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检测  
TESTING  
CNAS L0690

# TEST REPORT

Report No.: XJ2023C01B02187E

Entrusted by: Jiangsu Yaret Technology Industrial Park Co.,LTD

Sample Name: Aluminum plastic composite panel for curtain wall

Test Type: Type test

China Testing & Certification International Group Co.,Ltd.

National Center of Quality Supervision & Test for

Building Materials



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<b>Sample(s) Name</b>	Aluminum plastic composite panel for curtain wall	<b>Test Type</b>	Type test
<b>Client</b>	Jiangsu Yaret Technology Industrial Park Co.,LTD	<b>Application No.</b>	---
<b>Applicant</b>	Jiangsu Yaret Technology Industrial Park Co.,LTD	<b>Brand</b>	Yaret
<b>Manufacture</b>	Jiangsu Yaret Technology Industrial Park Co.,LTD	<b>Sample State</b>	Meet the requirements of testing
<b>Sampling Body</b>	China Testing & Certification International Group Co.,Ltd.	<b>Model/Size</b>	FC Two layers of coating HFR 4mm×1220mm×2440mm
<b>Production Date/ Batch No.</b>	September 8th, 2023 /20230908	<b>Sampling Base</b>	100 PCS.
<b>Sampling Date</b>	October 26, 2023	<b>Quantity of sample(s)</b>	6 PCS.
<b>Receiving Date</b>	November 6th, 2023	<b>Sampled by</b>	Shuai Wu
<b>Sampling Method</b>	Random sampling	<b>Sealed by</b>	Quan Jiang
<b>Sampling Site</b>	warehouse	<b>Sample Description</b>	Seal in good condition
<b>Test Method(s)</b>	The method for the test items are detailed in the data page(s).	<b>Test Date</b>	November 10, 2023 to May 28, 2024
<b>Judgment Standard(s)</b>	GB/T 17748-2016 Aluminum plastic composite panel for curtain wall		
<b>Test Item(s)</b>	Test items are detailed in data pages.		
<b>Test Result(s)</b>	*Upon testing, the test comply with the requirements for FC Two layers of coating aluminum-plastic composite panel for curtain wall in GB/T 17748-2016, Test result are detailed in data pages. *		
<b>Date of issue</b> 2024-06-12 <b>(Seal)</b> 			
<b>Remarks:</b> (Blank)			

**Approved by** 宇建伟  **Checked by** 刘顺利  **Compiled by** 刘晚晨 

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No.	Test Items	Requirements of Standard	Test Results	Individual Conclusion	Test methods		
1	Appearance	Appearance	Clean	Clean	Pass	GB/T 17748-2016 7.4	
		Non-decorative side	No defects affecting the product use	No defects	Pass		
		Press, Print, Unevenness	Not allowed	No	Pass		
		Plastic exposure	Not allowed	No	Pass		
		Uncoated	Not allowed	No	Pass		
		Wave	Not allowed	No	Pass		
		Decorative side	Bubble	Not allowed	No		Pass
		Spot	Maximum size $\leq$ 3mm and the count $\leq$ 3/m <sup>2</sup>	No	Pass		
		Scratch	Not allowed	No	Pass		
		Scuffing	Not allowed	No	Pass		
		Color difference	Not obvious visually	Not obvious visually	Pass		

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No.	Test Items	Requirements of Standard	Test Results		Individual Conclusion	Test methods
2	Dimensional tolerance	Length	$\pm 3\text{mm}$	0mm~+1mm	Pass	GB/T 17748-2016 7.5
		Width	$\pm 2\text{mm}$	0mm~+1mm	Pass	
		Thickness	$\pm 0.2\text{mm}$	-0.02mm~+0.04mm	Pass	
		Diagonal differential	$\leq 5\text{mm}$	2mm	Pass	
		Straightness	$\leq 1\text{mm/m}$	0.2mm/m	Pass	
		Warp	$\leq 5\text{mm/m}$	1mm/m	Pass	
3	Aluminum sheet thickness	Avg. $\geq 0.50\text{mm}$ Min. $\geq 0.48\text{mm}$	Front	Avg.0.50mm Min.0.50mm	Pass	GB/T 17748-2016 7.3
			Back	Avg.0.50mm Min.0.50mm	Pass	
4	Coating thickness Coating thickness	Avg. $\geq 25\mu\text{m}$ Min. $\geq 23\mu\text{m}$	Avg.38 $\mu\text{m}$ Min.38 $\mu\text{m}$		Pass	GB/T 17748-2016 7.6.1 GB/T 4957-2003
					Pass	
5	Pencil hardness	$\geq \text{HB}$	2H (CHUNG HWA Pencil)		Pass	GB/T 17748-2016 7.6.2 GB/T 6739-2022
6	Gloss difference	$\leq 10$	1.1		Pass	GB/T 17748-2016 7.6.3 GB/T 9754-2007

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No.	Test Items	Requirements of Standard	Test Results	Individual Conclusion	Test methods
7	Flexibility	$\leq 2T$	2T	Pass	GB/T 17748-2016 7.6.4
8	Adhesion rating	Cross-cut rating 0 Circle-cut rating I	Cross-cut rating 0 Circle-cut rating I	Pass	GB/T 17748-2016 7.6.5 GB/T 9286-2022 GB/T 1720-2020
9	Impact resistance	$\geq 50\text{kg} \cdot \text{cm}$	50kg · cm	Pass	GB/T 17748-2016 7.6.6 GB/T 1732-2020
10	Abrasion resistance	$\geq 5\text{L}/\mu\text{m}$	5.6L/ $\mu\text{m}$	Pass	GB/T 17748-2016 7.6.7
11	Hydrochloric acid resistance	Unchanged	Unchanged	Pass	GB/T 17748-2016 7.6.8
12	Oil resistance	Unchanged	Unchanged	Pass	GB/T 17748-2016 7.6.9
13	Alkali resistance	No abnormal phenomena such as bubble, heave and chalking etc., color difference $\Delta E \leq 2$	No abnormal phenomena such as bubble, heave and chalking etc., color difference $\Delta E = 0.7$	Pass	GB/T 17748-2016 7.6.10 GB/T 11942-2022
14	Nitric acid resistance	No abnormal phenomena such as bubble, heave and chalking etc., color difference $\Delta E \leq 5$	No abnormal phenomena such as bubble, heave and chalking etc., color difference $\Delta E = 0.5$	Pass	GB/T 17748-2016 7.6.11 GB/T 11942-2022
15	Solvent resistance	No exposure of substrate	No exposure of substrate	Pass	GB/T 17748-2016 7.6.12
16	Contamination resistance	$\leq 5\%$	1.9%	Pass	GB/T 17748-2016 7.6.13 GB/T 9780-2013 5.4 A Method

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No.	Test Items	Requirements of Standard	Test Results	Individual Conclusion	Test methods	
17	Boiling water resistance	Unchanged	Unchanged	Pass	GB/T 17748-2016 7.7.7	
18	Penetrating resistance	$\geq 7.0\text{kN}$	8.3kN	Pass	GB/T 17748-2016 7.7.2	
19	Shearing strength	$\geq 22.0\text{MPa}$	26.1MPa	Pass		
20	Thermal expansion coefficient	$\leq 4.00 \times 10^{-5} \text{ } ^\circ\text{C}^{-1}$	$2.13 \times 10^{-5} \text{ } ^\circ\text{C}^{-1}$	Pass	GB/T 17748-2016 7.7.5	
21	Bending strength	$\geq 100\text{MPa}$	Front longitudinal	130MPa	Pass	GB/T 17748-2016 7.7.1
			Front horizontal	119MPa	Pass	
			Back longitudinal	129MPa	Pass	
			Back horizontal	118MPa	Pass	
22	Bending elastic modulus	$\geq 2.0 \times 10^4\text{MPa}$	Front longitudinal	$3.8 \times 10^4\text{MPa}$	Pass	
			Front horizontal	$3.6 \times 10^4\text{MPa}$	Pass	
			Back longitudinal	$3.7 \times 10^4\text{MPa}$	Pass	
			Back horizontal	$3.4 \times 10^4\text{MPa}$	Pass	
23	Climbing drum peel	Avg. $\geq 110\text{N} \cdot \text{mm}/\text{mm}$ Min. $\geq 100\text{N} \cdot \text{mm}/\text{mm}$	Front longitudinal	Min.156 N · mm/mm Avg.172 N · mm/mm	Pass	GB/T 17748-2016 7.7.3 GB/T 1457-2005
			Front horizontal	Min.141 N · mm/mm Avg.173 N · mm/mm	Pass	
			Back longitudinal	Min.123 N · mm/mm Avg.156 N · mm/mm	Pass	
			Back horizontal	Min.126 N · mm/mm Avg.150 N · mm/mm	Pass	

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24	Temperature -change resistance	Loss of climbing drum peel	≤10%	5%	Pass	GB/T 17748-2016 7.7.4 GB/T 9286-2021 GB/T 1720-2020 GB/T 1457-2005
		Adhesion rating	Cross-cut rating 0 Circle-cut rating 1	Cross-cut rating 0 Circle-cut rating 1	Pass	
		Appearance	Unchanged	Unchanged	Pass	
25	Thermal distortion temperature	Front longitudinal	≥95°C	103°C	Pass	GB/T 17748-2016 7.7.6 GB/T 1634.2-2019
		Front horizontal		103°C	Pass	
		Back longitudinal		96°C	Pass	
		Back horizontal		96°C	Pass	
26	Artificial Weathering (4000h)	Appearance	No delamination	No delamination	Pass	GB/T 17748-2016 7.6.14 GB/T 16259-2008 A Method GB/T 11942-2022 GB/T 9754-2007 GB/T 1766-2008
		Color difference	≤4.0	0.92	Pass	
		Gloss loss rating	≤Rating 2	Rating 1	Pass	
		Other aging resistances rating	Rating 0	Rating 0	Pass	
27	Salt spray resistance (4000h)	Appearance	No delamination	No delamination	Pass	GB/T 17748-2016 7.6.15 GB/T 1771-2007 GB/T 1740-2007
		Salt spray resistance rating	≤Rating 1	Rating 1	Pass	

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