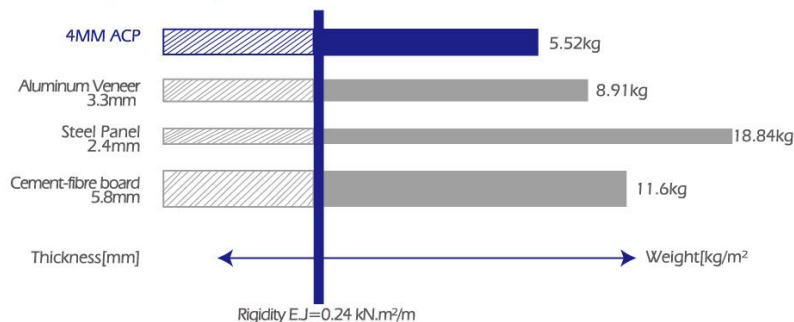
### 产品简介 Product Introduction

铝复合板是由经过表面处理并用涂层烤漆的铝板作为表面，聚乙烯塑料板作为芯层，经过一系列工艺加工复合而成的新型材料。以其经济性、可选色彩的多样性、便捷的施工方法、优良的加工性能、绝佳的防火性及高贵的品质，迅速受到人们的青睐。

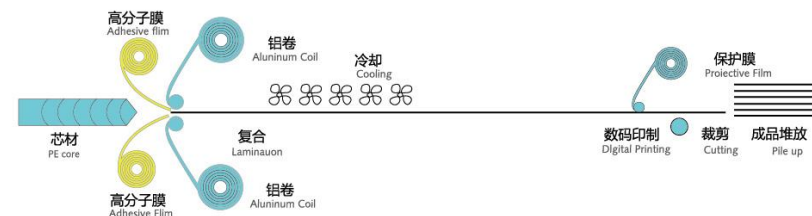
由于铝复合板是由性质截然不同的两种材料（金属和非金属）组成，它既保留了原组成材料（金属铝、非金属聚乙烯塑料）的主要特性，克服了原组成材料的不足，进而获得了众多优异的材料性质，如豪华性、艳丽多彩的装饰性、耐候、耐蚀、耐冲击、防火、防潮、隔音、隔热、抗震性；质轻、易加工成型、易搬运安装，可快捷施工等特性，这些特点为铝复合板开拓了广阔的运用前景。

Since ACP is composed by two different materials (metal and nonmetal). It keeps the main characteristics of the original material (aluminum and the polyethylene plastic), and overcomes the shortcoming of the original materials. And then to achieve more superior characteristics, such as luxury, colorful decorating, weather-proof, corrosion-proof, impact resistant, fireproof, damp-proof, soundproof, heat insulating, shock-resistant, light, good formability, easy handling and rapid construction. All characteristics lead ACP bright in wide application.

### 材料对比图 Material Comparison Diagram



### 生产工艺流程 Process Flow Diagram



### 分类 Product List

铝复合板品种比较多，而且是一种新型材料，因此至今还没有统一的分类方法，通常按照用途和产品功能来分类。

As ACP is a kind of new material, more variety, there's still no standard classification. It's classified according to the use and function as usual.

### 按用途来分类 According To The Use

a. 建筑幕墙用铝复合板，其上、下铝板的最小厚度不小于0.50mm，总厚度应不小于4mm。铝材材质应符合GB/T3880的要求，一般采用3系或5系的铝合金板材，涂层应采用氟碳树脂涂层。

b. 外墙装饰与广告用铝复合板，上、下铝板采用厚度不小于0.30mm的防锈铝，总厚度应不小于4mm。涂层一般采用氟碳涂层或聚酯涂层。

c. 室内用铝复合板 上、下铝板一般采用厚度为0.20mm，最小厚度不小于0.10mm的铝板，总厚度一般为3mm，涂层采用聚酯涂层。

a. Building curtain walls

Alloy skin thickness:  $\geq 0.30\text{mm}$ ;

Thickness:  $\geq 4\text{mm}$ ;

Coating: PVDF. Aluminum (conformed to GB/T3880.2): 3000/5000 series aluminum alloy.

b. Exterior wall decoration and advertisement ACP.

Alloy skin thickness: antirust aluminum  $\geq 0.30\text{mm}$ ;

Thickness:  $\geq 4\text{mm}$ ; Coating: PE or PVDF.

c. Indoor ACP.

Alloy skin thickness: usually 0.20mm, MIN  $\geq 0.10\text{mm}$ ;

Thickness: 3mm; Coating: PE.

### 按产品功能分类 According To The Product Function

a. 防火铝复合板：选用阻燃芯材，产品燃烧性能达到难燃级(B级)或不燃级(A级);同时其他性能指标也须符合铝复合板的技术指标要求。

b. 抗菌防霉铝复合板：将具有抗菌、杀菌作用的涂料涂覆在铝复合板上，使其具有控制微生物活动繁殖和最终杀灭细菌的作用。

c. 抗静电铝复合板：抗静电铝复合板采用抗静电涂料涂覆铝板表层，表面电阻率在109以下，比普通铝复合板表面电阻率小，因此不易产生静电，空气中尘埃也不易附着在其表面。

a. Fireproof ACP.

b. Antibacterial and mouldproof ACP.

c. Antistatic ACP.

### 规格尺寸及标记 Size And Mark Of Curtain Walls

根据它的燃烧性能可分为普通型和阻燃型

正常大小如下：

长度 (mm)：2000, 2440, 3000, 3200等

宽度 (mm)：1220, 1250, 1500, 2030等

厚度： $\geq 4\text{mm}$ 。

代号：普通型：G型；防火型：FR；PVDF涂层：FC

标识方法：按产品名称、分类、涂层、大小、铝板厚度和标准号做标记

样品：防火氟碳外墙板

尺寸：2440mmx1220mmx4mm；铝板厚度0.50mm

标识：W FR FC 2440x1220x4x0.5mm GB/T17748-2016

According to its combustibility can be divided into normal type and fireproof type.

The normal size as follow:

Length (mm): 2000, 2440, 3000, 3200 and so on.

Width (mm): 1220, 1250, 1500, 2030 and so on.

Thickness:  $\geq 4\text{mm}$ .

Mark code: Common type: G; Fireproof type: FR; PVDF coating: FC.

Mark method: According to the product name, classification, coating, size, skin thickness and standard number to do mark.

Sample: The Fireproof type curtain walls by PVDF coating;

Size: 2440mmx1220mmx4mm; Alloy skin thickness 0.50mm.

Mark: W FR FC 2440x1220x4x0.5mm GB/T17748-2016

## B级防火铝复合板 B Grade Fireproof ACP

### 产品简介

众邦B级防火铝复合板是一款专门为有较高防火需求的建筑研发的材料，是一种绿色材料，在燃烧时不会产生有害气体。该产品是由两面铝板及阻燃型矿物聚合物芯层以杜邦高效稳定的全分子粘接膜连续热复合而成。该产品是一种新型装饰材料，能满足高级别防火等级的要求，可达到多个国家地区测试标准的B级。同时保留了普通铝复合板的平整度、可成型性、耐候性和安装简便等多项优点，公司在原有B级防火铝复合板基础上，不断进行技术革新，与国内知名阻燃材料生产厂商密切配合，研发出了符合2017年9月1日颁布实施的中国国家标准热值要求的高阻燃型铝复合板，其热值 $\leq 12$ 。

目前国内B级防火铝复合板制造商大多采用两种芯料体系，即氢氧化铝体系和氢氧化镁体系。众邦B级防火铝复合板芯材使用的是氢氧化镁等难燃物质和PE的聚合物混合而成。该芯材是与国家地质矿产研究所共同合作开发，强大的技术研发团队保证了产品的稳定性和可靠性。

### 两种不同芯料体系对比

氢氧化铝阻燃剂中含有可生产水的氧化根，氢氧化铝分解温度为200℃，它在从245-300℃范围内基本上完成了脱水反应，释放出结晶水，吸收潜热，降低温度，即阻燃技术中的“冷却技术”，产生的大量水蒸气能稀释可燃气体，同时每摩尔氢氧化铝结合了34.6mol的水，受热要吸收热量1.97KJ，也起了冷却作用。

目前国内氢氧化铝用量较多，但随着高聚物加工温度的提高，氢氧化铝易分解，降低阻燃作用，氢氧化镁较氢氧化铝具有如下优点：

- 1、氢氧化镁分解温度达330℃，比氢氧化铝高100℃，故有利于塑料加工温度的提高，加快挤塑速度，缩短成型时间；
- 2、氢氧化镁与酸的中和能力强，可较快地中和塑料燃烧过程产生的酸性气体SO<sub>2</sub>、NO<sub>x</sub>、CO<sub>2</sub>等；
- 3、氢氧化镁分解能强，有利于吸收燃烧热，提高阻燃效率；
- 4、氢氧化镁抑烟能力强、硬度小，对设备摩擦小，有利于延长生产设备寿命。



### Product Introduction

Alucoone B grade fireproof aluminum composite panel is a type of construction material developed according to the needs of higher fireproof function. It is a kind of green material which does not produce harmful gases when get burned. The product is composed of two fireproof aluminum layer, fireproof plastic core and adhesive polymeric membrane. Alucoone B fireproof Aluminum Composite Panel reaches the high level fire-rating standards of different countries and retains the advantages of flatness, formability, weather ability, easy installation etc. Our company keeps improving the technologies during the time and cooperates closely with Chinese well-know fireproof plastic core suppliers so that we has developed the new type of B high fire-retardant aluminum composite panel whose calorific value is below 12. It meets the requirements of Chinese National Standard calorific value of B grade fireproof Aluminum Composite Panel.

At present, the B grade fireproof aluminum composite panel manufacturers in China mostly adopt two types of core material system: the aluminum hydroxide and the magnesium hydroxide system. Alucoone B fireproof aluminum composite panel uses the mixture of magnesium hydroxide and PE as the core material, which is developed along with the Chinese National Geology and mineral Institute. The outstanding technology research and development group guarantees stability and reliability of the products.

### The Comparison Between The Two Core Systems

The aluminum hydroxide contains the oxidative base which can produce water. The decomposition temperature of aluminum hydroxide is 200℃. It will complete the dehydration reaction at 245-300℃, releasing crystal water, absorbing latent heat and decreasing the temperature. It is called

the 'cooling technique' of fire retardance. Meanwhile, the large amount of water vapor can dilute the combustible gas and every mol aluminum hydroxide combines 34.6mol water, absorbing 1.97 KJ heat. It also helps to cool the temperature.

Currently, Chinese manufacturers prefer to use aluminum hydroxide. However, with the temperature increasing, aluminum hydroxide will be dissolved and the fire-retardant performance will be decreased. In this sense, magnesium hydroxide has more advantages:

1. The decomposition temperature of magnesium hydroxide is 330℃, 100℃ higher than aluminum hydroxide. Therefore, it's better for increasing temperature for plastic processing, improving the speed for plastic extrusion and reducing time for molding.
2. Magnesium hydroxide has excellent neutralization capacity with acid and can neutralize the acid gas such as SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub> during burning in short time.
3. Magnesium hydroxide has excellent decomposition capacity which is good for absorbing heat and improving fire-retardant efficiency.
4. Magnesium hydroxide has excellent smoke suppression capacity. And it's good for maintaining the use of equipment due to its low hardness and low friction with the machine.

### 众邦铝复合板燃烧性能对比表 Alucoone fireproof ACP combustion performance correlation table

芯材分类 Plastic core classification	普通铝塑板PE Normal ACP PE	B阻燃铝复合板FR B fireproof ACP FR	高阻燃铝复合板HFR High fireproof ACP HFR	不燃铝复合板A2 No-Combustible ACP A2
芯材可燃成分比重 Combustible element percentage	100%	<30%	<25%	<10%
芯材热值 Core calorific value	45MJ/kg	15MJ/kg	12MJ/kg	3MJ/kg
氧指数 Oxygen index	16-18	32-34	36-40	≥80
符合标准号 Standard No	中国 GB8624: B2  China GB8624: B2	中国GB8624: B1-s1,d0,t0 欧盟EN13501:B1-s1,d0 美国ASTME-84、NEPA285、ASTME-119 俄罗斯GOST30244-94、30402-96、12.1.044-89 乌克兰BV 2.7-19-95(GOST30244-94) 英国BS476Part6&7 德国DIN4102Part1 新加坡PSB(BS476 PART 6&7) class" 0"  China :GB8624: B1-s1,d0,t0 EU : EN13501:B1-s1,d0 America: ASTME-84、NEPA285、ASTME-119 Russia: GOST30244-94、30402-96、12.1.044-89 Ukraine: BV 2.7-19-95(GOST30244-94) UK: BS476Part6&7 Germany: DIN4102Part1 Singapore PSB(BS476 PART 6&7) class"0"	中国GB8624: A2-s1,d0,t0 欧盟EN13501:A2-s1,d0 新加坡PSB(BS476 PART 4&6&7)  China: GB8624: A2-s1,d0,t0 EU: EN13501:A2-s1,d0 Singapore PSB(BS476 PART 4&6&7)	

以下是A2级不燃铝复合板与B级难燃铝复合板以及普通芯层铝复合板的燃烧对比试验（点火30秒后移出）：  
Contrast Fire Test among Class A2 FR ACP, Class B FR ACP and Normal PE Core ACP (30 seconds after ignition out):



A2级不燃铝复合板（毫无影响）  
Class A2 no influence no flame

B级难燃铝复合板（有火苗产生）  
Class B flame has generated

普通芯层铝复合板（可燃）  
Normal PE core ACP (Combustible)

阻燃板标准修订前后的主要差异和水平对比

指标	修订版 (GB/T17748-2016)	08版 (GB/T17748-2008)	水平对比
产品分类	按燃烧性能分为:阻燃型和高阻燃型	按燃烧性能分为:阻燃型和普通型	修订版取消了普通型,增加了高阻燃型,使得幕墙板的定位得到提升。
滚筒剥离强度	平均值 $\geq 110$ 最小值 $\geq 100$	平均值 $\geq 130$ 最小值 $\geq 120$	修订版指标有所下降,主要考虑芯材原料发生变化产生了相应影响,但目前的国内外应用实践证明指标可满足使用要求。
燃烧性能耐硝酸性	不低于B1 (B-s1, d0,t0)级,且按照芯材热值水平进行了分级:1、阻燃级热值 $\leq 15\text{MJ/kg}$ 2、高阻燃级热值 $\leq 12\text{MJ/kg}$	不低于C级	修订版指标提高,且高阻燃级与国际先进水平接轨,鼓励更先进产品的生产、应用与推广。
耐硝酸性	硝酸蒸汽熏蒸后静置时间为1h	硝酸蒸汽熏蒸后静置时间为1h	修订版与AAMA2605-2013、AAMA2604-2013等保持一致

Main difference between the revised and former standard of the fire resistant panels

Index	Revised version (GB/T17748-2016)	2008 Version (GB/T17748-2008)	The level of contrast
Product classification	According to the combustion performance: Fire resistance & High fire resistance	According to the combustion performance: Fire resistance & common	The revised version cancel the common type, increase the high fire combustion type, and the position of curtain wall has been improved.
Peel strength	Average $\geq 110$ Minimum $\geq 100$	Average $\geq 130$ Minimum $\geq 120$	"Considering the change of core material, The revised index has declined, but the current practice all over the world has proved that the index can meet the requirements for use."
Combustion performance	$\geq \text{B1}$ (B-s1, d0,t0) LEVEL, The level was performed according to core heat values: 1、Fire resistance $\text{MJ} \leq 15\text{MJ/kg}$ 2、High fire resistance $\text{MJ} \leq 12\text{MJ/kg}$	$\geq \text{C}$ GRADE	The revised index is improved, and the high fire resistance level is in line with the international advanced level, and the production, application and popularization of more advanced products are encouraged.
Acid resistance	The holdig time of Nitric acid steam fumigation is 1H	The holdig time of Nitric acid steam fumigation is 1H	The revised version is consistent with AAMA2605-2013、AAMA2604-2013

## 2030mm超宽铝复合板 Super Width(2030mm)ACP

### 6-15mm超厚铝复合板 Super Thickness(6-15mm)ACP

#### 产品简介 Product Introduction

铝复合板发展至今,越来越多的客户出现了很多个性化的需求,以此来保证自己设计的强度,精度等等。自从进入市场以来,我公司一直致力于新颖建材技术研发与生产,影响着中国的建筑设计、建筑师的施工理念以及人们对建筑物审美的态度。我公司从台湾引进的大功率生产设备,克服了传统设备挤出慢,耗能高的弊端。在同等能耗下,能够轻松完成6-15mm厚度的生产任务,保证了铝复合板的强度。宽度上最宽可以做到2030mm。大大解决了材料以及辅料的使用,也满足了大幅度,大跨度的施工要求。

In order to ensure their own design strength, precision and so on, now more and more customers have a lot of personalized needs. Entering into the market, we have been committed to the development and production of new building materials. Compared with traditional machines, which is slow in extrusion and of high power-wasting, we imported the high-power production machines from Taiwan. Under the same energy consumption, 6-15mm good strength ACP production can be easily finished, and can reach 2030mm at widest. It solves the use of the main and auxiliary materials and can also meet requirements of construction widely and large span. We are the only one manufacturer in China at present time.

#### 两米超宽铝复合板图例 2030mm Super Width ACP Example



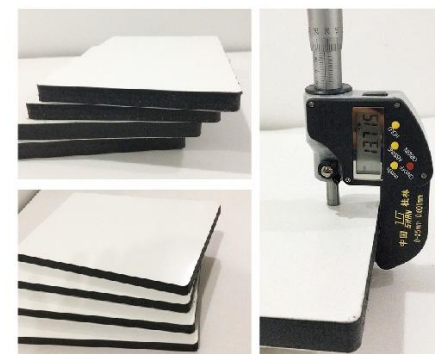
#### 产品规格 Specification

厚度 Thickness: 2-15mm

宽度 Width: 900-2030mm

长度 Length: 2440mm、3050mm、4050mm、6000mm

其他特殊尺寸、颜色可根据客户要求定制。  
Other special sizes, colors can be customized.



#### 超宽超厚复合板具有以下特性 Feature

- 1、国内唯一制造商,满足了大跨度、大篇幅设计的需要,能体现独特的设计风采。
- 2、便于各种规格的套裁,减少边角余料的浪费。
- 3、节约龙骨等辅助安装费用。

- 1, Meet requirements of the large span and large space design and to be the unique design style.
- 2, Cut all kinds of sizes easily and reduce the waste of edge material.
- 3, Save the installation cost of keel and other auxiliary material.



## 广告打印铝复合板 Advertising Printing ACP

### 产品简介 Product Introduction

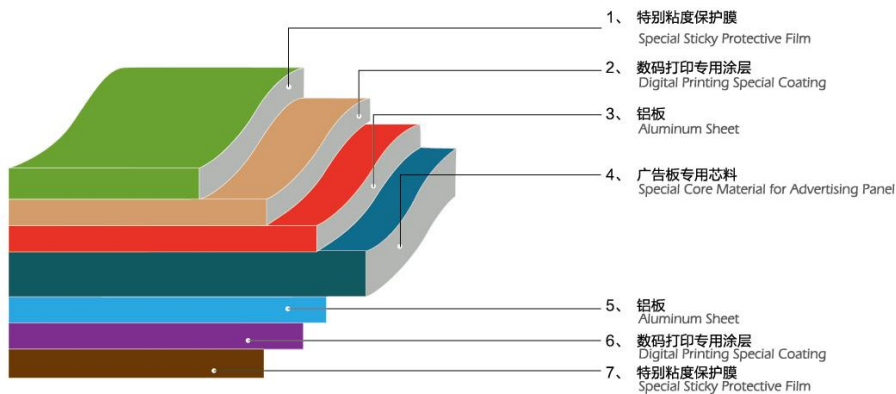
众邦广告打印铝复合板是首个带油漆系统优化的铝塑材料，产品符合欧盟RoHS认证。一般采用双面着色铝板复合，如双面高光白、一面高光红一面亚光红或者双面亚光白等配置。（正反面贴保护膜，颜色可由客户需求自由搭配）。产品可以用于数码打印，数码打印表面加固UV以及溶剂墨粘合剂一同使用。专用于数码打印的UV板，表面平滑，打印清晰度高，吸墨性能突出。铝塑板作为专用高端数码打印材料，是全新的有活力的广告材料。



ALUCOONE Advertising Printing Aluminum Composite Panel is the first aluminum composite material with the paint optimization system, which has obtained the EU ROHS certification. Generally it uses double-side colored aluminum composition, such as double-side high gloss white, one side high gloss red and one side semi-gloss red, or double-side semi-gloss white. (both sides with protective film, color customized). The product can be used for digital printing with UV and solvent ink binder. The UV board for digital printing should have the features of surface smoothness, high-definition and outstanding ink absorbency. Specialized in high-end digital printing, the Advertising Printing ACP is a new type of dynamic advertising material.



### 产品结构示意图 Product Structure Diagram



### 产品特点 Product Features

- 绝佳的刚性：轻便且硬度极佳。
- 绝佳的维度准确性：长度、宽度和厚度、对角维度公差小。
- 方便和多样化加工：可进行数码平直切割与成型，便于弧弯、打孔、钉牢或者螺栓连接。
- 良好的物理性能：表面平直度高、硬度高、强度高。
- 良好的化学特性：良好的化学稳定性，包括高抗酸、抗碱、抗油、抗盐性能。
- 多样化的规格：最大宽度可达2030mm，最大长度可达12m。可实现任何型号的大规模断面组装。
- 使用寿命长：在室内使用十年不会发生涂层掉落等不合格状况。
- 经济性强：便于平板车运输、加工、成型，建设和降低管理成本。
- 环保性能高：本产品符合CE以及RoHS认证，并可回收。

- Excellent rigidity: lightweight and excellent hardness;
- Great dimensional accuracy: length, width, and thickness, small diagonal dimension tolerances
- Convenient and diversified processing: can be digital cut and molded, easy to arc bend, punch, nail or bolt connection
- Good physical properties: high surface flatness, high hardness and high strength
- VGood chemical properties: good chemical stability, including high acid resistance, alkali resistance, oil resistance and salt resistance
- Diverse specifications: maximum width of 2030mm, maximum length of 12m, can achieve any type of large-scale cross sectional assembly
- Long service life: 10-years guarantee for interior using
- Economical efficiency: easy for transport, processing, molding, construction and can reduce management costs
- High environmental protection performance: This product conforms to CE and ROHS standard and can be recycled

### 应用范围 Application

户外大型平面广告、交通标志、室内设计、超市海报、装饰壁画、展览标牌、灯箱立柱、展厅展柜、连锁店、加油站、家具、门头、室内装饰。

Large outdoor print ads, traffic signs, interior project designs, supermarket posters, decorative frescoes, exhibition posters, column light boxes, showroom displays, chain-stores, gas stations, furniture, door head decoration and interior decoration.

### 产品规格 Specification

厚度 Thickness: 2mm~6mm

宽度 Width: 1220mm、1500mm、1800mm、2030mm

长度 Length: 2440mm、3050mm、3660mm

其他特殊尺寸、颜色可根据客户要求定制。

Other special sizes, colors can be customized.



## 工业用铝复合板 Industry Using ACP

### 车船用铝复合板 Vehicle And Vessel Using ACP

在车辆运输行业，我们的产品特点重量轻和高刚性，正是由于它的重量轻的结构，可以减少二氧化碳排放。同时给拥挤和受限制的铁路和公路网络减轻了负担。我们的产品是可循环利用的，我们所用的材料都可以再回收利用做成新的材料。

我们的产品非常适合特殊的内部装修，例如在铁路车辆建设中的墙壁和天花板等包覆，卡车表层建筑，小屋，门和襟翼系统。

In transport vehicle Industry, Alucoone Panel sheet possess the characteristic as the light weight and the high rigidity. Due to the lightweight construction, the CO2 emission can be reduced and at the same time, there is less burden on the congested and restricted rail and road networks. Alucoone is recyclable, the panels are fed back into the material cycle and used for producing new material.

Alucoone composite panels are ideal for special interior fittings, such as wall and ceiling cladding in rail vehicle construction, for lorry superstructures, for cabins, doors and flap systems.



### 电视机背板 TV Set Back Panel

电视机背板，是铝复合板应用领域不断拓宽的又一经典案例。2015年下半年以来，以三星、LG、乐视等家电巨头为先导，电视机行业开始逐步替换原先用作背板的纯镀锌钢板，改用重量更轻，散热效果更好，金属质感更强，总厚度更薄的拉丝铝复合板作为背面专用材料，给行业带来了材料的大面积革新。

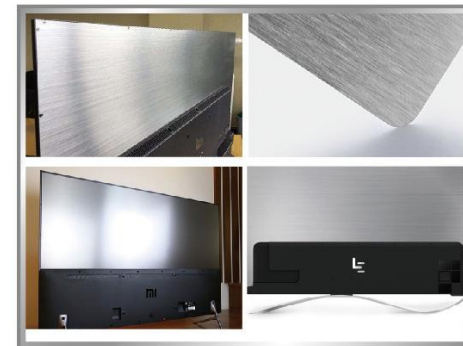
电视机背板表面多采用拉丝效果的铝复合板为主，主要颜色为黑拉丝或银拉丝，总体板材的厚度1.8、2.5、3.0mm，中间的塑料芯材必须符合欧盟RoHS环保标准，广泛应用于55寸，65寸以及75寸或更大屏幕的电视机上。（也有一些电视机厂商因强度需求采用强度更高的钢塑复合板作为背材）

拉丝效果的电视机背板，应用铝的自然拉丝工艺和氟碳喷涂工艺，以增强产品金属质感和抗侵蚀的特性，使其兼备时尚和科技的元素。外观饰面具有非常强的金属质感，拉丝纹理清晰、均匀、时尚感强，给人以强烈的视觉吸引，可与不锈钢拉丝板相媲美。具有超强的耐温、耐候、防火性能，散热快，而且易于清洁，是当今时尚流行的新型高档电视机背材。

TV set back panel, is constantly expanded in the application of aluminium composite panel that is another classic case. Since the second half year of 2015, Samsung, LG, LeTV and other home appliance giants as the forerunner, TV industry began to gradually replace back panel as the galvanized steel sheets, with lighter weight, better heat dissipation, strong metallic simple sense, using brushed aluminium composite panel as back panel with thinner total thickness, has brought the industry material with large area of innovation.

TV set back panel surface is using Aluminium composite panel with brushed effect, the main color is black or silver brushed, the overall thickness of panel are 1.8, 2.5, 3.0mm, the middle plastic core material must comply with EU RoHS environmental protection standard, widely used in 55 inch, 65 inch and 75 inch or more large screen TV. (some TV manufacturers also use a higher strength steel composite panel as back panel for strength demand).

TV set back panel with brushed effect is made from natural brushed process and PVDF roller coating process, to enhance the metal texture and anti-erosion characteristics, and make it both fashionable and technological elements. The appearance has very strong metallic texture, which can be compared with brushed stainless steel, clear texture, uniform, strong fashion sense, giving a strong visual appeal. It has high temperature resistance, weather resistance, fire resistance, fast heat dissipation, and easy to clean. It is a fashionable new type of high-end TV set back material.



### 产品特点 Product Feature

- 1、环保涂料。使用无重金属无毒环保涂料，通过SVHC SGS和ROHS认证。
- 2、新PE独家配方。该特殊配方提高了面板的强度，同时保持韧性，便于后续加工。
- 3、外观优良，平整度好，强度高，易加工。
- 4、选用镀锌钢复合板或PET覆膜复合板时，更有抗压强度高、承载力强、安全性能高

- 1、environmental protection paint. The use of non-toxic environmentally friendly coatings without heavy metals, through the SVHC SGS and ROHS certification.
- 2、New PE, exclusive formula. The special formula improves the strength of the panel, while retaining the toughness, which is convenient for subsequent processing.
- 3、Excellent appearance, excellent flatness, excellent strength, easy to process.
- 4、use galvanized steel composite panel or PET coated composite panel, with high compressive strength, high bearing capacity and high safety performance



## 铜塑复合板 Copper Composite Panel

### 产品简介 Product Introduction

自古以来，铜是一种集美观，耐用，实用等特点于一身的贵金属材料。它使用周期很长，一般的使用年限长达数百年。在使用前，铜不需要再加工或者维护，事实是铜在自然界的氧化过程中可以形成一种独特而坚固的铜绿层，而达到一种独特的效果。铜这种纯天然的材料可以和木、石、玻璃等材料完全兼容，使任何建筑物显得独特而高雅。

众邦铜塑复合板以铜板做面板，3003H26（H24）铝板做背板，高压低密聚乙烯（LDPE）为芯材，经热复合而成的一种新型高档建筑材料。它能将铜这种有生命力的材料的内在美完全释放出来，同时兼具降低工程造价、易加工成型、低维护、可循环、耐候性强、全兼容（其他材料）等特点。事实上，铜塑复合板可以大大提升一个建筑的价值，而且彰显出高雅的审美和贵族般的生活气质。

It is known that Copper is a kind of beautiful, durable and practical metal material. It can be used for a long period of at least hundreds of years. Copper does not need processing or maintenance before use and can form a unique and firm patina layer during the oxidation process. As a pure natural material, copper can be used with wood, stone, glass and other materials harmoniously, making building's appearance unique and elegant.

ALUCOONE Copper Composite Panel uses Copper coil as top layer, 3003H26 (H24) Aluminum coil as bottom layer and LDPE (high pressure and low density polyethylene) as the core. It is a new type of high-ranking construction materials made through thermal compounding technology. Purchasing Alucoone Copper Composite Panel is a good choice given its cost reduction, easy processing, low maintenance, recyclability, strong weather resistance and compatibility with other elements. Using Copper Composite Panel can to a great extent enhance the value of the architectures and highlight the elegant style and noble temperament.

### 产品规格 Specification

铜面效果：紫铜、黄铜、拉丝铜、铜绿以及立体时尚压花等各种效果；  
铜板宽度：600mm 800mm 1000mm 进口1220mm 进口1250mm  
铜板厚度：0.08mm-0.55mm

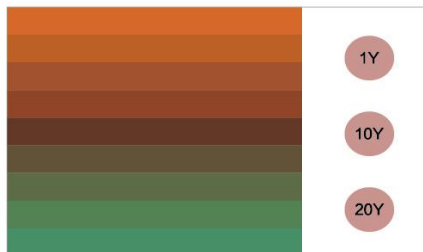
Copper surface: Red Copper, brass, embossed, brushed, and other three-dimensional and fashionable embossed patina effect  
Copper width: 600mm 800mm 1000mm 1220mm (imported) 1250mm (imported)  
Copper thickness: 0.08mm-0.55mm



### 铜塑复合板具有以下特性 Feature

- 1、高稳定,低维护的屋面和幕墙材料,铜板环保,使用安全,易于加工并极具抗腐蚀性;
- 2、在所有建筑用金属材料中,铜板具有最好的延伸性能,在适应建筑造型方面,具有极大的优势;
- 3、即使在极高腐蚀性的大气环境中,铜板也会形成坚固,无毒的钝化保护层,俗称“铜绿”。其化学成分取决于所在地区的空气条件,但各种成分的“铜绿”对铜板的保护效果基本相同。这层钝化膜非常稳定,受到破损可自动修复,肉眼难辨。

- 1, High stability, low maintenance cost, environmental-friendly, safety guarantee, easy processing and highly corrosion-resistant
- 2, Has the best malleability among the construction metals, therefore can be used in varieties of architectural styles
- 3 Copper can form a solid, nontoxic protective layer, commonly known as "verdigris" even in the very high corrosive environment. Its chemical composition depends on the air condition, but the protective effect of various 'verdigris' is basically the same. This passivation layer is very stable and can regenerate the damage automatically.



### 产品规格 Product Specification

板厚(mm) Panel total thickness(mm)	金属层厚度(mm) Metal skin thickness(mm)  (紫铜或黄铜/铝) (Red copper or Brass/Al)	板宽 Width(mm)		板长 (mm)  Length(mm)
		紫铜(T2)/铝 CU/AL	黄铜(H62)/铝 BRS/AL	
3	0.15 / 0.21(铜/铝)	600mm	600mm	标准：3200可定尺  Standard: 3200 Customization available
4	0.20 / 0.30(铜/铝)	600mm 800mm	600mm	
4	0.30 / 0.50(铜/铝)	600mm 800mm 1000mm	600mm	
4	0.4 / 0.50(铜/铝)	1000mm	-	
4	0.55 / 0.75(铜/铝)	1000mm	1000mm	
表面处理：紫铜本色、黄铜本色、透明漆、拉丝、古铜色、青铜色、绿铜色    Finish: Natural,Brass,Clear,Brushed,Antique,Bronze,Patina				



## 不锈钢复合板 Stainless Steel Composite Panel

### 产品简介 Product Introduction

众邦不锈钢复合板采用不锈钢作为面板和底板（主要采用的为304, 316/316L, 201, 和220M等牌号），高压低密度聚乙烯（LDPE）外加100%胶含量的进口粘结膜，通过当前世界最先进的两辊热复合工艺复合而成的一种高档新型建材。它显示不锈钢的高贵品质，光亮、质硬、耐磨、耐腐蚀性强。力学性能优异，经久耐用，适用于各种复杂的环境，是当今装饰、装修的理想建材。

304不锈钢是一种通用性的不锈钢材料，耐1000-1200度高温。它具有优良的不锈钢耐腐蚀性能和较好的抗晶间腐蚀性能。对碱溶液及大部分有机酸和无机酸亦具有良好的耐腐蚀能力。

316不锈钢是含钼不锈钢种，由于钢中含钼，该钢种总的性能优于310和304不锈钢，高温条件下，当硫酸的浓度低于15%或高于85%时，316不锈钢具有广泛的用途，通常用于海洋环境。

220M不锈钢是一种新型的超级铁素体不锈钢材料，主要由新日铁研制。这种铁素体不锈钢含钼量较低，但是耐腐蚀性却优于普通316不锈钢，可以说代表着不锈钢的未来。

ALUCOONE Stainless steel composite panel is new type of high-class building material. It uses the world's most advanced two roller thermal composite technology, taking stainless steel as top and bottom layer (mainly used 304, 201, 316/316L, 220M and other items), high pressure low density polyethylene (LDPE) as the plastic core, and 100% rubber adhesive polymeric membrane. It appears the extraordinary quality of Stainless steel: bright, hard, wear-resistant, corrosion-resistant, excellent mechanical properties, durable, applicable to all kinds of complex environment. Therefore it is the ideal decoration and building material for the modern world.

304 stainless steel is a universal stainless steel material which is durable to high temperature of 1000-1200 degree. It has excellent corrosion resistance including intergranular corrosion, alkaline solution corrosion and most of organic and inorganic acid corrosion.

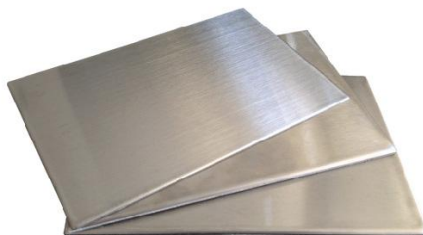
316 stainless steel is a type of stainless steel with molybdenum and its performance is better than 310 and 304 stainless steel. The 316 stainless steel can be widely used in the high-temperature environment, the marine environment or in the solution where the concentration of sulfuric acid is less than 15% or higher than 85%.

220M stainless steel is a new type of super ferrite stainless steel. It contains low molybdenum, but the corrosion resistance is better than 316 stainless steel. It is anticipated to be the mainstream stainless steel in the future.

### 众邦不锈钢复合板可生产效果

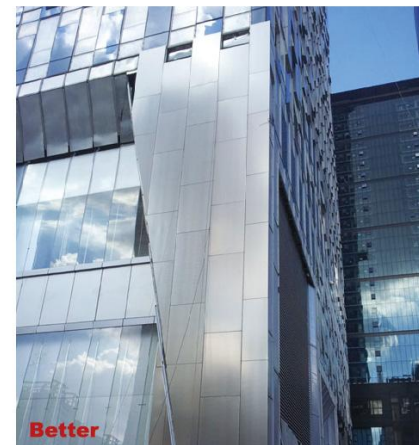
#### Alucoone Stainless Steel Composite Panel Items

- |          |                             |
|----------|-----------------------------|
| 1. 不锈钢本色 | 1. Stainless steel          |
| 2. 不锈钢拉丝 | 2. Brushed stainless steel  |
| 3. 不锈钢镜面 | 3. Mirror stainless steel   |
| 4. 不锈钢压花 | 4. Embossed stainless steel |



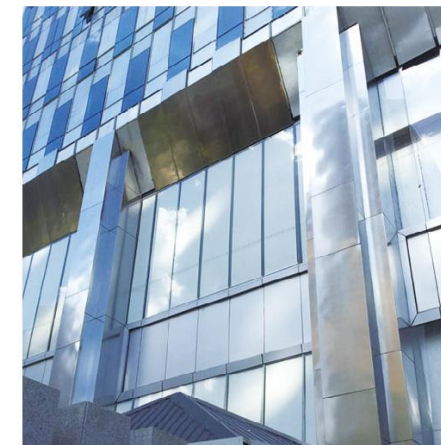
### 不锈钢复合板(4毫米)

#### Stainless Steel Composite Panel(4mm)



### 不锈钢单板(3毫米)

#### Stainless Steel Veneer(3mm)



### 不锈钢复合板在电梯轿厢上的应用 Elevator Cage Panel (Stainless Steel Composite Panel)

电梯轿厢是用来运载乘客或货物和其他负载的一个重要组成部分。传统的电梯轿厢通常是纯不锈钢板或蜂窝板，我们公司所生产的新型不锈钢复合板和镀锌钢PET覆膜复合板，具有花色多样、重量轻、平整度好、耐冲击性好、运输和安装方便，可重复使用，可以减少传统轿厢工厂预安装的工序，减少对资源的浪费，可完全替代纯不锈钢板和蜂窝板，并带来非常大的成本优势。

Elevator cage is a important part that is used to carry passengers or cargo and other loads. The traditional ceiling and cage wall is usually pure stainless steel materials or Aluminium honeycomb panel, and our company's new Stainless Steel Composite Panel and Galvanized steel PE coated composite panel with various colors, light weight, excellent flatness, excellent impact resistance, convenient installation and can be reused, Can reduce the traditional cage factory pre installation process, to reduce environmental pollution and the waste of resources ,can completely replace the pure stainless steel panel and Aluminium honeycomb panel, and brings the very big cost advantage.



## 钛锌复合板 Titanium Zinc Composite Panel

### 产品简介 Product Introduction

钛锌复合板是以钛锌合金板做面板，3003H26（H24）铝板做背板，高压低密度聚乙烯（LDPE）为芯材，经热复合而成的一种新型贵金属复合建材，它集钛锌板的特点（金属质感、表层自我修复功能、使用寿命长、可塑性好等）与复合板平整、抗弯性能高的优点于一体，是古典艺术和现代技术相结合的典范。

使用初期，远观是自然的崭新的蓝灰色，近看则呈现出天然金属的朴素质感。随着时间的推移，暴露在大气中的钛锌板表面会逐渐形成一层致密坚硬的碳酸锌防腐层，防止板面进一步腐蚀，即使有划痕和瑕疵也在这个演化过程中完全消失。对那些需要营造出强烈的天然感的建筑来说，无疑是理想的装饰材料，特别适用于自然和历史氛围浓厚的环境中，可为现代建筑和古典建筑增添独特的魅力。具有良好的强度和刚性可抵御强风和其它恶劣气候环境的侵袭。塑性好，易于加工安装，有利于三维造型，能适应变化多样的布局要求，可充分张扬建筑师的个性，满足其丰富的创作想象力和灵感要求。

### 钛锌卷筒简介 Titanium Zinc Coil Introduction

高纯度金属锌（99.995%）与少量的钛和铜冶炼而成  
钛含量是0.06% - 0.20%，可以改善合金的抗蠕变性能  
铜含量是0.08% - 1.00%，用以增加合金的硬度

Composed of Zn (99.995% pure zinc), a small quantity of Titanium and copper  
0.06-0.20% of Titanium, it helps to improve the creep resistance  
0.08-1.00% of Copper, contribute to the rigidity of the alloy



Titanium Zinc Composite Panel is a kind of new high-grade construction materials, taking titanium zinc plate as its face plate, aluminum as rear plate and high-pressure low density polythene (LDPE) as core materials. It combines Zinc plate characteristics (metallic feeling, self-healing, long life and good plasticity, etc) with the advantages of smooth good, high flexural resistance. It is the combination of classical art and modern technology. In early days, the Titanium Zinc Composite panel looks natural new blue grey from far view, but a simple natural metal near. As time passed, the surface of Titanium Zinc Composite panel will gradually form a layer of dense hard carbonate zinc corrosion, preventing the panel from further corrosion. Even if some scratch and flaw occurs, it will disappear completely in this evolution process. It is the ideal decorative materials for buildings that need a strong natural feeling, especially suitable for buildings full of natural and historical atmosphere, adding distinctive glamour to the modern and classical architecture. With good strength and rigidity, the panel can resist strong wind and other severe weather. Owing to the good plasticity and easy processing installation, it is helpful for 3D modeling and can adapt to various layout requirements. This kind of panel satisfies the designers' rich imagination and creative inspiration.

### 为何选择钛锌复合板 Why To Choose Titanium Zinc Composite Product?

#### 锌是一款可持续发展的材料

100%可回收再利用的  
生产钛锌复合板的能耗很少，符合可持续发展理念  
使用钛锌板，在申请LEED认证时可以在3个方面加分

#### Asustainable architectural material

100% recycleable  
Energy saving during the production process  
Using Zinc Composite Panel, it will be a plus in 3 aspects when you apply for LEED certification

#### 一种耐久的材料

使用寿命可达70-100年  
耐久的材料，具有天然的抗腐蚀性  
表面形成深灰色的致密钝化层  
根据环境的不同，钝化层的形成要6个月到2年的时间

#### Adurable material

Long life span(70 -100) years  
Natural corrode resistance  
Grey compact passivated layer formed on the surface  
Passivation layer in the ZCP surface may be formed within six months to two years

#### 维护成本极低

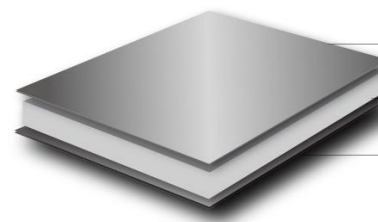
对于表面划痕具有自我修复功能表面钝化层与板材融为一体，不会剥离、脱落，雨水冲刷即可实现表面自洁

#### Low maintenance

Self repair imperfections and scratches  
Passivated layer is integrated into the ZCP surface and will not come off. And it will be easily cleaned by rain water.

## A2级防火铝复合板 A2 Grade Fireproof ACP

### 板材结构 Panel Structure



带装饰效果的金属表皮  
Metal surface with decoration effect

A2级防火芯层  
A2 grade fireproof core layer

带保护效果的金属表皮  
Metal surface with protection effect

### 产品简介 Product Introduction

众邦A2级防火铝复合板是一种新型的不燃装饰材料，它利用不燃无机物作为芯材，表面为氟碳涂层的铝合金，通过先进的生产工艺使其达到完美的结合，从而形成一种外观时尚、性能优越、施工方便的新一代室内外幕墙装饰材料。

众邦A2级防火铝复合板不仅具有普通铝复合板和防火铝复合板装饰方面的优点，在防火等级和环保性能及板材强度、刚性上更弥补了它们的不足。

众邦A2级防火铝复合板通过独特的加工手段、科学的工艺技术，是无机阻燃材料与金属材料有机的结合，达到一个既具有幕墙装饰材料所具备的美观效果，又有防火、阻燃、有害烟雾小、防潮等优良性能。能在1000℃以下不燃烧，1200℃左右不松散，成板厚度在3mm-4mm，是其他幕墙装饰材料所无法比拟的。就普通铝塑板而言，芯材为易燃聚乙烯，遇火即燃，也属于可燃材料。即便是目前B级的防火铝塑复合板，也只是有限的提高了其燃点。聚乙烯的熔点在112-140℃，在300℃时分解燃烧，从而引发火灾事故。

我公司成功研制出的A2级防火铝复合板的各项性能已通过了国家建筑材料质量监督检验中心检测，达到《建筑幕墙用铝塑复合板》国家标准，并且也通过国家防火建筑材料质量监督检验中心的检验，公司的A2级防火铝复合板采用自动化连续复合生产线生产，独特的机械装置、创新性的专利技术与工艺，以其可连续生产的独特优势，成为幕墙装饰产品中的一个创新。

随着国家对防火安全标准的要求越来越高，A2级防火铝复合板将以其强大的防火优势，完全满足国家标准对于安全和环保的要求，广泛应用于各种场合，像机场大楼、候机室、油库与加油站、娱乐场所、运动场、酒店、写字楼等建筑外墙，以及内墙装饰，不仅具有极大的社会效益和经济效益，更将成为人类的安全卫士。

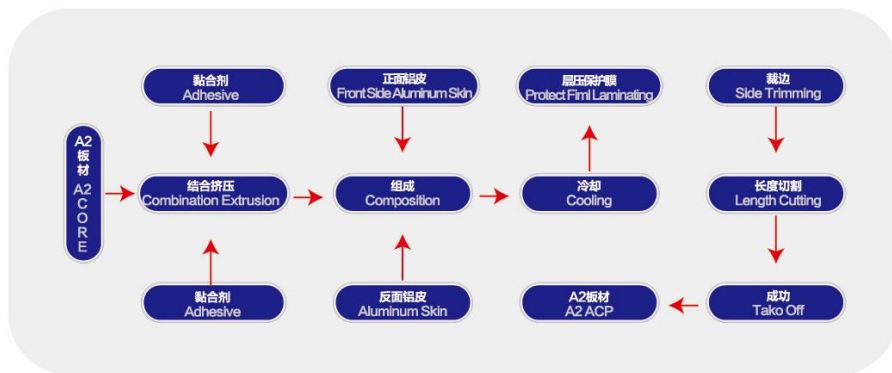
Alucoone A2 FR aluminum composite panel is a new type of non-combustible construction material. Through advanced technologies, it perfectly combines the non-combustible inorganic plastic core and the fluorocarbon coated aluminum alloy. With its fashionable appearance, excellent performance and easy installation advantage, it becomes more and more widely used as a new generation of wall decoration material. While retaining the good features of normal ACP and FR ACP, the A2 FR aluminum composite panel also performs superior in the aspect of fire retardance, environmental-friendly as well as strength, stiffness and flatness.

Through unique processing means and scientific technologies, the A2 FR aluminum composite panel successfully combines the inorganic fire-retardant materials in an organic way. Therefore, it realizes both a beautiful outlook and the function of fire retardance, smoke prevention and damp resistance. The panel thickness ranges from 3mm to 4mm. It is non-ignitable under 1000℃ and non-meltable under 1200℃, of which the other curtain wall materials are not comparable. In terms of normal ACP, its plastic core is made of flammable polyethylene and easy to get burned. Even for the class B FR ACP, it only improves the ignition point. Its melting point is about 112-140℃. When reaching to 300℃ it will decompose and combust, causing fire accident.

Our company has successfully developed the A2 FR aluminum composite panel, which has passed the test from the National Building Materials Quality Supervision and Inspection Center, reached the standards of the National Building Curtain Wall Use Aluminum Composite Panel Criteria, and also passed the test from the National Fireproof Construction Material Inspection Center. Our A2 FR aluminum composite panel production line has an advantage of automatic, continuous and high effective production. With the unique mechanical device, creative patented technology and advantage of continuable production, our company becomes the pioneer in the field of innovative wall decoration products.

As the national fire safety standards becoming higher and higher, the A2 FR aluminum composite panels with its superior fire-retardant and environmental-friendly advantages are widely used in various occasions, such as airports, lounges, oil depots, petrol stations, entertainment venues, stadiums, hotels, office buildings' façade as well as interior decoration. Its superiorities are more than just social and economic benefits, it is believed the A2 FR aluminum composite panels will become the safeguard of human beings.

#### 生产工艺流程 Process Flow Diagram



规格尺寸 SPECIFICATION AND SIZE		
产品信息	Product Information	众邦 ALUCOONE
板材厚度	Panel Thickness	3/4/5/6 mm
板材宽度	Panel Width	1000 1250 1500 1575 <b>1800 2030</b> mm
板材长度	Panel Length	1000-8000 mm
金属表皮厚度	Skin Thickness	0.21-0.65 mm

特殊宽度/厚度/长度要求请咨询厂家 Please consult the manufacturer for special width/thickness/length etc

## A2全维铝复合板 A2 3D Aluminium Composite Panel

#### 产品简介 Product Introduction

A2全维铝复合板是公司最新研制开发的新型金属建材,由三层铝板复合而成,面板辊涂耐候性能极佳的PVDF涂层为装饰和保护面,中间板采用辊冲压拉伸工艺处理为两面相互交错且均整排布有凹凸的梯柱型中空突块,背板经彻底清洗及表面化成处理。

A2 3D aluminum composite panel is the new developed metal building decoration panel by Zhejiang Zhongbang New Metal Materials Co., Ltd., the panels are laminated with 3 layers of aluminum, top coil is coated by PVDF with excellent weather fastness, and the aluminum core is pressed by the embossed roller, bottom coil is fully washed and coated as customers requirement.

全维板的全维三层结构,成熟的特有粘结技术,二十年剥离强度衰减率低于5%。

Following the mature technology of 3 layer lamination, the panels' peel off strength can last more than 20 years within 5% strength retrogression.

#### 基本参数 Parameters

防火等级: 具有优秀的防火性能, 达到A2级

基材组成: 合金铝板

推荐涂层: 选用PVDF涂层或木纹石纹

宽度: 1220mm, 1570mm (最大宽度)

长度: 2440mm, 也可根据设计要求及运输条件定制

厚度: 3mm, 4mm, 6mm

应用范围: 金属幕墙板、内装墙面集成板、公共建筑物超长 (>6m)

条型天花板、功能性(机房、手术室)专用板、船舶内舱专用装饰板等

#### 五大核心优势 Core Advantages

- 1、防火性好、符合消防要求  
全维板的主要材质均属不燃物质, 可达A2级, 完全满足建筑幕墙防火标准要求。
- 2、超耐腐蚀、自洁性能佳  
具超耐腐蚀性能的PVDF涂层附着力强, 在耐污染、耐候方面有着独特优势, 能有效抵抗酸雨、空气污染及紫外线的侵袭。使全维板具有二十年以上的保色性。
- 3、任意造型, 满足个性美  
可按用户需求任意切割、弯折、滚弧, 呈现出各种几何图形, 充分表达设计师的理念。
- 4、板面平整度高, 抗风压变化率小  
全维板的多层复合结构使其具有出色的刚性重量比, 中间层梯柱型中空突块的均匀分布使板材以最小的重量获得最大受力, 其抗风压和抗弯挠能力大大超越铝复合板和铝单板。
- 5、材质轻、易加工、方便安装  
材质轻易于搬运, 安装方式简单、快捷, 并不受季节气候和地理环境限制, 显著缩短工程周期。



全维板采用独特的结构, 不仅增强了板材的抗弯性能, 提高了抗风压能力及循环荷载周期, 同时进一步密封防水、防腐、防渗透, 延长板材的使用寿命。

Use the unique Corner folding structure, 3D aluminum composite panels not only improve the bending strength, have better wind resistance Cycle load cycle performance, but also improve the sealing water resistance, corrosion prevention, anti-osmosis performance, make the panel last for longer.

Fire proof grade: excellent fire proof performance, reach A2 fire proof grade

Material: alloy aluminum

Recommend coating: PVDF, Wooden color, stone color

Width: 1220mm, 1570mm (Max Width)

Length: 2400mm (customized length are available)

Thickness: 3MM, 5MM, 6MM

Application: metal curtain wall, interior decoration, public building strip ceiling (>6m), functionality board (machine room, operating room), ship cabin interior decoration.

#### 1.Fire proof

The mean content of 3D aluminum composite panel are made of aluminum (more than 98%), reach A2 fire proof grade, fully meet the fire protection standards of building curtain walls.

#### 2.High corrosion prevention and good self clean ability.

With the high corrosion prevention and good self clean ability, even under the high pollution and bad natural environment, then panels can last for more than 20 years with excellent on wall performance.

#### 3.Any modeling available, satisfy the customized design.

Any cutting, boring, milling, curing are available, appear massive geometric figure looking, fully express the designers' idea.

#### 4.High panel flatness, low rate of change by the weather affects (wind, heat and so on).

Due to the excellent performance of 3D aluminum composite panel inner structure, the core will make the panel have the uniform bearing stress, no matter the wind resistance or the bending strength will better compare with aluminum composite panel and aluminum single board.

#### 5.Light weight, easy for process and installation.

Light weight panel, easy for transportation, installation, not restricted by the weather and geographical environment, reduce construction period.

全维板与其它金属幕墙材料的特征对比				
性能指标	铝塑复合板	铝单板	铝蜂窝板	全维板
结构形式	三明治结构，LDPE中间层与上下合金铝板复合而成。	全铝结构	全铝结构	全铝结构
抗风压变形	★★★★ 抗风压变形率小	★★★ 抗风压变形率大	★★★★★ 抗风压变形率小	★★★★★ 抗风压变形率小
结构安全性	★★★★ 重量刚性比高	★★★★★ 结构强度高	★★★★★ 重量刚性比高	★★★★★ VA无毒性特有架桥粘接复合工艺使得剥离强度高，重量刚性比与铝蜂窝板相当。
颜值指数	★★★★★ 板面平整度极佳，连续性辊涂工艺，色泽均匀	★★★ 板面平整度差，喷涂工艺色差难控制。	★★★★★ 板面平整度较好，面板辊涂工艺。	★★★★★ 板面平整度极好，连续辊涂工艺色泽均匀、色差小，实现喷涂工艺难以达到的涂层效果。
防火性能	★★ 防火等级B级，用于高层建筑受到一定限制。根据现有生产工艺技术，如要提高防火等级，则会降低层间剥离强度。	★★★★★ A2级不燃	★★★★ A2级不燃，溶剂型胶施工工艺降低了防火性能。	★★★★★ 防火等级达到A2级不燃
环保指数	★★★★ 可回收、性价比较低	★★★★★ 可回收、性价比较低	★★★ 胶粘工艺，有溶剂挥发	★★★★★ 省材、节能、环保
后加工性	★★★★ 生产效率高，后加工性能优异。	★★ 焊点多、费人工、生产效率高，属双高产品。	★★★★★ 生产效率高，后加工折边角铆接强度差、易塌陷。	★★★★★ 生产效率高，后加工性能优于铝复合板
其它	出口代码单列，属国家鼓励的新材料产品。			集多种产品优势的幕墙幕墙板换代产品

Feature contrast between 3D aluminum composite panels and the other metal curtain wall panels				
Performance Index	ACP	Aluminum curtain wall	Honeycomb aluminum panel	3D aluminum panel
Structure	Sandwich structure, LDPE core laminate with top and bottom coil	Tensile strength	Elongation	Hardness
Resistance to wind pressure	★★★★ High resistance to wind pressure	★★★ Low resistance to wind pressure	★★★★★ Very high resistance to wind pressure	★★★★★ Very high resistance to wind pressure
Safety of the structure	★★★ High resistance to wind pressure	★★★★★ Low resistance to wind pressure	★★★★★ Very high resistance to wind pressure	★★★★★ High peel off strength, same grade of weight/stiffness ratio with honeycomb aluminum panel.
Appearance level	★★★★★ Perfect flatness performance, continuing coating system with uniform color.	★★★ Low flatness performance, hard to control the color difference with the spray coating.	★★★★★ Good flatness performance, continuing coating system with uniform color.	★★★★★ Perfect flatness performance, continuing coating system with uniform color.
Fire proof grade	★★★ Most of ACP is using B grade fire proof, limited to some extent in the high-raised buildings. Higher grade fire proof core will make the peel off strength lower.	★★★★★ A2 grade	★★★★★ A2 grade with big amount of flammable glue	★★★★★ A2 grade with very low flammable glue
Environmental protection index	★★★★ Energy saving, environmental protection, recyclable.	★★★★★ Recyclable, low cost performance	★★★ Glue lamination tech with toxic gas release	★★★★★ Energy saving, environmental protection, recyclable.
After processing ability	★★★★ High production efficiency, excellent after processing ability	★★★ To many welding spot, high cost with manual work, low production efficiency, high energy consumption and high pollution.	★★★ Low production efficiency, bad after processing ability.	★★★★★ High production efficiency, excellent after the process ability.
Other	Encouraged product by Chinese exports policy.			Collect multiple product advantages of the curtain wall industry.

## 安装方法 Processing Method

铝复合板只要用加工木材或金属的工具就可以进行剪、锯、铣、冲、压、折、弯等加工成型，可以按建筑装修设计的要求加工成各种造型，尤其对弧形、反弧形、小半径圆角、内外转角等造型更是随心所欲，是其它装修材料所不能相比的。

普通的铝制品加工机械和木制品加工机械不需特殊装置就可用于复合板的加工。

### 锯断加工 Saw Cutting

用木制品加工用机械锯和板就能简单地加工。本公司推荐使用硬质合金刀片。It can be easily processed with wood product processing saw and plate saw. It's recommended to use hard alloy blade.



### 剪断加工沟槽加工 Slotting

距离聚乙烯基层面保持0.2~0.4mm的V型沟槽加工是很重要的。本公司推荐的最佳沟槽角度为110°。

(1) 铣床和修剪器  
如右图所示使用平头V形刀具。  
转数：20,000~30,000rpm  
进刀转数：3~5m/min

材质：硬质合金

(2) 当大量加工V型沟槽时

使用圆形锯和带锯为适当。下列所示的是一个槽刀的例子；

材质：硬质合金片

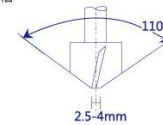
外径：305mm

齿数：24

转数：3,000~5,000rpm

进刀速度：5m/min

开槽中心线离铝复合板边缘应大于20mm



It's important to make the V type slotting process with a distance of 0.2-0.4mm from the polyethylene substrate. The recommended slot angle is 110°.

(1) milling machine and trimmer

Use the modified drill as showed in the left chart.

Running speed: 20000-30000rpm

Feed speed: 3-5m/min

Material: hard alloy

(2) When processing large quantity of V type slots, It's recommended to use round saw and belt saw.

And the following is an example of slotter:

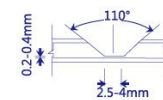
material: hard alloy flake

outer diameter: 305mm

number of teeth: 24

running speed: 3000-5000rpm

feed speed: 5m/min



panel is very easy to process. All cutting, milling, slotting, side-folding and curving can be easily fulfilled by simple tools used for processing timber and metal. It can be shaped into various shapes, such as curve, reserve curve corner and sharp curve, according to requirements of building design. It is incomparable for other decorating materials.

Normal aluminum product processing machinery and wood product processing machinery can be used for processing of panel without special device.

### 弯曲加工 Bending With Panel Folder

在平台进行操作，弯曲部分可以做得很整齐。

If operated on the platform, bending part can be made very tidy.



### 用折板机弯曲加工 Bending With Panel Bender

当使用折板机整形时，应使用适当半径上模。

When plate folder is used to finish the HUAYUAN panel, disc shall be placed on with appropriate radius.



### 用三辊弯板机弯曲加工 Bending With 3-roller Panel Bender

三辊弯板机较之折板机适用于大内径的弯曲

3-roller panel bender is more preferable for bending of large internal diameter to plate folder.



### 铆接加工 Riveting

抽芯铆钉可以方便地从一个方向进行连接。Countersunk rivet can realize easy.



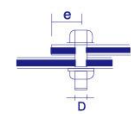
### 栓接 Boiting

从变形极限考虑，图中 $e \geq 2D$

Considering fom deformation limit, formul

$e > 2D$  is the best calculation way of aperture

D and distance from hole center to plate end.



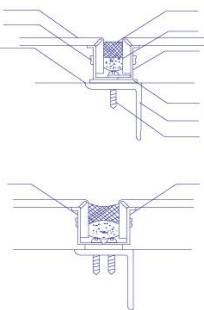
## 安装图解 Scheme Of Installation

### 板的类型和连接设计实例 (A)

#### Example Of Panel Type And Joint Design(A)

#### 角铝和密封连接 (1) Angle aluminum and seal joint(1)

1. 铝复合板 ACP
2. 铝铆钉 Aluminum rivet
3. 角铝 (大) Angle aluminum
4. 角铝 (小) Angle aluminum
5. 垫衬材料 Bach spacer
6. 密封材料 Sealing material
7. 垫片 Spacer
8. 角钢 Angle bar
9. 圆头螺钉 Bullen screw



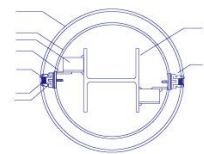
#### 圆柱包覆实例

#### Example Of Column Covering

1. 铝复合板 ACP
2. 角支撑 Angle support
3. 钢板条 Steel plate strip
4. 密封材料 Sealing material
5. 塑料垫衬 Plastic lining bar
6. 附属装置 Accessories
7. 圆头螺钉 Bullen screw
8. 承重柱 Bearing strut
9. 角钢 Angel bar

以上附属装置适用于低层建筑

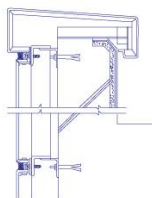
Above mentioned accessories are used for low buildings



#### 建筑顶部安装实例

#### Installation Example Of Building Top

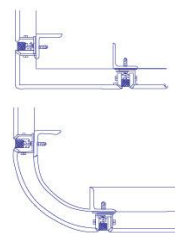
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### 外部拐角处安装实例

#### Installation Example Of External Corner

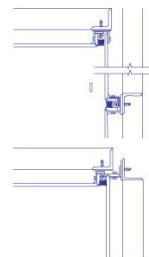
1. 铝复合板 ACP
2. 密封材料 Sealing material
3. 垫衬材料 Lining material
4. 角钢 Angle bar
5. 钢板条 Steel plate strip



### 内部拐角处安装实例

#### Installation Example Of Internal Corner

1. 铝复合板 ACP
2. 密封材料 Sealing material
3. 垫衬材料 Lining material
4. 角钢 Angle bar
5. 圆头螺钉 Bullen screw



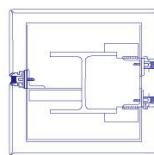
### 方柱包覆实例

#### Example Of Strut Covering

1. 铝复合板 ACP
2. 角支撑 Angle support
3. 角钢 Angle bar
4. 密封材料 Sealing material
5. 塑料垫衬 Plastic lining bar
6. 附属装置 Accessories
7. 圆头螺钉 Bullen screw
8. 承重柱 Bearing strut

以上附属装置适用于低层建筑

Above mentioned accessories are used for low buildings



## 铝复合板维护 ACP Maintenance

### 运输与储存 Transportation And Storage

1. 成品铝复合板应放应根据与长宽尺寸一致的平整木托上, 两张板材之间需一正一反放置;
2. 铝复合板运输需平放。在搬运时必须将板四边同时抬起, 切勿单边拖拉, 以免划伤板面;
3. 集装箱装运铝复合板, 需要在装货完成后用木料等做好支撑, 保证板材在海运过程中的平稳性;
4. 铝复合板的包装码放以不超过5包为宜;
5. 需要长期储存的铝复合板, 应放置在通风干燥的环境下, 最好在下面垫上一层防潮物, 且环境温度不高于 70℃。

1. The finished aluminum composite panels should be placed on flat wooden pallet according to the length and width, and the two sheet shall be placed in reverse position;
2. Aluminum composite panels should be transported in flat. When handling, it is necessary to lift the four sides of panel at the same time, not single side dragging, to avoid to scratch panel surface.
3. The container loading aluminium composite panel needs to be supported with wood material after loading finished, so as to ensure panel stability during shipping process.
4. The packaging of aluminium composite panel should not exceed 5 packages.
5. Aluminum composite panels that need long-term storage should be placed in a ventilated and dry environment. It's better to lay a damp proof material on the bottom, and temperature is not higher than 70 degrees.

### 清洗 Cleaning

#### 1. 常规清洗 General Cleaning

首先, 用柔软的海绵加清水并用适度力量进行擦拭。如果干燥后仍有污渍, 使用中性清洁剂或家用清洁剂加水稀释进行清洗。典型的清洗程序如下。

A. 稀释的洗涤剂或清洁剂 1-5% 的水。

B. 用抹布或海绵将配置好的溶液涂抹于板材表面。等待1分钟, 然后泡沫会变黑。

C. 用刮刀将溶液擦干, 用湿布将剩余溶液擦去。

根据我们的测试, 该配置溶液适合所有面板。建议使用花王集团 PH 值为 8 的家用洗涤剂。如果你使用其他的洗涤剂, 先在板面上小范围测试一下。

Firstly, try water rinse using soft sponge with modest pressure to remove the stain. If the stain remains after dry, then use neutral detergents or household cleaners diluted with water. Typical cleaning procedures are as follows.

a. Dilute a detergent or a cleaner to 1-5% with water.

b. Apply the solution and spread on panels surface with soft rags or sponges. Wait for 1 minute, then the foam will blacken.

c. Dry the solution with a squeegee and wipe the remaining solution with wet cloth containing clean water.

According to our test, dilute Magiclean is suitable for all finishes of FEITENG PANEL. Magiclean is a household detergent with pH8 from Kao Corp. If you use other detergent, pre-test it in a small area.

a. Add detergent to water Water 5 liter  
Detergent 50-250ml



b. Apply detergent and spread on FEITENG panel surface

Hold for 60 seconds



c. Dry with squeegee and wipe off with wet cloth

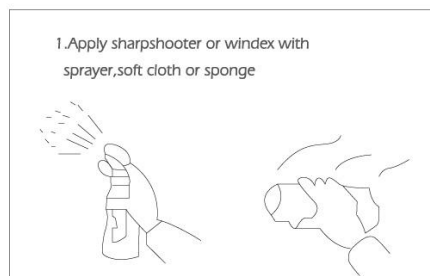


## 2. 顽固污渍 Stubborn Stain

顽固污渍根据我们的测试，碱性清洁剂如神枪手和Windex清洗剂能用于去除顽固污渍。但是金属颜色的表面在使用清洁剂擦拭后需要再用清水擦洗。这是由于有碱的存在，金属色的板面如果不漂洗可能会导致颜色变化。如果是单色板，石纹板和木板，不要求在使用清洁剂之后再用清水擦拭。

注：神枪手是3M品牌的一种多功能清洁剂（碱性，PH值12），Windex是Jhonson牌玻璃清洁剂（碱性，pH值11）。这些都是碱性溶液，需避免眼睛和皮肤接触。并遵循制造商的安全指示。

如果你使用其他的洗涤剂，请先在板面上小范围测试一下。一般来说，强酸性和强碱性可能会导致光泽、颜色变化，或涂层变化。不要使用含磨料的清洁剂。请勿使用强溶剂和油漆稀释剂。



## 装修墙面后的养护 Maintenance After Wall Decoration

(1) 铝复合板在施工完毕前，不得撕下表面保护膜，以免作业中擦伤表面。

(2) 镜面铝复合板表面亮丽光滑，灰尘不易附着，每月擦拭2-3次即可。擦拭时不得用尼龙刷子、丝瓜布及挥发性溶剂或盐酸类清洁剂等。否则会损坏镜面表层。最好用软布蘸一般玻璃用中性清洁剂或中国石油公司出品的去渍油轻轻擦拭。

(3) 铝复合板如用于室外湿气较重及易产生雾气凝结的场所，须常用软布将雾气轻轻擦掉，即可保持持久亮丽之效果。

According to our test, alkali cleaners such as Sharpshooter and Windex are applicable to strong stain, however Metallic Colors of FEITENG PANEL requires good rinsing with water afterward. It is because in Metallic Colors, non-rinsing may cause a color change due to remaining alkali. In Solid Colors, Stone and Timber Finishes, rinsing with water is unnecessary especially.

Note: Sharpshooter is a versatile cleaner from 3M[alkali,pH12],and Windex is a glass cleaner from Johnson [alkali,pH11].As these are alkali solutions, prevent eye and skin contact. Follow manufacturer's safety instructions.

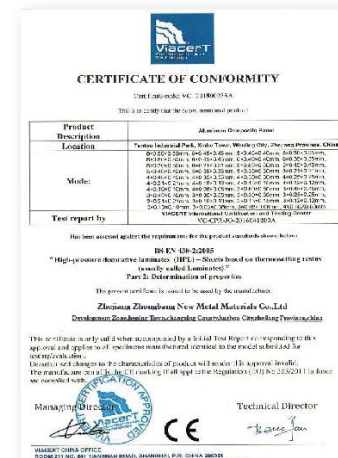
If you use other strong cleaners or stain removers, pre-test in a small area. Generally, strong acid and alkali may cause a gloss change, color change, or swelling of coating film. Do not use cleaners containing abrasives. Do not use strong solvents and paint thinners.

(1) aluminum composite panel in the construction before the end, not to tear down the surface protective film, so as not to scratch the surface in the work.

(2) mirror aluminum composite panel surface smooth and bright, the dust is not easy to adhere, wiping 2-3 times per month. Cleaning is not allowed to use nylon brush, sponge gourd cloth and volatile solvent or hydrochloric acid cleaning agent. Otherwise it will damage the mirror surface. The best with a soft cloth dipped in general glass with a mild detergent or China Petroleum Corp produced naphtha wipe gently.

(3) aluminum composite panel as used in outdoor heavy moisture and easy to produce the mist condenses place, shall be commonly used a soft cloth to gently wipe the fog, can maintain a lasting bright effect.

## 资质认证 Qualification Certification



## A2检测报告 A2 Fireproof Test Report

			
ZC 130020562	01010101-0001-9		中国合格评定国家认可委员会 CNAS 18000

# 检 验 报 告

**TEST REPORT**

中心编号(A#): CNY2101CO.BC15TD



浙江中南钢铁股份有限公司  
ZHEJIANG ZHONGNAN STEEL MATERIAL CO., LTD.

受检单位:  
**ZHEJIANG ZHONGNAN STEEL MATERIALS CO., LTD**

Address:

样品名称:  
**A2 热压大板复合板**

Samples Name:  
**A2 FR laminar plate composite panel**

检验项目:  
**拉伸试验**

Test Type:  
**Sampling test**

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**国家建筑材料质量监督检验中心**  
National Center of Quality Supervision & Inspection for Building Materials


CMA 检测单位

[illegible]

中國建築材料產品質量監督中心 (National Center for Building Materials Supervision & Testing-MoC)				
檢 驗 報 告				
中心編號: 京建字(2007)第 00000000 號			第 1 頁 共 3 頁 Page 1 of 3	
序 號	檢驗項目	材料名稱 Material Name	材料規格 Material Size	材料 單位 Unit
1	重量偏差 Weight Deviation	7.75(%)	8.25	合格 Pass
2	重量偏差 Weight Deviation	2.22(30%)	23.37(3%)	合格 Pass
3	抗壓強度多點 Compressive Strength	54.8 N/mm <sup>2</sup> (7.91 MPa)	1.71 x 10 <sup>-3</sup> m <sup>3</sup>	合格 Pass
4	抗壓強度多點 Compressive Strength	24.07	12.02%	合格 Pass
5	抗拉強度多點 Tensile Strength	3.35 0.31 N/mm <sup>2</sup>	3.35 MPa 0.31 MPa	合格 Pass
6	抗拉強度多點 Tensile Strength	抗拉強度多點 Tensile Strength 235.02 MPa	抗拉強度多點 Tensile Strength 235.02 MPa	合格 Pass
7	斷裂 Fracture	3.31	3.31 MPa	合格 Pass

[illegible][illegible]

## EN13501 检测报告 EN13501 Test Report

[illegible][illegible][illegible][illegible][illegible][illegible]

## 不锈钢复合板检测报告 Stainless Steel Composite panel Test Report

报告编号: TC-16-12-002987  
日期: 2018-3-28

委托单位: 浙江工业大学材料科学与工程学院  
检测项目: 浙江工业大学材料科学与工程学院

检测内容: 1. 外观检查 2. 尺寸检查 3. 厚度检查 4. 硬度检查 5. 冲击检查 6. 拉伸检查 7. 弯曲检查 8. 疲劳检查 9. 腐蚀检查 10. 其他检查

检测结果: 1. 外观检查: 表面平整, 无裂纹, 无缺陷。 2. 尺寸检查: 符合设计要求。 3. 厚度检查: 符合设计要求。 4. 硬度检查: 符合设计要求。 5. 冲击检查: 符合设计要求。 6. 拉伸检查: 符合设计要求。 7. 弯曲检查: 符合设计要求。 8. 疲劳检查: 符合设计要求。 9. 腐蚀检查: 符合设计要求。 10. 其他检查: 符合设计要求。

检测结论: 该不锈钢复合板符合设计要求, 可用于工程。

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日期: 2018-3-28

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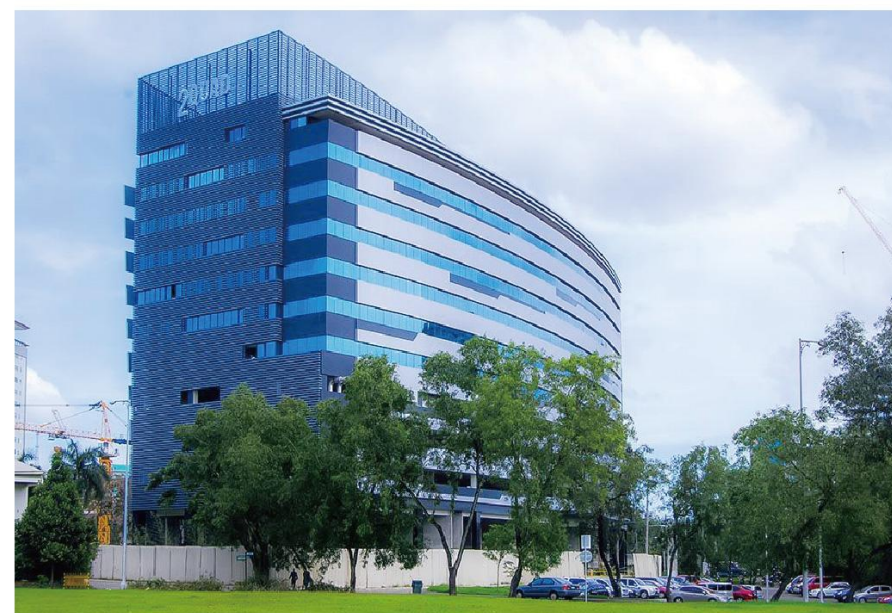
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## 工程实例 Application Projects



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## 工程实例 Application Projects

