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检测  
TESTING  
CNAS L0690

# TEST REPORT

Report No.: WT2023E09A00354G1E

NANJING E·SHINE NEW MATERIAL

Entrusted by:

TECH. CO., LTD.



Sample Name:

Laminated glass

Test Type:

Entrustment Test

China Testing & Certification International Group Co., Ltd.

China National Safety Glass & Quartz Glass Test Center



WT2023E09A00354



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<b>Sample Name</b>	Laminated glass	<b>Test Type</b>	Entrustment Test
<b>Entrusted By</b>	NANJING E·SHINE NEW MATERIAL TECH. CO., LTD.	<b>Trademark</b>	—
<b>Manufacturer</b>	NANJING E·SHINE NEW MATERIAL TECH. CO., LTD.	<b>Sample Status</b>	Samples meet the test requirements
<b>Reception Date</b>	May 25, 2023	<b>Sample Quantity</b>	19 Pieces
<b>Manufacture Date/Batch No.</b>	—	<b>Model/Size</b>	Shown on each data sheet
<b>Test Method</b>	Shown on each data sheet	<b>Test Date</b>	May 29, 2023- June 12, 2023
<b>Criterion</b>	GB 15763.3-2009 <i>Safety glazing materials in building – Part 3: Laminated glass</i>		
<b>Test Item</b>	High temperature resistance, Radiation resistance, Ball impact peeling test, Shot bag impact test, Humidity test		
<b>Conclusion</b>	*The test results conform to the requirements of GB 15763.3-2009. The test results are shown on Page 2-6. *		
<b>Remark:</b>	<p>The entrusting party is responsible for the following submitted information:</p> <p>1. Structure: 6mm tempered glass+0.76mm EVA+6mm tempered glass.</p>		

Date of issue: 2023-07-27  
(Seal)



Approved by: 邱娟 Checked by: 王睿 Compiled by: 赵文婧

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<b>Test Item</b>	<b>High temperature resistance</b>
<b>Test Method</b>	GB15763.3-2009 <i>Safety glazing materials in building---Part 3: Laminated glass</i> , Section 7.8
<b>Requirement of Criterion</b>	Requirement of GB 15763.3-2009: 1. It is permitted for the specimens to bring forth cracks, but neither bubbles nor other defects shall be found beyond 13mm from the edges or any cracks developed during the test. 2. Three specimens shall be tested. If all the specimens meet the requirements, the test result is deemed to be satisfied. If one specimen meets the requirements, the result of the test is deemed to be failure. When two specimens meet the requirements, three new specimens shall be re-tested, and all the new specimens meet the requirements, the result of the test is deemed to be satisfied.
<b>Test Result</b>	
<b>Sample No.</b>	<b>Status after high temperature test</b>
1	No cracks, no bubbles or other defects appear.
2	No cracks, no bubbles or other defects appear.
3	No cracks, no bubbles or other defects appear.
<b>Item Conclusion</b>	<b>Pass</b>
<b>Remark</b>	1. Test address: Guanzhuang; 2. Main test equipment: Q-09 ZF-68 Boiling chamber; 3. Sample size: 300mm×300mm×12.76mm.

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<b>Test Item</b>	<b>Radiation resistance</b>	
<b>Test Method</b>	GB15763.3-2009 <i>Safety glazing materials in building---Part 3: Laminated glass</i> , Section 7.10	
<b>Requirement of Criterion</b>	Requirement of GB 15763.3-2009: (1) $\Delta T =  T_1 - T_2  / T_1 \times 100\% \leq 3\%$ , where $T_1$ : luminous transmittance before UV-irradiation; $T_2$ : luminous transmittance after UV-irradiation. (2) After test, there shall not be any remarkable changes, like discoloration, bubble and turbidity found in the specimen. (3) Three specimens shall be tested. If all the specimens meet the requirements, the test result is deemed to be satisfied. If one specimen meets the requirements, the result of the test is deemed to be failure. When two specimens meet the requirements, three new specimens shall be re-tested, and if all the new specimens meet the requirements, the result of the test is deemed to be satisfied.	
<b>Test Result</b>		
<b>Sample No.</b>	<b>Status after UV-irradiation</b>	<b>Change rate of luminous transmittance before and after UV-irradiation <math>\Delta T</math> /%</b>
4	No remarkable discoloration, bubble or turbidity was found in the sample.	0.2
5	No remarkable discoloration, bubble or turbidity was found in the sample.	0.4
6	No remarkable discoloration, bubble or turbidity was found in the sample.	0.2
<b>Item Conclusion</b>	<b>Pass</b>	
<b>Remark</b>	1. Test address: Guanzhuang; 2. Main test equipment: Q-01 SGT-A Visible light transmittance meter, Q-32-3 SGR-III Radiation chamber; 3. Sample size: 300 mm×76mm×12.76mm.	

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Test Item	Ball impact peeling test			
Test Method	GB15763.3-2009 <i>Safety glazing materials in building---Part 3: Laminated glass</i> , Section 7.11			
Requirement of Criterion	Requirement of GB 15763.3-2009: 1. The interlayer shall not be torn or exposed portions due to the splinters detached from the test piece. 2. Six specimens shall be tested, after the test, if five or more samples meet the requirements, the result of the test is deemed to be satisfied. If three or less specimens meet the requirements, the result of the test is deemed to be failure. If four specimens meet the requirements, six specimens shall be re-tested. If all the new specimens meet the requirements, the result of the test is deemed to be satisfied.			
Test Results				
Sample No.	Thickness /mm	Weight of the ball/g	Height /mm	Status after impact
14	12.72	1040	4800	The interlayer is not torn, no exposed portions while two side glass broke.
15	12.68	1040	4800	The interlayer is not torn, no exposed portions while one side glass broke.
16	12.65	1040	4800	The interlayer is not torn, no exposed portions while two side glass broke.
17	12.64	1040	4800	The interlayer is not torn, no exposed portions while one side glass broke.
18	12.65	1040	4800	The interlayer is not torn, no exposed portions while one side glass broke.
19	12.69	1040	4800	The interlayer is not torn, no exposed portions while one side glass broke.
Item Conclusion	Pass			
Remark	1. Test address: Guanzhuang; 2. Main test equipment: J-54-5 25mm Micrometer (Digital display), Q-36 MCJ-12 Impact machine; 3. Sample size: 610mm×610mm×12.76mm.			

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<b>Test Item</b>	<b>Shot-bag impact test</b>						
<b>Test Method</b>	GB 15763.3-2009 <i>Safety glazing materials in building--Part 3: Laminated glass</i> , Section 7.12						
<b>Requirement of Criterion</b>	<p>Requirement of GB 15763.3-2009:</p> <p>II-1: 3 group test pieces shall be tested at a height of 300mm, 750mm and 1200mm. After impact all the specimens shall not break and/or shall break safely.</p> <p>II-2: 2 group test pieces shall be tested at a height of 300mm and 750mm. After impact all the specimens shall not break or shall break safely. But another group test pieces shall be tested at height of 1200mm, any sample shall be break unsafely.</p> <p>III: 1 group test pieces shall be tested at a height of 300mm. After impact all the specimens shall not break and/or break safely. But another group test pieces shall be tested at height of 750mm, any sample shall be break unsafely.</p> <p>The requirements of the specimens which break safely:</p> <p>a) When breakage occurs with appearance of numerous cracks and fissures, but remains substantially in one piece and no tear or shear or opening develops within the vertical specimens through which a 76 mm diameter sphere can pass using a force of 25 N.</p> <p>b) When breakage occurs, the crack-free particles shall be selected within 3 minutes subsequent to the impact and shall weigh no more than the equivalent weight (300.0g) of 100cm<sup>2</sup> of the original specimen. The largest single particle shall weigh less than the mass (66.0g) equivalent to 44cm<sup>2</sup> of the original specimen.</p>						
<b>Test Results</b>							
<b>Sample No.</b>	<b>Thickness mm</b>	Impact height /mm					
		300		750		1200	
		Status after impact / weight of detached particles(g)/ weight of the largest particle(g)	76mm ball can pass through or not	Status after impact / weight of detached particles(g)/ weight of the largest particle(g)	76mm ball can pass through or not	Status after impact / weight of detached particles(g)/ weight of the largest particle(g)	76mm ball can pass through or not
<b>10</b>	12.68	—	—	—	—	Sample was unbroken./—/—	Not applicable
<b>11</b>	12.66	—	—	—	—	Sample was broken without opening./0/0	Not applicable
<b>12</b>	12.71	—	—	—	—	Sample was broken without opening./0/0	Not applicable
<b>13</b>	12.65	—	—	—	—	Sample was broken without opening./0/0	Not applicable
<b>Classification</b>		<b>II-1</b>					
<b>Item Conclusion</b>		<b>Pass</b>					
<b>Remark</b>		<p>1. Test address: Guanzhuang;</p> <p>2. Main test equipment: J-54-1 25mm Micrometer (Digital display), J-02 SBI-II Shot-bag impact machine;</p> <p>3. Sample size: 1930mm×864mm×12.76mm.</p>					

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Test Item	Humidity resistance
Test Method	GB/T 5137.3-2002 <i>Test methods of safety glazing materials used on road vehicles Part 3: radiation, high temperature, humidity, fire and simulated weathering resistance tests</i> , Section 7
Requirement of Criterion	Requirement of GB 15763.3-2009: 1. Neither bubbles nor other defects shall be found beyond 15mm from the uncut edges of the specimen, beyond 25mm from the cut edges or beyond 10mm from any cracks developed during the test. 2. Three specimens shall be tested, after the test, if all the specimens meet the requirements, the test result is deemed to be satisfied. If one specimen meets the requirements, the result of the test is deemed to be failure. When two specimens meet the requirements, three new specimens shall be re-tested, and all the new specimens meet the requirements, the result of the test is deemed to be satisfied.
<b>Test Result</b>	
Sample No.	Status after humidity resistance test
7	No crack, no bubbles nor other defects appear.
8	No crack, no bubbles nor other defects appear.
9	No crack, no bubbles nor other defects appear.
Item Conclusion	Pass
Remark	1. Test address: Guanzhuang; 2. Main test equipment: J-46-2 GDJW-024 High temperature and humidity test chamber; 3. Sample size: 300 mm×300mm×12.76mm.

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End of the report

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