



TEST REPORT

No. : SHIN2510009933PL02_EN

Date : 2025-11-24

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CUSTOMER NAME: BECINDUSTRIAL (SHANGHAI) .CO.,LTD
ADDRESS: NO.2CHUANGYE ROAD,INDUSTRIALPARK,XINGDUO
TOWN,XINGHUA CITY,JIANGGSU PROVINCE

Sample Name : calcium silicate

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.

Date of Receipt : 2025-10-24
Testing Period : 2025-10-24 ~ 2025-11-24
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 (Shanghai) Co., Ltd..

Jeff Zhang

Jeff Zhang
Authorized signatory

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Summary of Results:

| No. | Test Item | Test Method | Result | Conclusion |
|-----|-------------------------------------|---|------------|------------|
| 1 | Apparent Thermal Conductivity | ASTM C533-17(2013) Section 12.1.2 & ASTM C177-19e ¹ | See Result | Pass |
| 2 | Linear Shrinkage after Heat Soaking | ASTM C533-17(2023) Section 12.1.3 & ASTM C356-22 | See Result | Pass |
| 3 | Mass Loss by Tumbling | ASTM C533-17(2023) Section 12.1.6 & ASTM C421-08(2020) | See Result | Pass |
| 4 | Flexural Strength | ASTM C533-17(2023) Section 12.1.4 & ASTM C203-22 Method I Procedure A | See Result | Pass |

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

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Original Sample Photo(s):



Apparent Thermal Conductivity



Linear Shrinkage after Heat Soaking



Mass Loss by Tumbling



Flexural Strength

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1. Test Item: Apparent Thermal Conductivity

Test Method: ASTM C533-17(2023) Section 12.1.2 & ASTM C177-19e¹

Test Condition:

Specimen: $\Phi 200\text{mm} \times 39.0\text{mm}$, 2pcs

Mean temperature: 204 °C

Temperature difference: 20 °C

Type: I Block (offered by client)

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

Test Result:

| Test Item | Test Result | Client's Requirement | Conclusion |
|-------------------------------|---------------|----------------------|------------|
| Apparent Thermal Conductivity | 0.072 W/(m·K) | ≤ 0.079 W/(m·K) | Pass |

Note: 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.

Specimen Photo(s):



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2. Test Item: Linear Shrinkage after Heat Soaking

Test Method: ASTM C533-17(2023) Section 12.1.3 & ASTM C356-22

Test Condition:

Specimen: 152.4mm×63.5mm×38.1mm, 4pcs

Dry condition: 105°C

Heating temperature: 649°C

Heating time: 24h

Type: I Block (offered by client)

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

Test Result:

| Test Item | | Test Result | Requirement in ASTM C533-17(2023) Table 1 Type I Block | Conclusion |
|----------------------|-----------|-------------|--|------------|
| Linear Shrinkage (%) | Length | 0.6 | ≤ 2 | Pass |
| | Width | 0.7 | | Pass |
| | Thickness | 0.8 | | Pass |

Original Data:

| Test Item | Test Result | | | | | |
|----------------------|------------------|-----|-----|-----|---------------|-----|
| | Individual Value | | | | Average Value | |
| Linear Shrinkage (%) | Length | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| | Width | 0.9 | 0.5 | 0.6 | 0.7 | 0.7 |
| | Thickness | 0.6 | 1.0 | 1.0 | 0.8 | 0.8 |

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3. Test Item: Mass Loss by Tumbling

Test Method: ASTM C533-17(2023) Section 12.1.6 & ASTM C421-08(2020)

Test Condition:

Specimen: 25.4mm×25.4mm×25.4mm, 12pcs

Dry condition: 105℃

Test rate: 60r/min

Type: I Block (offered by client)

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

Test Result:

| Test Item | | Test Result | Requirement in ASTM C533-17(2023) Table 1 Type I Block | Conclusion |
|------------------------------|--------------|-------------|--|------------|
| Mass Loss by Tumbling (%) | First 10min | 9.8 | ≤ 20 | Pass |
| | Second 10min | 16.0 | ≤ 40 | Pass |

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4. Test Item: Flexural Strength

Test Method: ASTM C533-17(2023) Section 12.1.4 & ASTM C203-22 Method I Procedure A

Test Condition:

Specimen: 300mm×100mm×25mm, 4pcs

Dry condition: 105℃

Test rate: 4.2mm/min

Support span: 250mm

Type: I Block (offered by client)

Lab Environmental Condition: 23.2℃, 50.2%RH

Test Result:

| Test Item | Test Result | Requirement in ASTM C533-17(2023) Table 1 Type I Block | Conclusion |
|-------------------------|-------------|---|------------|
| Flexural Strength (kPa) | 927 | ≥ 344 | Pass |

Original Data:

| Test Item | Test Result | | | | |
|-------------------------|------------------|-----|------|-----|---------------|
| | Individual Value | | | | Average Value |
| Flexural Strength (kPa) | 900 | 858 | 1116 | 834 | 927 |

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.

Unless otherwise stated, this report provides a declaration of conformity according to whether the test results are within the specified limits or specifications without considering the measurement uncertainty.

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



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