

## TEST REPORT

No. : SZIN2003002568SC

Date : Apr 24, 2020

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scan to see the report



SZIN2003002568SC

CUSTOMER NAME: KEEN TOP REFRIGERATION (D.G.) CO., LTD  
ADDRESS: DONGXI ROAD HOUIE TOWN, CITY. CHINA

Sample Name : THE SANDWICH PANEL USE FOR PREFABCOLD STORE (100MM)

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.

\*\*\*\*\*

SGS Ref. No. : SHIN2003011969CM; SDFS2004001826FF  
Date of Receipt : Mar 20, 2020  
Testing Start Date : Mar 20, 2020  
Testing End Date : Apr 24, 2020  
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. Shenzhen Branch  
Testing Center

James Zheng  
Authorized signatory



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Summary of Results:

No.	Test Item	Test Method	Result		Conclusion
1	Compressive strength	GB/T 21558-2008 Section 5.7 & GB/T 8813-2008	189kPa		Pass
2	Dimensional Stability	GB/T 21558-2008 Section 5.9 & GB/T 8811-2008	See result		Pass
3	Low Temperature Resistance Test	Provided by client	Appearance: No visible change		Pass
4	Apparent Density	GB/T 21558-2008 section 5.6 & GB/T 6343-2009	Normal	42.1kg/m <sup>3</sup>	Pass
			After low temperature resistance test	41.9kg/m <sup>3</sup>	
5	Thermal Conductivity	GB/T 10295-2008 and Client's Requirement	0.022 W/(m·K)		Pass
6	Fire classification for burning behavior of building materials and products	GB 8624-2012	B2 (E)		Pass

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



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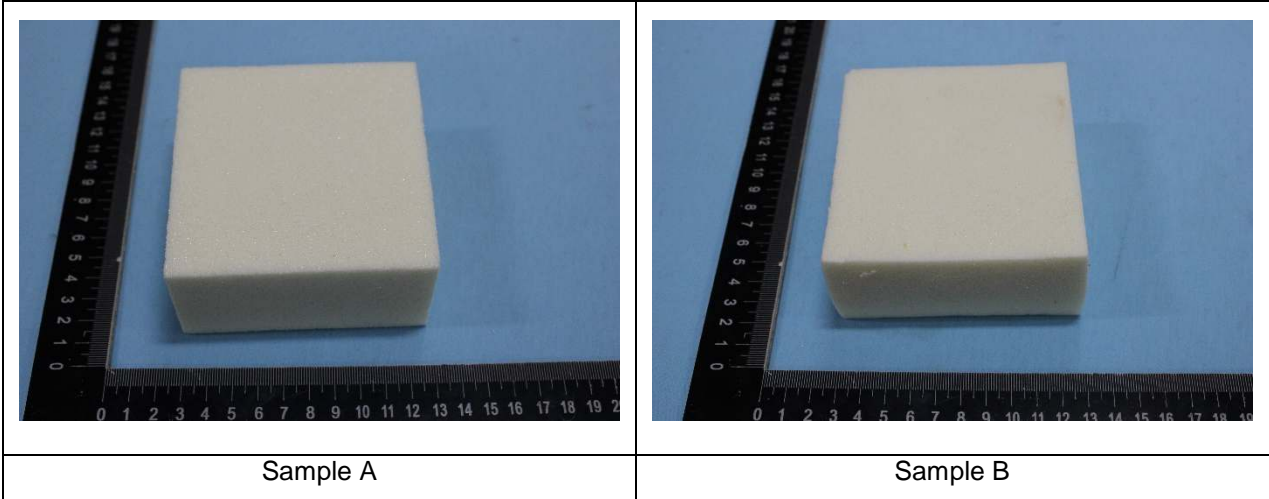
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Original Sample Photo:



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1. Test Item: Compressive strength

Sample Description: Foam

Test Method: GB/T 21558-2008 Section 5.7 & GB/T 8813-2008

Test Condition:

Specimen: 101mm×102mm×50mm

Testing speed: 5mm/min

Lab Environmental Condition: 23±2°C, 50±5%RH

Test Result:

Sample	Test Item	Test Result	Requirement in GB/T 21558-2008 Table 3	Conclusion
B	Compressive strength	189kPa	≥180kPa	Pass



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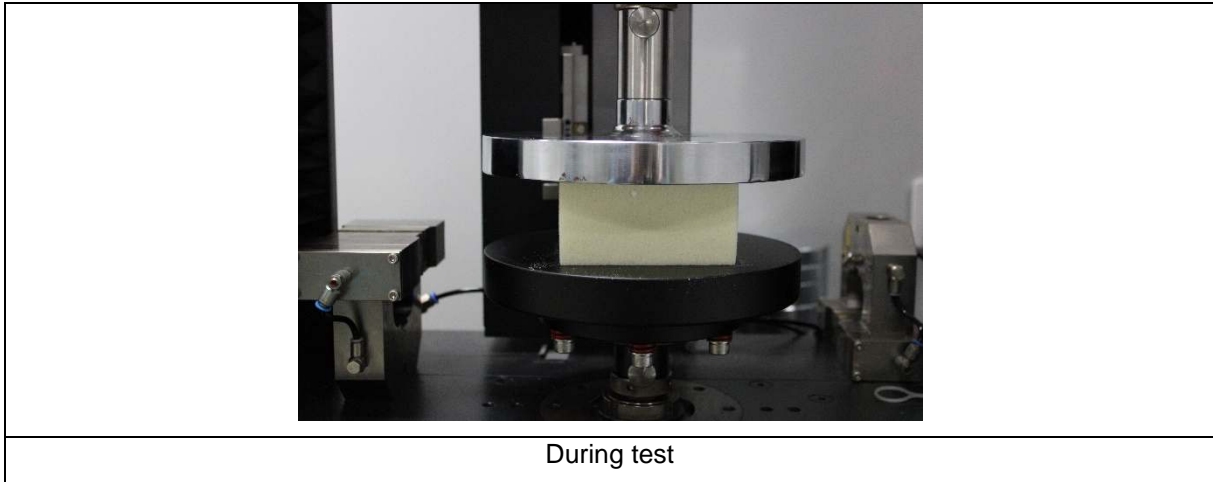
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Test Photo:



During test

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Testing Machine	Z010	SZML-POL-E001	2019-08-06	2020-08-05



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2.Test Item: Dimensional Stability

Sample Description: Foam

Test Method: GB/T 21558-2008 Section 5.9 & GB/T 8811-2008

Test Condition:

Specimen: 100mm×100mm×25mm

Condition 1: 70±2°C, 48h→23±2°C, 50±5%RH, 1h

Condition 2: -30±2°C, 48h→23±2°C, 50±5%RH, 1h

Lab Environmental Condition: 23±2°C, 50±5%RH

Test Result:

Sample	Test Item	Test Result			Requirement in GB/T 21558-2008 Table 3	Conclusion
A	Dimensional Stability	70°C	X direction	-0.2%	≤2.0%	Pass
			Y direction	0.1%		Pass
			Thickness	0.1%		Pass
		-30°C	X direction	-0.1%	≤1.5%	Pass
			Y direction	-0.1%		Pass
			Thickness	-0.5%		Pass

Note: Dimensional Stability, %=(Dimension after test-Dimension before test)/Dimension before testx100.



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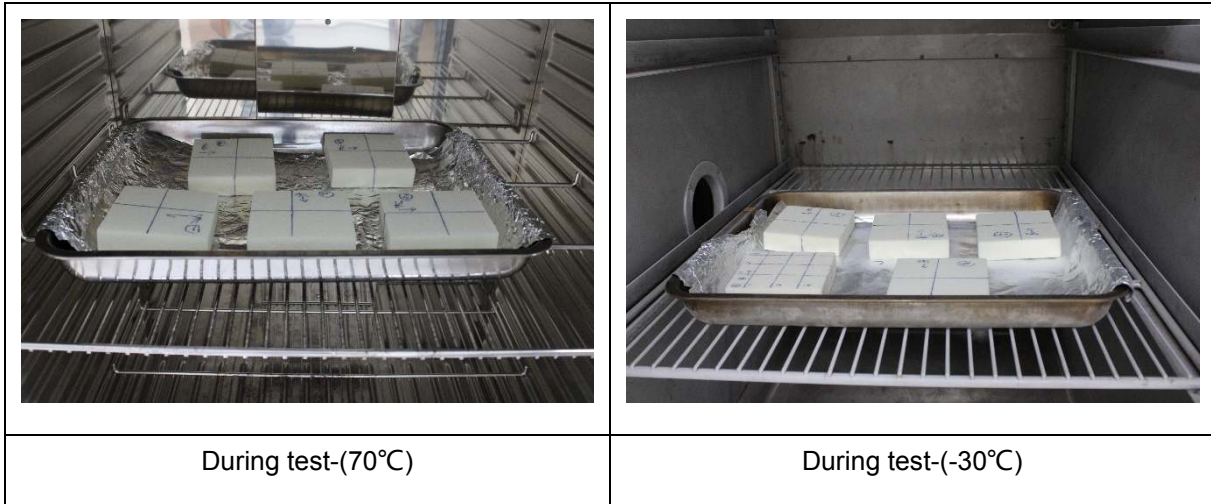
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Test Photo:



Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Heating Oven/Drying Oven	UF260	SZML-POL-E046	2020-01-03	2021-01-02
High/Low Temperature Cyclic And Damp Heat Chamber	SETH-Z-042L	SZML-POL-E019	2020-03-20	2021-03-19
Digital Vernier Caliper	0~150mm/0.01 mm	SZML-POL-E005-01	2020-01-02	2021-01-01



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### 3. Test Item: Low Temperature Resistance Test

Sample Description: Foam

Test Method: Provided by client



Test Condition:

-22°C, 24h

Test Result:

Sample	Test Result	Client's requirement	Conclusion
A	Appearance: No visible change	Appearance: No visible change	Pass

Test Photo:

	
During test	After test

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
High/Low Temperature Cyclic And	JTH-800P	SZML-POL-E048	2020-01-03	2021-01-02



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4. Test Item: Apparent Density

Sample Description: Foam

Test Method: GB/T 21558-2008 section 5.6 & GB/T 6343-2009

Test Condition:

Specimen: 100mm×100 mm×50 mm

Lab Environmental Condition: (23±2)°C, (50±5)%RH

Test Result:

Sample A	Test Result	Requirement in GB/T 21558-2008 Table 3	Conclusion
Normal	42.1kg/m <sup>3</sup>	≥35 kg/m <sup>3</sup>	Pass
After low temperature resistance test (-22°C, 24h)	41.9kg/m <sup>3</sup>		Pass

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Electron balance	ME204E	SZML-POL-E036	2020-01-03	2021-01-02



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5. Test Item: Thermal Conductivity

Test Method: GB/T 10295-2008 and Client's Requirement

Test Condition:

Specimen: 299mm×299mm×50.7mm, 1pc

Density: about 41.3kg/m<sup>3</sup>

Mean temperature: 25°C

Temperature difference: 20°C

Lab Environmental Condition: 23±2°C, 50±5%RH

Test Result:

Test Item	Test Result	Client's Requirement	Conclusion
Thermal Conductivity	0.022 W/(m·K)	≤0.024 W/(m·K)	Pass

Note:

1. The test result can not be compared with other results obtained from different test conditions, and should not be cited to the use condition directly.
2. The above test was carried out by SGS-CSTC Standards Technical Services (ShangHai) Co., Ltd.



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6. Test Item: Fire classification for burning behavior of building materials and products

Test(s) Requested	Result(s)
GB 8624-2012 Fire classification for burning behavior of building materials and products Clause 5.1.1 Table 2 Classes of reaction to fire performance for slab building materials and construction products	Classification: B <sub>2</sub> (E)

## TESTS AND RESULTS

Test Conducted:

GB 8624-2012 Fire classification for burning behavior of building materials and products.

Clause 5.1.1 Table 2 Classes of reaction to fire performance for slab building materials and construction products. And the test methods as following:

1. GB/T 8626-2007 Test method of flammability for building materials.

Test Results:

Test method	Parameter	Number of tests	Results
GB/T 8626-2007 Exposure = 15 s	$F_s \leq 150$ mm within 20s (Yes/No)	6	Yes
	Ignition of the filter paper within 20s (Yes/No)		No

Classification and direct field of application:

This classification has been carried out in accordance with GB 8624-2012 Clause 5.1.1 Table 2 Classes of reaction to fire performance for slab building materials and construction products

**Conclusion:**

According to the test result, Combustion properties identified as: GB 8624 B<sub>2</sub> (E) ;

The submitted sample satisfies Class B<sub>2</sub> requirement of reaction to fire performance for slab building materials and construction products in GB 8624-2012.



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Table 2 Classes of reaction to fire performance for slab building materials and construction products

Class		Test method(s)	Classification criteria
A	A1	GB/T 5464 <sup>a</sup> and	$\Delta T \leq 30^\circ\text{C}$ ; $\Delta m \leq 50\%$ ; $t_r = 0$
		GB/T 14402	$\text{PCS} \leq 2.0\text{MJ/kg}$ <sup>a, b, c, e</sup> ; $\text{PCS} \leq 1.4\text{MJ/m}^2$ <sup>d</sup>
	A2	GB/T 5464 <sup>a</sup> or	and $\Delta T \leq 50^\circ\text{C}$ ; $\Delta m \leq 50\%$ ; $t_r \leq 20\text{ s}$
		GB/T 14402	
		GB/T 20284	$\text{FIGRA}_{0.2\text{MJ}} \leq 120\text{W/s}$ ; LFS < edge of specimen; $\text{THR}_{600\text{s}} \leq 7.5\text{ MJ}$
B <sub>1</sub>	B	GB/T 20284 and	$\text{FIGRA}_{0.2\text{MJ}} \leq 120\text{W/s}$ ; LFS < edge of specimen; $\text{THR}_{600\text{s}} \leq 7.5\text{MJ}$
		GB/T 8626 Exposure =30s	$F_s \leq 150\text{mm}$ within 60s; No ignition of paper within 60s
	C	GB/T 20284 and	$\text{FIGRA}_{0.4\text{MJ}} \leq 250\text{W/s}$ ; LFS < edge of specimen; $\text{THR}_{600\text{s}} \leq 15\text{MJ}$
		GB/T 8626 Exposure=30s	$F_s \leq 150\text{mm}$ within 60 s; No ignition of paper within 60s
B <sub>2</sub>	D	GB/T 20284 and	$\text{FIGRA}_{0.4\text{MJ}} \leq 750\text{W/s}$
		GB/T 8626 Exposure=30s	$F_s \leq 150\text{mm}$ within 60 s; No ignition of paper within 60s
	E	GB/T 8626 Exposure =15s	$F_s \leq 150\text{mm}$ within 20 s; No ignition of paper within 20s
B <sub>3</sub>	F	No performance determined	



SGS-CSTC Inspection & Testing Services Co., Ltd.  
Shenzhen Branch Testing Center- Materials Laboratory

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# TEST REPORT

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- <sup>a</sup> For homogeneous products or substantial components of non-homogeneous products.
- <sup>b</sup> For any external non-substantial component of non-homogeneous products.
- <sup>c</sup> any external non-substantial component having a PCS  $\leq 2.0 \text{ MJ/m}^2$  , provided that the product satisfies the following criteria of  $\text{FIGRA}_{0.2\text{MJ}} \leq 20 \text{ W/s}$ , and  $\text{LFS} < \text{edge of specimen}$ , and  $\text{THR}_{600\text{s}} \leq 4.0 \text{ MJ}$ , and  $s_1$ , and  $d_0$  can be defined A1.
- <sup>d</sup> For any internal non-substantial component of non-homogeneous products.
- <sup>e</sup> For the product as a whole.

**Statement:**

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

**Warning:**

This classification report does not represent type approval or certification of the product.

Note: The above test was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch.

**SAMPLE INFORMATION AND PICTURES**

- Thickness: About 50mm
- Area density: About 2.30 kg/m<sup>2</sup>
- ★Product usage: The sandwich panel use for prefabcold store



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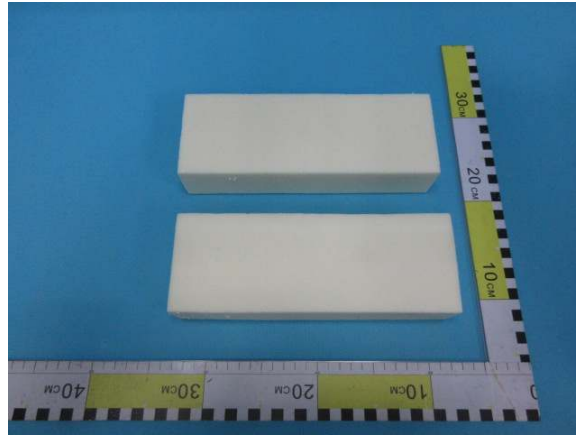
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### Appendix information:

The test report shall only be used for clients' scientific research, teaching, internal quality control, product research and development, etc... and just for internal reference.

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



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