# SULFYCOR NEW MATERIALS CO., LIMITED

# TEST REPORT

**SCOPE OF WORK**
Magnesium Sulfate Board

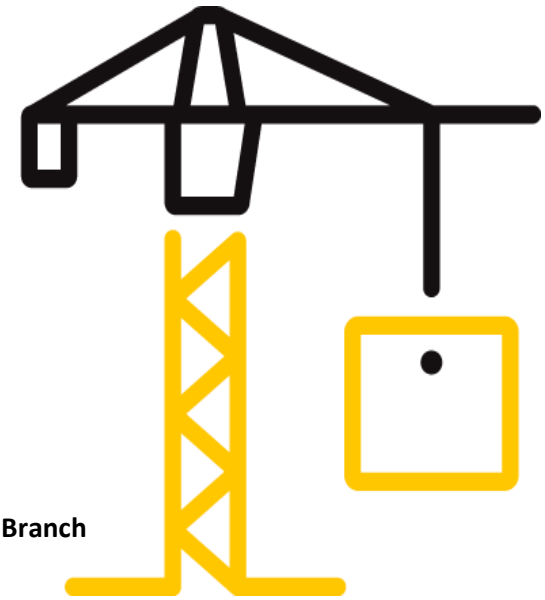
**REPORT NUMBER**
241217005SHF-001

**TEST DATE(S)**
2024-12-17 - 2025-01-02

**ORIGINAL ISSUE DATE**
2025-01-06

**PAGES**
6

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**Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch**

# Test Report

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# Test Report

Original Issue Date: 2025-01-06 Intertek Report No. 241217005SHF-001

Applicant: SULFYCOR NEW MATERIALS CO., LIMITED

Address: Technology&Innovation Center, No. 1, Chaogui South RD., Xiaohuangpu Community

Attn: Olivia Yang

Test Type: Performance test, samples provided by the applicant.

**Product Information**

| Product Name | Model | Specification | Brand |
|---|---|---|---|
| Magnesium Sulfate Board | / | 12mm MGO board | Sulfycor |
| **Sample ID** | **Sample Amount** | **Sample Received Date** | |
| S241217005SHF.001~006 | 1 box + 4 packs | 2024-10-22, 2024-12-09, 2024-12-12 | |
| **Sample Description** | | | |
| The sample consists of one package of powder, one package of non-woven fabric, two packages of glass fiber meshes and one box of cylindrical magnesium sulfate board , see sample photo in Appendix A | | | |

**Test Methods And Standards**

| | |
|---|---|
| **Test Standard** | ISO 1182:2020 and ISO 1716:2010 |
| **Specification Standard** | EN 13501-1:2018 |
| **Test Conclusion** | The samples were tested according to the above standards, and the results are shown in the following page. |

Note:

1. This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

2. The heat of combustion test section in this report only reflects the testing result based on the data and information followed the Δ mark provided by the testing applicant. The testing applicant agrees that Intertek has no duty, responsibility or obligation including without limitation examination, review, analysis, assessment, comment, suggestion, adjustment, calibration, modification, revision, guarantee or otherwise in regard to the legitimacy, compliance, applicability, adequacy, necessity, reasonableness, accuracy, appropriateness, reliability or any other feature or aspect of the data and information.

**Report Authorized**

Sally Xie Stone Shi

Name: Sally Xie Name: Stone Shi

Title: Reviewer Title: Project Engineer

# Test Report

Original Issue Date: 2025-01-06 Intertek Report No. 241217005SHF-001

**Test Items, Method and Results:**

EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

### 1.1 NON-COMBUSTIBILITY TEST

The test was conducted in accordance with EN ISO 1182. This test evaluates the non-combustibility performance of products in a vertical tube at 750±5°C.

### 1.2 HEAT OF COMBUSTION TEST

The test was conducted in accordance with EN ISO 1716. This test evaluates the gross heat of combustion ($Q_{PCS}$) of products at constant volume in a bomb calorimeter.

### 1.3 CLASSIFICATION CRITERIA

The classification was determined in accordance with EN 13501-1:2018. The class A1 with its corresponding fire performance are given in the table below.

Table - Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products.

| Class | Test Method(s) | Classification criteria | Additional classifications |
|---|---|---|---|
| A1 | EN ISO 1182 [a] and | $\Delta T \leq 30$℃; and<br>$\Delta m \leq 50\%$; and<br>$t_f = 0$ s (i.e. no sustained flaming) | -- |
| | EN ISO 1716 | PCS ≤2.0 MJ/kg [a] and<br>PCS ≤ 2.0 MJ/kg [b] and<br>PCS ≤ 1.4 MJ/m$^2$ [c] and<br>PCS ≤ 2.0 MJ/kg [d] | -- |

**Note:**

a. For homogeneous products and substantial components of non-homogeneous products.
b. For any external non-substantial component of non-homogeneous products.
c. For any internal non-substantial component of non-homogeneous products.
d. For the product as a whole.

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# Test Report

Original Issue Date: 2025-01-06 Intertek Report No. 241217005SHF-001

**Test Items, Method and Results:**

**2 RESULTS AND OBSERATIONS**

| Method | Parameter | | Result |
|---|---|---|---|
| EN ISO 1182:2020 | ΔT (°C) | | 1.4 |
| | Δm (%) | | 30.6 |
| | $t_f$ (s) | | 0 |
| EN ISO 1716:2010 | PCS | lubricous layers, MJ/m$^2$ | -0.0906 |
| | | glass fiber meshes, MJ/m$^2$ | 0.0369 |
| | | glass fiber meshes, MJ/m$^2$ | 0.1118 |
| | | Sandwich Layers, MJ/kg | -0.2546 |
| | | glass fiber meshes, MJ/m$^2$ | 0.0369 |
| | | glass fiber meshes, MJ/m$^2$ | 0.1118 |
| | | textured Layers, MJ/m$^2$ | 0.1949 |
| | | The whole product, MJ/kg | 0.0338 |

Note:

ΔThe information of each component of the product was declared by applicant, see below table.

| Layer No. (from face to back) | Material of each Layer | Mass per unit area (kg/m$^2$) | Thickness (mm) |
|---|---|---|---|
| 1 | lubricous layers | 0.84 | 0.7 |
| 2 | glass fiber meshes | 0.12 | 0.25 |
| 3 | glass fiber meshes | 0.14 | 0.4 |
| 4 | Sandwich Layers | 13.2 | 11 |
| 5 | glass fiber meshes | 0.12 | 0.25 |
| 6 | glass fiber meshes | 0.14 | 0.4 |
| 7 | textured Layers | 0.009 | 0.1 |

**3 CLASSIFICATION**

The classification has been carried out in accordance with EN 13501-1.

| Fire behaviour | | Smoke production | | | Flaming Droplets | |
|---|---|---|---|---|---|---|
| *A1* | - | s | *Not applicable* | - | d | *Not applicable* |

Reaction to fire classification: *A1*

# Test Report

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**Appendix A: Sample Received Photo**



Sandwich Layers for ISO 1182



lubricous layers for ISO 1716



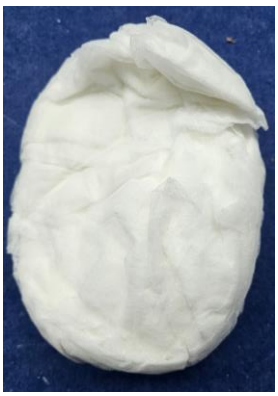
glass fiber meshes (0.25mm) for ISO 1716



glass fiber meshes (0.4mm) for ISO 1716



Sandwich Layers for ISO 1716



textured layers for ISO 1716

**Revision:**

| NO. | Date | Changes |
|---|---|---|
| 241217005SHF-001 | 2025-01-06 | First issue |