

# TEST REPORT

No. : GZIN2112068819CM

Date : Dec 31, 2021

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CUSTOMER NAME: GUANGZHOU SEASON DECORATION MATERIALS CO., LTD.  
ADDRESS: NO.57-9, JINGHU AVENUE, XINYA STREET, HUADU DISTRICT,  
GUANGZHOU CITY, CHINA

Sample Name : ceiling system (G.I.STEEL CEILING TILE &G.I.STEEL CARRIER & Accessories)

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

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Date of Receipt : Dec 21, 2021  
Testing Start Date : Dec 21, 2021  
Testing End Date : Dec 31, 2021  
Test result(s) : For further details, please refer to the following page(s)  
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for  
SGS-CSTC Standards Technical  
Services Co., Ltd. GZ Branch Testing  
Center



Toby Yang  
Authorized signatory



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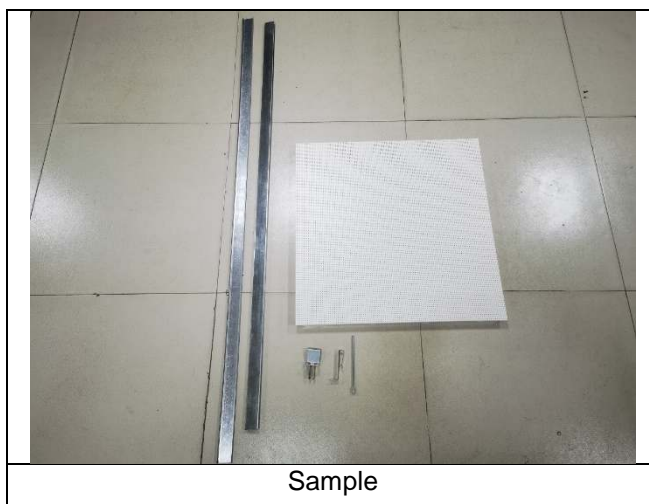
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## Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Dimensions and Tolerances - General	EN 13964:2014(E) Section 4.1	See test result	Pass
2	Modular Dimensions	EN 13964:2014(E) Section 4.2	See test result	Pass
3	Flexural tensile strength (test without loading)	EN 13964:2014(E) Clause 4.6.2 and Annex F	See test result	Pass
4	Load bearing performance	EN 13964:2014(E) Section 4.3.2.1 and Section 5	See test result	Pass

Note: Pass : Meet the requirements;  
Fail : Does not meet the requirements;  
/ : Not Apply to the judgment.

## Original Sample Photo:



Sample



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Test Item 1: Dimensions and Tolerances – General

Test Method: EN 13964:2014(E) Section 4.1

Test Condition:

If there is no separate product standard available, the tolerances for profiles shall comply with Table 1 and Table 2 of EN 13964:2014. The substructure for linear components shall comply with Table 5 of EN 13964:2014

The manufactured dimensions and tolerances for volume and thin gauge membrane components shall comply with Table 3 and Table 4 of EN 13964:2014, unless a separate product standard is available.

The manufactured dimensions and tolerances for linear components shall comply with Table 5 of EN 13964:2014

Nominal size (Declared by client): 600mm×600mm (thin gauge membrane components). Depth of stops/supports: 30mm;

Test Result:

Thin gauge membrane components:

Test item		Test result	Requirement in EN 13964:2014 table 4	Conclusion
Length, mm		[-0.20, -0.02]	[-0.5, 0]	Pass
Width, mm		[-0.16, -0.02]	[-0.4, 0]	Pass
Angularity of the long edge in relation to short edge, mm		[0.10, 0.25]	[-0.5, 0.5]	Pass
Flatness, mm	a	[0.10, 0.30]	[-0.5, 0.5]	Pass
	b	[0.05, 0.25]	[0, 6.0]	Pass
Depth of stops/supports, mm		[-0.06, 0.20]	[-0.3, 0.3]	Pass



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Test Item 2: Modular Dimensions

Test Method: EN 13964:2014(E) Section 4.2

Test Condition:

The plan dimension of suspended ceiling substructure and membrane components should be based on modular co-ordination as standardized in ISO 1006.

The commonly used modular dimensions of membrane components shall be based on nx100mm or on sub-modules of nx50mm or nx25mm.

If there is no separate product standard available, Table 2 of EN 13964:2014 applies.

Nominal size (Declared by client): XxM: 600mmx600mm

Test Result:

Test item	Test result	Requirement in EN 13964:2014 table 2	Conclusion
Tolerance in X axis	[0.16, 0.20]mm	$\pm 0.25$ mm	Pass
Tolerance in M axis	[0.13, 0.17]mm/m	$\pm 0.25$ mm/m	Pass



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Test item 3: Flexural tensile strength test

Sample description: See photo

Test method: EN 13964:2014(E) Clause 4.6.2 and Annex F

Test condition:

Actual unit weight: 10.45kg

Load type: No load

Class of exposure: Class A/- (Declared by client)

Test procedure:

The specimen has been stored in the condition (23.0°C, 50%RH) for at least 12h. Then weigh the specimen and mount it in the test frame simulating the normal condition in use. Apply a distrusted load of 2.5 times the dead weight on the specimen and maintain it for a duration of 600s. Check the status of specimen.

Test results:

Sample No.	Test result	Requirement in EN 13964:2014(E) Section F 5.3.3	Conclusion
1	No collapse.	Failure of the test corresponds with collapse of the specimen or parts thereof.  All test samples shall pass the test. If 1 fails, 5 additional samples shall be subjected to testing and all subsequent samples shall meet the requirement.	Pass
2	No collapse.		
3	No collapse.		
4	No collapse.		
5	No collapse.		

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Test Item 4: Load bearing performance

Sample description: See photo

Test Method: EN 13964:2014(E) Section 4.3.2.1 and Section 5

Test condition:

Classes of deflection: Class 2(Declared by client)

Maximum test span: 1200mm (Declared by client)

Minimum test span: 1050mm (Declared by client))

Test Result:

Test Item	Admissible bending moment M (N • mm)		Bending Rigidity EI(N • mm <sup>2</sup> )
	Admissible bending moment M <sub>f</sub>	Admissible bending moment M <sub>u</sub>	
Load bearing performance	50754	53445	1.52×10 <sup>9</sup>

1. The Permanent deflection after removing the load for class 2 did not exceed 0.2mm in all test.
2. Please see Annex A for detail of test result



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## Annex A Detail of test result

Sample No.	Position	Span(mm)	F(N)	M <sub>f</sub> (N·mm)	Average value (N·mm)
1	Positive	1200	163.9	49170	50120
2		1200	168.5	50550	
3		1200	168.8	50640	
4	Negative	1200	166.3	49890	50280
5		1200	168.1	50430	
6		1200	168.4	50520	
7	Positive	1050	241.3	63341	63367
8		1050	241.3	63341	
9		1050	241.6	63420	
10	Negative	1050	244.2	64103	64313
11		1050	245.4	64418	
12		1050	245.4	64418	



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According to the test result above, test seven more main tees under the positive load direction at a support span of 1200 mm. The Total result of ten individual tests are shown as follow

Sample No.	Position	Span(mm)	F(N)	M <sub>f</sub> (N·mm)	F <sub>u</sub> (N)	M <sub>u</sub> (N·mm)
1	Positive	1200	163.9	49170	463.5	139050
2			168.5	50550	468.0	140400
3			168.8	50640	468.7	140610
4			169.4	50820	457.5	137250
5			170.2	51060	455.3	136590
6			169.9	50970	453.6	136080
7			169.9	50970	479.0	143700
8			170.3	51090	471.6	141480
9			170.7	51210	476.1	142830
10			170.2	51060	472.0	141600
Admissible bending moment M (N · mm)			Admissible bending moment M <sub>f</sub> =50754		Admissible bending moment M <sub>u</sub> =53445	
EI(N · mm <sup>2</sup> )			1.52×10 <sup>9</sup>			

Table 6 Classes of Deflection – Substructure Profiles

Class	Deflection(mm)
1	L/500 and not greater than 4.0
2	L/300
3	No limit

Where L is the span in millimeters between the suspension points.

\*\*\*\*\* End of report\*\*\*\*\*



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