

# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-004-R1

## TEST DATE(S)

2024-01-25 - 2024-03-04

## ORIGINAL ISSUE DATE REVISED DATE

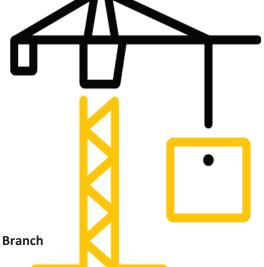
2024-03-07

2024-04-15

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## **DOCUMENT CONTROL NUMBER**

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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch



Website: www.intertek.com

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## **Test Report**

Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-004-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification		
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm		
Sample ID	Sample Amount	Sample Received Date		
S240125004SHF.010~011	1 package	2024-01-23		
Sample Description				
1220mm*2440mm*12mm				

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 5.6.1, EN ISO 1182:2020, EN 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.

**Report Authorized** 

Name: Sally Xie

Title: Reviewer

Jackie Zhou Project Engineer

2hou

Version: Feb. 01 2024 Page 3 of 7

LFT-APAC-SHF-OP-10k



Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-004-R1

## Test Items, Method and Results:

EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods						
Clause	use Requirement - Test Result - Remark					
5.6	Fire and safety					
5.6.1	Reaction to fire When subject to the regulatory requirements, the reaction to fire of the sheets shall be declared in accordance with 7.5.	Class A1 (see page 5 to 6)				







Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-004-R1

#### 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  $750\pm5$ °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
	EN ISO 1182 a $\Delta T \leq 30^{\circ}\text{C}$ ; and $\Delta m \leq 50\%$ ; and $t_f = 0 \text{ s}$ (i.e. no sustained flaming)		
A1		PCS $\leq$ 2.0 MJ/kg <sup>a</sup> and PCS $\leq$ 2.0 MJ/kg <sup>b</sup> and PCS $\leq$ 1.4 MJ/m <sup>2 c</sup> and PCS $\leq$ 2.0 MJ/kg <sup>d</sup>	

#### 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.



Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-004-R1

**Test Items, Method and Results:** 

## **2 RESULTS AND OBSERATIONS**

ĺ	Method	Parameter		Result	
		ΔT (°C)		2.4	
	EN ISO 1182:2020	Δm (%)		38.5	
		t <sub>f</sub> (s)		0	
Γ	EN ISO 1716:2010	PCS The whole product, MJ/kg		-0.1253	

## **3 CLASSIFICATION**

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

Fire behavi	our		Smoke production		Flaming Droplets		
A1	-   -	S	Not applicable	-	d	Not applicable	

Reaction to fire classification: A1







Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-004-R1

## **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-004	2024-03-07	First issue
240125004SHF-004-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-004-R1 report, the original report 240125004SHF-004 was cancelled at the same time.



# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-002-R1

## TEST DATE(S)

2024-01-25 - 2024-03-01

## ORIGINAL ISSUE DATE REVISED DATE

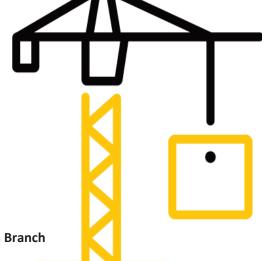
2024-03-18 2024-04-15

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## **Test Report**

Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-002-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification		
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm		
Sample ID	Sample Amount	Sample Received Date		
S240125004SHF.002	1 package	2024-01-23		
Sample Description				
1220mm*2440mm*12mm				

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 5.4.2
Specification Standard	/
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.

**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Version: Feb. 01 2024

Jackie Zhou Project Engineer

2hou



Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-002-R1

## Test Items, Method and Results:

	EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods				
Clause	Requirement - Test	Result - Remark			
5.4	Physical requirement and characteristics				
5.4.2	Apparent density The manufacture shall specify in his literature the minimum apparent density for each category and each class of sheet. When tested in accordance with the method specified in 7.3.1 the density shall be not less than this value	Specified minimum: 920kg/m <sup>3</sup> Measured: 926 kg/m <sup>3</sup>			





Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-002-R1

## **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-002	2024-03-18	First issue
240125004SHF-002-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-002-R1 report, the original report 240125004SHF-002 was cancelled at the same time.





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-005-R1

## TEST DATE(S)

2024-01-25 - 2024-03-04

## ORIGINAL ISSUE DATE REVISED DATE

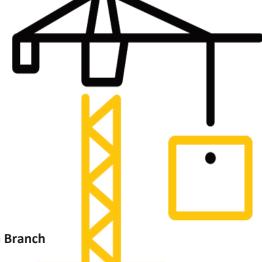
2024-03-07 2024-04-15

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Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-005-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification		
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm		
Sample ID	Sample Amount	Sample Received Date		
S240125004SHF.012	1 package	2024-01-23		
Sample Description				
1220mm*2440mm*12mm				

#### **Test Methods And Standards**

Test Standard	NIOSH 9002:1994
Specification Standard	/
Test Conclusion	The samples were tested according to the above standards, and the results are shown in the following page.

#### Note:

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**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Jackie Zhou Project Engineer



Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-005-R1

Test Item: Asbestos content

Test Method: As per test method NIOSH 9002:1994, Asbestos qualitative test was determined by microscopic

examination method.

#### Test Result:

Analyte	CAS No.	Test Result
Actinolite	77536-66-4	Negative
Amosite	12172-73-5	Negative
Crocidolite	12001-28-4	Negative
Tremolite	77536-68-6	Negative
Anthophyllite	77536-67-5	Negative
Chrysotile	12001-29-5	Negative

## Note:

1. Estimated LOD: < 1% asbestos

2. The estimated LOD is quoted hereby, because of the detection limit for visual estimation is a function of the quantity of sample analyzed, the nature of matrix interference, sample preparation, and the fiber size and distribution.

3.Test location: Central Chemical Lab of Intertek Testing Services Ltd., Shanghai Address: 4-5/F., Block C, No.1218, Wanrong Road, Jing'an District, Shanghai





Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-005-R1

## **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-005	2024-03-07	First issue
240125004SHF-005-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-005-R1 report, the original report 240125004SHF-005 was cancelled at the same time.





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-008-R1

## TEST DATE(S)

2024-01-25 - 2024-03-18

## ORIGINAL ISSUE DATE [REVISED DATE]

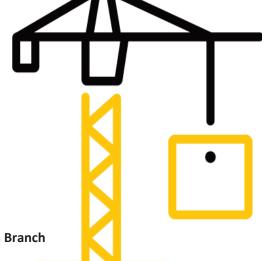
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## **Test Report**

Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-008-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification		
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm		
Sample ID	Sample Amount	Sample Received Date		
S240125004SHF.004	1 package	2024-01-23		
Sample Description				
1220mm*2440mm*12mm				

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 5.4.4
Specification Standard	/
<b>Test Conclusion</b>	The samples were tested according to the above standards, and the results are shown in the following page.

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**Report Authorized** 

Name: Flora Fan Title: Reviewer Jackie Zhou : Project Engineer

2hou



Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-008-R1

## Test Items, Method and Results:

	EN 12467:2012+A2:2018 Fibre-cement flat sheets - Product specification and test methods						
Clause	1	ent - Test	auct specification	Result - Remark			
5.4	Physical r	equirement an	d characte	ristics			
5.4.4	When tes modulus of megapaso MOR shal from testi min. MO	al characteristi ted as specified of rupture of the cals, shall be as I be the averag ing the sample OR in the wet ndition Mpa	d in 7.3.2, the sheets, specified e of the value both din min. MO	the minimum expressed in in Table 6. The alues obtained	-For Category B Wet condition: average 10.2 MPa minimum 9.1 MPa		
	Classes	Category A &	Classes	Category C & D	Class 2		
	1	4	1	4			
	2	7	2	7			
	3	13	3	10			
	4	18	4	16			
	5	24	5	22			





Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-008-R1

## **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-008	2024-03-18	First issue
240125004SHF-008-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-008-R1 report, the original report 240125004SHF-008 was cancelled at the same time.





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-001-R1

## TEST DATE(S)

2024-01-25 - 2024-03-01

## ORIGINAL ISSUE DATE REVISED DATE

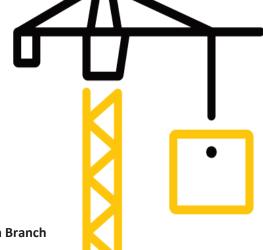
2024-03-07 2024-04-15

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**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification		
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm		
Sample ID	Sample Amount	Sample Received Date		
S240125004SHF.001	1 package	2024-01-23		
Sample Description				
1220mm*2440mm*12mm				

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 5.3
Specification Standard	/
Test Conclusion	The samples were tested according to the above standards, and the results are shown in the following page.

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**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Version: Feb. 01 2024

Jackie Zhou Project Engineer

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Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-001-R1

## **Test Items, Method and Results:**

	Fibre-cement flat sh	_	2012+A2:2018 uct specification a	and test methods
Clause	Requirement - Test			Result - Remark
5.3	Dimensions and tolerand	ces		
5.3.2	Nominal Length and Wic The manufacture shall sp and width of the sheets		ominal length	Nominal Length: 2440mm Nominal Width: 1220mm
5.3.3	Thickness The manufacture shall spof the sheets	pecify the n	ominal thickness	Nominal Thickness: 12mm
5.3.4	Tolerance on nominal di	mensions		
	Tolerance on length and width Tolerance on length and width shall be in accordance with Table 1, for the appropriate level.			Measured length: 2440.5mm
	Nominal Dimension a	Level I	Level II	Measured width: 1221.0mm
5.3.4.1	a≤600mm	±3mm	±4mm	Tolerance on length: 0.5mm
	600mm <a≤1000mm< td=""><td>±3mm</td><td>±5mm</td><td>Tolerance on width: 1.0mm</td></a≤1000mm<>	±3mm	±5mm	Tolerance on width: 1.0mm
	1000mm≤a≤1600mm	±0.3%a	±0.5%a	Complied with Level I
	1600mm <a< td=""><td>±5mm</td><td>±8mm</td><td></td></a<>	±5mm	±8mm	
	a is the nominal width o	r length		
	Tolerance on thickness For non-textured sheets, tolerances shall be in accordance with Table 2.			
	e ≤ 6 mm	± 0.6 mm		Measured thickness: 12.16mm
	6 mm < e ≤ 20 mm	± 10 % e		Tolerance on thickness: 0.16mm
5.3.4.2	e > 20 mm	± 2 mm		Max. deviation within one sheet:
	For sheets without texture, the maximum difference between extreme values of the thickness measurements within one sheet shall not exceed 10 % of the maximum measured value.		0.49%	
5.3.5	Tolerance on shape			
5.3.5.1	Straightness of edges The tolerance on the stradefined as a percentage the relevant dimensions be in accordance with talevel.	of the lengt (length or v	th of the edge of width), and shall	Measured: max. 0.02% Complied with Level I
	Level I	Level II		
	0.1%	0.3%		





Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-001-R1

EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods					
Clause	Clause Requirement - Test Result - Remark				
5.3.5.2	-	eness of sheets shall be in 6, for the appropriate level.	Measured: max. 0.02mm/m Complied with Level I		
	Level I	Level II	complied with Level 1		
	2mm/m	4mm/m			





Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-001-R1

## **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-001	2024-03-07	First issue
240125004SHF-001-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-001-R1 report, the original report 240125004SHF-001 was cancelled at the same time.





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240415008SHF-001

## TEST DATE(S)

2024-04-15 - 2024-05-13

## **ORIGINAL ISSUE DATE**

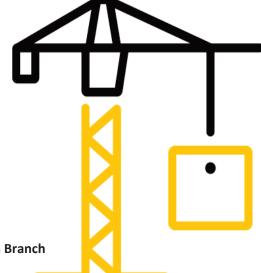
2024-05-13

## **PAGES**

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## **Test Report**

Original Issue Date: 2024-05-13 Intertek Report No. 240415008SHF-001

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm
Sample ID	Sample Amount	Sample Received Date
S240415008SHF.001	20 pcs	2024-04-15
Sample Description		
250mm×250mm×12mm		

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 Section 5.5.2	
Specification Standard	EN 12467:2012+A2:2018	
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.

**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Erin Huang

Project Engineer



Original Issue Date: 2024-05-13 Intertek Report No. 240415008SHF-001

## Test Items, Method and Results:

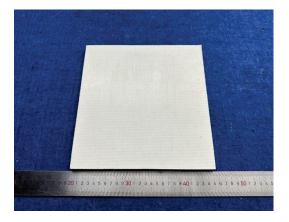
	EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods		
5.5	Durability requirements		
5.5.2	Freeze-thaw for categories A, B and D When tested in accordance with 7.4.1, after 100 freeze-thaw cycles for Category A and 25 cycles for Category B and D, the ratio RL as defined in 7.4.1.4 shall be not less than 0.75	For Category B RL=0.79	Р

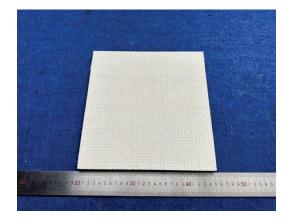




Original Issue Date: 2024-05-13 Intertek Report No. 240415008SHF-001

## **Appendix A: Sample Received Photo**





Front view Back view

## **Revision:**

NO.	Date	Changes
240415008SHF-001	2024-05-13	First issue





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-010-R1

## TEST DATE(S)

2024-01-25 - 2024-03-18

## ORIGINAL ISSUE DATE REVISED DATE

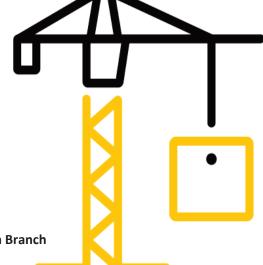
2024-03-18 2024-04-15

## **PAGES**

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## **Test Report**

Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-010-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm
Sample ID	Sample Amount	Sample Received Date
S240125004SHF.008	1 package	2024-01-23
Sample Description		
1220mm*2440mm*12mm		

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 5.5.3
Specification Standard	/
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.

**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Version: Feb. 01 2024

篇ace: Jackie Zhou 和 Project Engineer

Page 3 of 5

LFT-APAC-SHF-OP-10k



Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-010-R1

# Test Items, Method and Results:

	EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods					
Clause	Requirement - Test	Result - Remark				
5.5	Durability requirements					
5.5.3	Heat-rain for categories A and B When tested in accordance with 7.4.2, after 50 heat-rain cycles for Category A and 25 cycles for Category B, any visible cracks, delamination, warping and bowing or other defects in the sheets shall not be of such a degree as to affect their performance in use. a) Water tightness is tested according to 5.4.4. b) Warping and bowing are visually assessed.	For Category B  No visible cracks, delamination, warping and bowing or other defects after 25 heat-rain cycles.				





Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-010-R1

# **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-010	2024-03-18	First issue
240125004SHF-010-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-010-R1 report, the original report 240125004SHF-010 was cancelled at the same time.





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-007-R1

# TEST DATE(S)

2024-01-25 - 2024-03-18

# ORIGINAL ISSUE DATE REVISED DATE

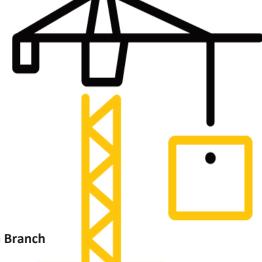
2024-03-18 2024-04-15

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Website: www.intertek.com

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Website: www.intertek.com

# **Test Report**

Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-007-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification			
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm			
Sample ID Sample Amount		Sample Received Date			
S240125004SHF.003	1 package	2024-01-23			
Sample Description					
1220mm*2440mm*12mm					

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 5.4.3
Specification Standard	/
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.

**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Jackie Zhou oject Engineer

2hou

NZHEA





Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-007-R1

# Test Items, Method and Results:

EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods							
Clause	Clause Requirement - Test Result - Remark						
5.4	Physical requirement and characteristics						
5.4.3	Moisture movement The manufacturer's literature shall state the percentage value of linear sheet moisture movement measured when the sheet is exposed to a relative humidity change from 30 % to 90 %. The stated value shall be determined in accordance with 7.3.7 using the test method given in Annex C.	Parallel to the long dimension: 0.08% Perpendicular to the long dimension: 0.08%					





Original Issue Date: 2024-03-18 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-007-R1

# **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-007	2024-03-18	First issue
240125004SHF-007-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-007-R1 report, the original report 240125004SHF-007 was cancelled at the same time.





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-006-R1

# TEST DATE(S)

2024-01-25 - 2024-03-04

## ORIGINAL ISSUE DATE REVISED DATE

2024-03-07

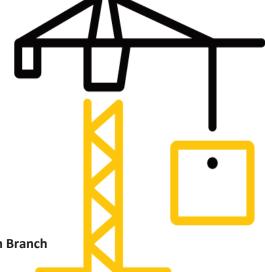
2024-04-15

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Tel: +86 21-61136116 Fax: 021-61189921

Website: www.intertek.com

# **Test Report**

Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-006-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification			
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm			
Sample ID	Sample Amount	Sample Received Date			
S240125004SHF.013	1 package	2024-01-23			
Sample Description					
1220mm*2440mm*12mm					

#### **Test Methods And Standards**

Test Standard	EU REACH Regulation (EC) No 1907/2006 Article 33(1) Obligation to provide information of safe use (see REACH and WFD requirement in report for details)
	EU REACH Regulation (EC) No 1907/2006 Article 33(1) Obligation to provide information of safe use (see REACH and WFD requirement in report for details)
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.

**Report Authorized** 

Name: Flora Fan

Title: Reviewer

roject Engineer

Jackie Zhou



Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-006-R1

#### **Test Items, Method and Results:**

Test method: By a combination of Inductively Coupled Argon Plasma Spectrometry, Gas Chromatography – Mass Spectrometry, Liquid Chromatography - Mass Spectrometry, UV-VIS Spectrophotometer, Gas Chromatography - Electron Capture Detector, Headspace Gas Chromatography - Mass Spectrometry and High-Performance Liquid Chromatography.

Test Result: (Substances in the Candidate List of SVHC)

No.	<u>Chemical Substance</u>	<u>CAS No.</u>	Results %(w/w)
-	Tested SVHCs in Chemical list	-	ND

#### Conclusion:

Tested Samples	Standard	Result
Submitted sample	Obligation to provide information of safe use (see	Meet requirement

## Note:

Reporting limit = 0.010% (w/w)

SVHC = Substance of very high concern

ND = Not detected (the result is less than the reporting limit)

Reporting limit = Quantitation limit of analyte in sample

 $\Delta$  = Determination was based on elemental analysis. The content was calculated based on assumption of worst-Case

Test location: Central Chemical Lab of Intertek Testing Services Ltd., Wuxi Address: No. 8, Fubei Road, Xishan Economic Development Zone, Wuxi, China



Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-006-R1

240 SVHCs (effective on Jan 2024) and 1 proposed SVHC Testing list:

	. , , ,				
No.	<u>Chemical Substance</u>	CAS No.	No.	<u>Chemical Substance</u>	CAS No.
1	Cobalt Dichloride Δ	7646-79-9	21	Diisobutyl Phthalate (DIBP)	84-69-5
2	Diarsenic Pentaoxide Δ	1303-28-2	22	Coal Tar Pitch, High Temperature	65996-93-2
3	Diarsenic Trioxide Δ	1327-53-3	23	Anthracene Oil	90640-80-5
4	Lead Hydrogen Arsenate Δ	7784-40-9	2.4	Anthracene Oil, Anthracene Paste,	01005 17 4
5	Triethyl Arsenate Δ	15606-95-8	24	Distn. Lights	91995-17-4
6	Sodium Dichromate Δ	7789-12-0, 10588-01-9	25	Anthracene Oil, Anthracene Paste, Anthracene Fraction	91995-15-2
7	Bis (Tributyltin) Oxide (TBTO) Δ	56-35-9	26	Anthracene Oil, Anthracene-low	90640-82-7
8	Anthracene	120-12-7	27	Anthracene Oil, Anthracene Paste	90640-81-6
9	4,4'-Diaminodiphenylmethane (MDA)	101-77-9	28	Acrylamide	79-06-1
	Hexabromocyclododecane (HBCDD) and All Major	25637-99-4 and 3194-55- 6 (134237-	29	Boric Acid Δ	10043-35-3, 11113-50-1
10	Diastereoisomers Identified (α-HBCDD, β-HBCDD, γ-HBCDD)	50-6, 134237-51-7, 134237-52-	51-7,	Disodium Tetraborate, Anhydrous Δ	1330-43-4, 12179-04-3,
11	5-Tert-Butyl-2,4,6-Trinitro-m- Xylene (Musk Xylene)	81-15-2			1303-96-4
12	Bis (2-Ethylhexyl) Phthalate (DEHP)	117-81-7	31	Tetraboron Disodium Heptaoxide, Hydrate $\Delta$	12267-73-1
13	Dibutyl Phthalate (DBP)	84-74-2	32	Sodium Chromate Δ	7775-11-3
14	Benzyl Butyl Phthalate (BBP)	85-68-7	33	Potassium Chromate Δ	7789-00-6
15	Short Chain Chlorinated Paraffins $(C_{10-13})$	85535-84-8	34	Ammonium Dichromate Δ	7789-09-5
16	Lead Chromate Δ	7758-97-6	35	Potassium Dichromate Δ	7778-50-9
	Lead Chromate Molybdate		36	Trichloroethylene	79-01-6
17	Sulphate Red (C.I. Pigment Red 104) Δ	12656-85-8	37	2-Methoxyethanol	109-86-4
18	Lead Sulfochromate Yellow (C.I. Pigment Yellow 34) Δ	1344-37-2	38	2-Ethoxyethanol	110-80-5
19	Tris (2-Chloroethyl) Phosphate	115-96-8	39	Cobalt Sulphate Δ	10124-43-3
20	2,4-Dinitrotoluene	121-14-2	40	Cobalt Dinitrate Δ	10141-05-6



41	Cobalt Carbonate Δ	513-79-1		4-(1,1,3,3-	
42	Cobalt Diacetate Δ	71-48-7	63	tetramethylbutyl)phenol, (4-tert- Octylphenol)	140-66-9
43	Chromium Trioxide Δ	1333-82-0	64	2-Methoxyaniline; o-Anisidine	90-04-0
	Chromic Acid Δ	7738-94-5	65	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8
44	Dichromic Acid $\Delta$ Oligomers of Chromic Acid and Dichromic Acid $\Delta$	13530-68-2	66	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4
45	Strontium Chromate Δ	7789-06-2	67	Pentazinc chromate octahydroxide $\Delta$	49663-84-5
46	2-ethoxyethyl acetate (2-EEA)	111-15-9	68	Potassium hydroxyoctaoxodizincate di- chromate Δ	11103-86-9
47	1,2-Benzenedicarboxylic acid, di- C <sub>7-11</sub> -branched and linear alkyl	68515-42-4	69	Dichromium tris(chromate) Δ	24613-89-6
48	esters (DHNUP)  Hydrazine	7803-57-8, 302-01-2	70	Aluminosilicate Refractory Ceramic Fibres Δ	Index No. 650-017-00- 8
49	1-methyl-2-pyrrolidone	872-50-4		Zirconia Aluminosilicate	Index No.
50	1,2,3-trichloropropane	96-18-4	71	Refractory Ceramic Fibres Δ	650-017-00- 8
51	1,2-Benzenedicarboxylic acid, di- C <sub>6-8</sub> -branched alkyl esters, C <sub>7</sub> -rich (DIHP)	71888-89-6	72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2
52	Lead dipicrate Δ	6477-64-1	70	1,2-dimethoxyethane; ethylene	440.74.4
53	Lead styphnate Δ	15245-44-0	73	glycol dimethyl ether (EGDME)	110-71-4
54	Lead azide; Lead diazide Δ	13424-46-9	74	Diboron trioxide Δ	1303-86-2
55	Phenolphthalein	77-09-8	75	Formamide	75-12-7
56	2,2'-dichloro-4,4'- methylenedianiline (MOCA)	101-14-4	76	Lead(II) bis(methanesulfonate) Δ	17570-76-2
57	N,N-dimethylacetamide (DMAC)	127-19-5		TGIC (1,3,5-tris(oxiranylmethyl)-	
58	Trilead diarsenate Δ	3687-31-8	77	1,3,5-triazine-2,4,6(1H,3H,5H)- trione)	2451-62-9
59	Calcium arsenate Δ	7778-44-1		β-TGIC (1,3,5-tris[(2S and 2R)-2,3-	
60	Arsenic acid Δ	7778-39-4	78	epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6
61	Bis(2-methoxyethyl) ether	111-96-6		4,4'-	1
62	1,2-Dichloroethane	107-06-2	79	bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8



80	N,N,N',N'-tetramethyl-4,4'- methylenedianiline (Michler's base)	101-61-1	91	Cyclohexane-1,2-dicarboxylic anhydride [1] cis-cyclohexane-1,2-dicarboxylic anhydride [2]	
81	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9		trans-cyclohexane-1,2-dicarboxylic anhydride [3]	85-42-7 13149-00-3 14166-21-3
82	[4-[[4-anilino-1-naphthyl][4- (dimethylamino)phenyl]methylen e]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027- 5) or Michler's base (EC No. 202- 959-2)]	2580-56-5	92	Hexahydro-3-methylphthalic	25550-51-0 19438-60-9 48122-14-1 57110-29-9
83	$\alpha, \alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with $\geq$ 0.1% of Michler's ketone (EC No. 202-027-5) or Michl er's base (EC No. 202-959-2)]	6786-83-0			
84	4,4'-bis(dimethylamino)-4''- (methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1			
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5		the individual isomers or a combination thereof] 4-(1,1,3,3-	
86	Pentacosafluorotridecanoic acid	72629-94-8	1	tetramethylbutyl)phenol,	
87	Tricosafluorododecanoic acid	307-55-1	94	ethoxylated	
88	Henicosafluoroundecanoic acid	2058-94-8	1	[covering well-defined substances	
89	Heptacos afluoro tetra decanoic acid	376-06-7		and UVCB substances, polymers and homologues]	
90	Diazene-1,2-dicarboxamide (C,C'- azodi(formamide))	123-77-3	95	Methoxyacetic acid	625-45-6



96	N,N-dimethylformamide	68-12-2	123	Tetralead trioxide sulphate Δ	12202-17-4
97	Dibutyltin dichloride (DBTC) Δ	683-18-1	124	Trilead dioxide phosphonate Δ	12141-20-7
98	Lead monoxide (Lead oxide) Δ	1317-36-8	125	Furan	110-00-9
99	Orange lead (Lead tetroxide) Δ	1314-41-6	126	Diethyl sulphate	64-67-5
100	Lead bis(tetrafluoroborate) Δ	13814-96-5	127	Dimethyl sulphate	77-78-1
101	Trilead bis(carbonate)dihydroxide Δ	1319-46-6	128	3-ethyl-2-methyl-2-(3- methylbutyl)-1,3-oxazolidine	143860-04-2
102	Lead titanium trioxide Δ	12060-00-3	120	Dinoseb (6-sec-butyl-2,4-	00.05.7
103	Lead titanium zirconium oxide Δ	12626-81-2	129	dinitrophenol)	88-85-7
104	Silicic acid, lead salt Δ	11120-22-2	130	4,4'-methylenedi-o-toluidine	838-88-0
	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt		131	4,4'-oxydianiline and its salts	101-80-4
	(1:1), lead-doped $\Delta$		132	4-aminoazobenzene	60-09-3
	[with lead (Pb) content above the applicable generic concentration		133	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7
105	limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member	68784-75-8	134	6-methoxy-m-toluidine (p- cresidine)	120-71-8
	of the group entry of lead		135	Biphenyl-4-ylamine	92-67-1
	compounds, with index number 082-001-00-6 in Regulation (EC)		136	o-aminoazotoluene [(4-o-tolylazo- o-toluidine])	97-56-3
	No 1272/2008]		137	o-toluidine	95-53-4
106	1-bromopropane (n-propyl bromide)	106-94-5	138	N-methylacetamide	79-16-3
107	Methyloxirane (Propylene oxide)	75-56-9	139	Cadmium Δ	7440-43-9
108	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	140 141	Cadmium oxide Δ Dipentyl phthalate (DPP)	1306-19-0 131-18-0
109	Diisopentylphthalate (DIPP)	605-50-5			
110	N-pentyl-isopentylphthalate	776297-69-9		4-Nonylphenol, branched and linear, ethoxylated	
111	1,2-diethoxyethane	629-14-1		[substances with a linear and/or	
112	Acetic acid, lead salt, basic Δ	51404-69-4		branched alkyl chain with a carbon	
113	Lead oxide sulfate Δ	12036-76-9		number of 9 covalently bound in	
114	[Phthalato(2-)] dioxotrilead Δ	69011-06-9	142	position 4 to phenol, ethoxylated covering UVCB- and well-defined	
115	Dioxobis(stearato)trilead Δ	12578-12-0		substances, polymers and	
116	Fatty acids, C16-18, lead salts Δ	91031-62-8		homologues, which include any of	
117	Lead cyanamidate Δ	20837-86-9		the individual isomers and/or	
118	Lead dinitrate Δ	10099-74-8		combinations thereof]	
		12065-90-6	<del>                                     </del>		
119	Pentalead tetraoxide sulphate Δ	12003-30-0			
119 120	Pentalead tetraoxide sulphate Δ  Pyrochlore, antimony lead yellow Δ	8012-00-8	143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	Pyrochlore, antimony lead yellow		143 144		3825-26-1 335-67-1



145	Cadmium sulphide Δ	1306-23-6		1.2 Ponzonodicarhovulicacid di	
146	Lead di(acetate) Δ	301-04-2		1,2-Benzenedicarboxylic acid, di- C6-10-alkyl esters; 1,2-	
147	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-	1937-37-7	162	benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5; 68648-93-1
	disulphonate (C.I. Direct Black 38)			5-Sec-butyl-2-(2,4-	
148	Disodium 3,3'-[[1,1'-biphenyl]- 4,4'-diylbis(azo)]bis(4- aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	163	dimethylcyclohex-3-en-1-yl)-5- methyl-1,3-dioxane [1], 5-Sec-butyl-2-(4,6- dimethylcyclohex-3-en-1-yl)-5- methyl-1,3-dioxane [2]	
149	Dihexyl phthalate	84-75-3		[covering any of the individual	
150	Imidazolidine-2-thione; (2- imidazoline-2-thiol)	96-45-7		isomers of [1] and [2] or any combination thereof]	
151	Trixylyl phosphate	25155-23-1	164	1,3-Propanesultone	1120-71-4
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	165	2,4-di-tert-butyl-6-(5- chlorobenzotriazol-2-yl) phenol	3864-99-1
153	Cadmium chloride Δ	10108-64-2		(UV-327)	
154	Sodium perborate; perboric acid, sodium salt $\Delta$	15120-21-5, 11138-47-9	166	2-(2H-Benzotriazol-2-yl)-4-(tert- butyl)-6-(sec-butyl)phenol (UV-	36437-37-3
155	Sodium peroxometaborate Δ	7632-04-4		350)	
156	2-(2H-benzotriazol-2-yl)-4,6- ditertpentylphenol (UV-328)	25973-55-1	167	Nitrobenzene	98-95-3 375-95-1;
157	2-benzotriazol-2-yl-4,6-di-tert- butylphenol (UV-320)	3846-71-7	168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	21049-39-8; 4149-60-4
150	2-ethylhexyl 10-ethyl-4,4-dioctyl-		169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8
158	7-oxo-8-oxa-3,5-dithia-4- stannatetradecanoate (DOTE)	15571-58-1	170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7
159	Cadmium fluoride Δ	7790-79-6		Nonadecafluorodecanoic acid	
160	Cadmium sulphate Δ	10124-36-4; 31119-53-6		(PFDA) and its sodium and ammonium salts	
161	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)		171	Nonadecafluorodecanoic acid EC no.: 206-400-3   CAS no.: 335- 76-2 Ammonium nonadecafluorodecanoate EC no.: 221-470-5   CAS no.: 3108- 42-7 Decanoic acid, nonadecafluoro-, sodium salt EC no.:   CAS no.: 3830-45-3	



	4-Heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a		190	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (Trimellitic anhydride) (TMA)	552-30-7
	carbon number of 7 covalently		191	Dicyclohexyl phthalate (DCHP)	84-61-7
172	bound predominantly in position 4 to phenol, covering also UVCB-		192	2,2-bis(4'-hydroxyphenyl)-4- methylpentane	6807-17-6
	and well-defined substances		193	Benzo[k]fluoranthene	207-08-9
	which include any of the individual		194	Fluoranthene	206-44-0
	isomers or a combination thereof]		195	Phenanthrene	85-01-8
173	p-(1,1-dimethylpropyl)phenol	80-46-6	196	Pyrene	129-00-0
174	Perfluorohexane-1-sulphonic acid and its salt (PFHxS)		197	1,7,7-trimethyl-3- (phenylmethylene)bicyclo[2.2.1]h	15087-24-8
175	Benz[a]anthracene	56-55-3	]197	eptan-2-one (3-benzylidene	
176	Cadmium nitrate∆	10325-94-7		camphor)	
177	Cadmium carbonate∆	513-78-0	198	4-tert-butylphenol (PTBP)	98-54-4
178	Cadmium hydroxide∆	21041-95-2		2,3,3,3-tetrafluoro-2-	
179	Chrysene	218-01-9		(heptafluoropropoxy)propionic	
	1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo[12.2.1.1 6,9.02,		199	acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	
180	13.05,10]octadeca-7,15-diene (" Dechlorane Plus"TM) [covering		200	2-methoxyethyl acetate	110-49-6
	any of its individual anti- and syn- isomers or any combination thereof]		201	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	
104	Reaction products of 1,3,4- thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol,		202	2-benzyl-2-dimethylamino-4'- morpholinobutyrophenone	119313-12-1
181	branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]		203	2-methyl-1-(4-methylthiophenyl)- 2-morpholinopropan-1-one	71868-10-5
	brunened and inicarj		204	Diisohexyl phthalate	71850-09-4
182	Octamethylcyclotetrasiloxane (D4)	556-67-2	205	Perfluorobutane sulfonic acid	
183	Decamethylcyclopentasiloxane (D5)	541-02-6	203	(PFBS) and its salts	
184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	206	1-vinylimidazole	1072-63-5
185	Lead	7439-92-1	207	2-methylimidazole	693-98-1
186	Disodium octaborate∆	12008-41-2	208	Butyl 4-hydroxybenzoate	94-26-8
187	Benzo[ghi]perylene	191-24-2	209	Dibutylbis(pentane-2,4-dionato- O,O')tin	22673-19-4
188 189	Terphenyl hydrogenated Ethylenediamine (EDA)	61788-32-7 107-15-3	210	bis(2-(2-methoxyethoxy)ethyl)	143-24-8
	]		<u> </u>	ether	



211	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy	-	220	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	
212	moiety Δ 1,4-dioxane	123-91-1	221	6,6'-di-tert-butyl-2,2'- methylenedi-p-cresol (DBMC)	119-47-1
213	2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA);		222	S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate $\Delta$	255881-94-8
	2,3-dibromo-1-propanol (2,3-		223	Tris(2-methoxyethoxy)vinylsilane	1067-53-4
	DBPA)		224	N-(hydroxymethyl)acrylamide	924-42-5
214	2-(4-tert- butylbenzyl)propionaldehyde and its individual stereoisomers	-	225	1,1'-[ethane-1,2- diylbisoxy]bis[2,4,6- tribromobenzene]	37853-59-1
215	4,4'-(1- methylpropylidene)bisphenol; (bisphenol B)	77-40-7	226	2,2',6,6'-tetrabromo-4,4'- isopropylidenediphenol	79-94-7
216	Glutaral	111-30-8	227	4,4'-sulphonyldiphenol	80-09-1
217	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	-	228	Barium diboron tetraoxide∆  Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	
210	-	13840-56-7	230	Isobutyl 4-hydroxybenzoate  Melamine	4247-02-3 108-78-1
218	Orthoboric acid, sodium salt Δ  Rhenol, alkylation products	13840-56-/	231	Perfluoroheptanoic acid and its salts	
219	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	-	233	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	



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No.	<u>Chemical Substance</u>	CAS No.	No.	<u>Chemical Substance</u>	CAS No.
234	bis(4-chlorophenyl) sulphone (BCPS)	80-07-9	238	2-(dimethylamino)-2-[(4- methylphenyl)methyl]-1-[4- (morpholin-4-yl)phenyl]butan-1-	119344-86-4
235	Diphenyl (2,4,6- trimethylbenzoyl)	75980-60-8		one	
233	phosphine oxide	73380-00-8	239	Bumetrizole	3896-11-5
236	2,4,6-tri-tert-butylphenol (2,4,6-	732-26-3	233	(UV-326)	
	TTBP)	702 20 0			
237	2-(2H-benzotriazol-2-yl)-4- (1,1,3,3-tetramethylbutyl)phenol (UV-329)	3147-75-9	240	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol (OAPP)	-

Tested proposed SVHC Chemicals list (Substance in the list of 1 chemical in the draft Commission Implementing Decision proposed by European Commission, and published as Notification G/TBT/N/EU/803 on World Trade Organization (WTO) on 1 June 2021)

No.	<u>Chemical Substance</u>	CAS No.
1	Resorcinol	108-46-3

## **REACH requirement:**

- 1. Substances of very high concern (SVHC) are classified as:
  - (a) Carcinogenicity category 1A or 1B;
  - (b) Germ cell mutagenicity category 1A or 1B;
  - (c) Reproductive toxicity category 1A or 1B, adverse effects on sexual function and fertility or on development;
  - (d) Persistent, bioaccumulative and toxic (PBT)
  - (e) Very persistent and very bioaccumulative (vPvB)
  - (f) Other substances for which there is scientific evidence of probable serious effects to human health or the environment which give rise to an equivalent level of concern, such as endocrine disrupters



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- 2. As per Article 7 of Regulation (EC) No 1907/2006 (REACH) as amended, if a substance of very high concern (SVHC) on the Candidate List for Authorisation is present in articles above a concentration of 0.1% weight by weight (w/w) and the substance is present in those articles in quantities totalling over 1 tonne per producer or per importer per year, then the producer or importer shall notify the European Chemicals Agency (ECHA). The notifications have to be submitted no later than 6 months after the inclusion in the Candidate List. The information to be notified shall include the following:
  - (a) Identity and contact details of the producer or importer;
  - (b) Registration number(s), if available;
  - (c) Identity of the substance;
  - (d) Classification of the substance(s);
  - (e) Brief description of the use(s) of the substance(s) in the article and of the uses of the article(s);
  - (f) Tonnage range of the substance(s).
- 3. As per Article 31 of Regulation (EC) No 1907/2006 (REACH) as amended, the supplier of mixture not classified as hazardous according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP), shall provide the recipient at his request with a safety data sheet, where a mixture contains at least one substance on the SVHC list (Candidate List of substances of very high concern for Authorisation) and its individual concentration is of 0.1% or above by weight for non-gaseous mixtures.
- 4. As per Article 33(1) of Regulation (EC) No 1907/2006 (REACH) as amended, any supplier of an article containing a substance of very high concern (SVHC) on the Candidate List for Authorisation in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with information of safe use of the article. An article meets the requirement of Article 33(1) by default when no SVHC exceeds 0.1% weight by weight (w/w).
- 5. As per Article 33(2) of Regulation (EC) No 1907/2006 (REACH) as amended, any supplier of an article containing a substance of very high concern (SVHC) on the Candidate List for Authorisation in a concentration above 0.1% weight by weight (w/w) shall provide the consumer on request with information of safe use of the article, within 45 days of receipt of the request.
- 6. As per Court of Justice of the European Union Judgment in Case C-106/14, Press Release No 100/15 dated 10 September 2015, each of the articles incorporated as a component of a complex product is covered by the relevant duties to notify and provide information when they contain a substance of very high concern in a concentration above 0.1% of their mass.

## Waste Framework Directive (WFD) Requirement:

As per Article 9(1)(i) of Directive 2008/98/EC on waste (WFD, Waste Framework Directive) as amended, Member States shall take measures to ensure that any supplier of an article as defined in point 33 of Article 3 of Regulation (EC) No 1907/2006 (REACH) provides the information pursuant to Article 33(1) of Regulation (EC) No 1907/2006 (REACH) to the European Chemicals Agency (ECHA) as from 5 January 2021. Any supplier of an article containing a substance of very high concern (SVHC) on the Candidate List for Authorisation in a concentration above 0.1% weight by weight (w/w) on the EU market is required to submit a SCIP Notification on that article to ECHA, as from 5 January 2021.



Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-006-R1

# **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-006	2024-03-07	First issue
240125004SHF-006-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-006-R1 report, the original report 240125004SHF-006 was cancelled at the same time.



# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-003-R1

# TEST DATE(S)

2024-01-25 - 2024-03-01

# ORIGINAL ISSUE DATE REVISED DATE

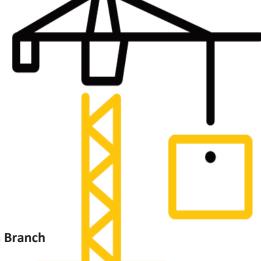
2024-03-07 2024-04-15

## **PAGES**

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## **DOCUMENT CONTROL NUMBER**

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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch





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Website: www.intertek.com

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# **Test Report**

Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-003-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification		
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm		
Sample ID	Sample Amount	Sample Received Date		
S240125004SHF.005	1 package	2024-01-23		
Sample Description				
1220mm*2440mm*12mm				

#### **Test Methods And Standards**

Test Standard	EN 12467:2012+A2:2018 5.4.5
Specification Standard	/
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.

**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Jackie Zhou Project Engineer



Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-003-R1

# Test Items, Method and Results:

EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods				
Clause	Requirement - Test Result - Remark			
5.4	Physical requirement and characteristics			
5.4.5	Water impermeability for Categories A, B and D When tested in accordance with 7.3.3, traces of moisture may appear on the under face of the sheet, but in no instance shall there be any formation of drops of water.	For Category B The traces of moisture was appeared on the under face of the sheet. No any formation of drops of water		





Original Issue Date: 2024-03-07 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-003-R1

# **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-003	2024-03-07	First issue
240125004SHF-003-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-003-R1 report, the original report 240125004SHF-003 was cancelled at the same time.





# **TEST REPORT**

## **SCOPE OF WORK**

MAGNESIUM OXIDE BOARD

## **REPORT NUMBER**

240125004SHF-012-R1

# TEST DATE(S)

2024-01-25 - 2024-03-21

# ORIGINAL ISSUE DATE [REVISED DATE]

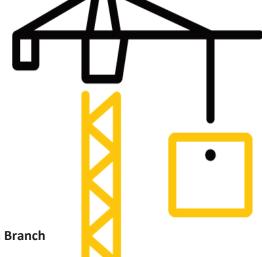
2024-03-21

2024-04-15

## **PAGES**

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# **Test Report**

Original Issue Date: 2024-03-21 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-012-R1

**Applicant: Ambient Building Products** 

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

Manufacturer: Ambient Building Products

Address: 8230 Preston Ct Ste C, Jessup, MD 20794

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

#### **Product Information**

Product Name	Model	Specification
MAGNESIUM OXIDE BOARD	/	1220mm*2440mm*12mm
Sample ID	Sample Amount	Sample Received Date
S240125004SHF.006	1 package	2024-01-23
Sample Description		
1220mm*2440mm*12mm		

#### **Test Methods And Standards**

Test Standa	EN 12467:2012+A2:2018 5.4.6
Specificatio Standard	/
Test Conclusi	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.

**Report Authorized** 

Name: Flora Fan

Title: Reviewer

Jackie Zhou oject Engineer



Original Issue Date: 2024-03-21 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-012-R1

# Test Items, Method and Results:

EN 12467:2012+A2:2018  Fibre-cement flat sheets - Product specification and test methods			
Clause	use Requirement - Test Result - Remark		
5.4	Physical requirements and characteristics		
5.4.6	Water vapour permeability for Category D For flat sheets used as rigid underlays, the water vapour resistance value $\mu$ shall be determined according to 7.3.4 and shall be specified in the manufacturer's literature. The $\mu$ value obtained from the test shall not be higher than the value specified by the manufacturer.	Specified value, μ: 12.8 Water vapor resistance factor, μ: 12.4	





Original Issue Date: 2024-03-21 Revised Date: 2024-04-15 Intertek Report No. 240125004SHF-012-R1

# **Appendix A: Sample Received Photo**



## **Revision:**

NO.	Date	Changes
240125004SHF-012	2024-03-21	First issue
240125004SHF-012-R1	2024-04-15	Revised the product name as per applicant's requirement.

Note: Since the issue date of 240125004SHF-012-R1 report, the original report 240125004SHF-012 was cancelled at the same time.





# **ICC-ES TEST REPORT**



Report No.: ABPI101524-92 Test Date(s): 10/30/2024 Report Date: 11/01/2024

Pages: 11



**Report No.:** ABPI101524-92 **Date:** 11/01/2024

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## 1.0 General Information

#### 1.1 Product

Mag Panel MgO Board

# 1.2 Project Summary

ICC-ES was contracted by Ambient Building Products, Inc. to evaluate Mag Panel MgO Board in accordance with ASTM E84-24. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at ICC-ES's facility in Bryan, TX.

# 1.3 Product Description

**ASTM E84-24** 

Product Name:	Mag Panel MgO Board
Product type:	MgO Board
Product Use:	Interior
Model Name/Sample	Sample 1
Number:	
Sample Description:	(3) ½-in x 24-in x 96-in
Color:	White
Sample Length:	288-in
Sample Width:	24-in
Thickness:	½-in
Total Weight:	112.5 lbs.
Sample Received Date:	10/24/2024
Days in Conditioning:	6

## 1.4 Qualifications

ICC-ES in Bryan, TX has demonstrated compliance with ISO/IEC 17025 and is consequently accredited as a Testing Laboratory. ICC-ES is accredited to perform all testing reported herein.

# 1.5 Product Sampling

No evidence was provided that a third-party agency sampled materials for the testing reported herein. All test specimens were supplied by Ambient Building Products, Inc.. As needed, ICC-ES provided commonly-available construction materials and assembled each specimen to the client's specifications, and where applicable, average quality lumber was used in the construction of specimens.



# 1.6 Witnessing

No representative of Ambient Building Products, Inc. witnessed the testing reported herein.

# 1.7 Conditions of Testing

Unless otherwise indicated, all testing reported herein was conducted in a laboratory set to maintain temperature in the range of  $65-80^{\circ}F$  and humidity in the range of  $45-60^{\circ}RH$ . All test specimen materials were stored in the laboratory conditioning room of  $73.4 \pm 5^{\circ}F$  and at a relative humidity of  $50 \pm 5^{\circ}R$  environment for no less than 24 hours prior to testing. The test specimens were conditioned for 6 days and obtained steady state.

## 2.0 Referenced Standards

ASTM E84-24 Standard Test Method for Surface Burning Characteristics of Building Materials.

# 3.0 Summary of Results

Flame Spread Index - 0

Smoke Developed Index – 5

#### 3.1 General

This fire-test-response standard for the comparative surface burning behavior of building materials is applicable to exposed surfaces such as walls and ceilings. This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire-hazard or fire-risk assessment of the materials, products, or assemblies under actual fire conditions.

# 3.2 Test Specimens

The samples submitted by the manufacturer was identified as Mag Panel MgO Board and was supplied in the form of (3) ½-in x 24-in x 96-in. They were received without damage.



# 3.3 Test Setup and Procedure

The product(s) were setup and evaluated in accordance with ASTM E84-24.

Substrate Used:	N/A
Mounting Method:	Standard
Support Used:	N/A
Side Exposed:	Smooth Side
Adhesive Used &	N/A
Coverage Rate (if	
Applicable):	
Cement Board Used to	Yes
Cover Sample (Y/N):	
Sample Continuous or	Sectioned
Sectioned:	
No. & Size of	(3) ½-in x 24-in x 96-in
Sections:	
Lab Ambient Temp (°F):	74
Lab Ambient RH (%):	64
Date Tested:	10/30/2024



## 3.4 Test Results

## **TEST DATA**

Time to Ignition (mm/ss):	00:00
Maximum Flame Spread (ft):	0.000
Time to Max Flame Spread	00:00
(mm/ss):	
Maximum Temperature (°F):	532
Time to Max Temperature	09:53
(mm/ss):	
Total Fuel Burned (cubic feet):	44.684
Total Fuel Burned (cubic feet):	44.684
Total Fuel Burned (cubic feet):  Flame Spread*Time Area	0.000
Flame Spread*Time Area	
Flame Spread*Time Area (ft*min):	0.000
Flame Spread*Time Area (ft*min):	0.000
Flame Spread*Time Area (ft*min): Smoke Area (%A*min):	0.000

# **TEST OBSERVATIONS**

05:17	Observed discoloration
08:00	Observed discoloration
	increase

# **POST-TEST OBSERVATIONS**

0 – 8 ft	Section had cracking and	
	discoloration	
8 – 16 ft	Section had little discoloration	
16 – 24 ft	Section had little discoloration	

# **Analysis on Classification Criteria**

Based on Flame Spread Index and Smoke Developed Index when tested in accordance with ASTM E84 or UL 723. Three classes of interior finish are specified by the International Building Code (IBC) that describes a set of classification criteria required for interior wall and ceiling finish materials. The classification criteria for all three model codes is the same: ASTM E84 and UL 723 do not include classification criteria for the results obtained from testing.

Class	Flame Spread Index	Smoke Developed Index
Α	0-25	0-450
В	26-75	0-450
С	76-200	0-450



# 4.0 Closing Statement

This report contains only findings and results arrived at after employing the specific test procedures listed herein. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Unless differently required, ICC-ES reports apply the "Simple Acceptance" rule, also called "Shared Risk approach", of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity. ICC-ES makes no warranty, expressed or implied, except that the test has been performed, and a report prepared, based upon the specimen specified by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC-ES assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC-ES has no control. ICC-ES has issued this report for the exclusive use of the client to whom it is addressed. Any use or duplication of this report shall not be made without their consent. This report shall only be reproduced in its entirety.

For ICC-ES, LLC:

Tested by: Brent Mynar 11/01/2024

Project Manager

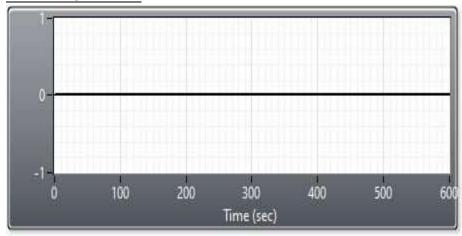
Gabriel Parra
Reviewed by: Gabriel Parra

11/01/2024

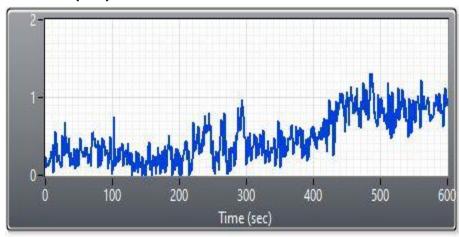
**Project Engineer** 



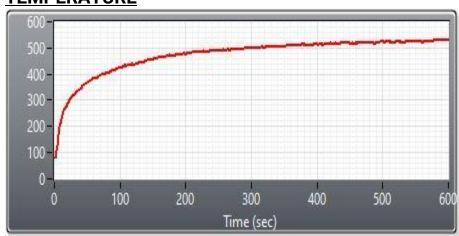
# **FLAME SPREAD**



# **SMOKE (%A)**



# **TEMPERATURE**



# Appendix B - Photographs



Photo No. 1 Sample Marking



Photo No. 2 Pre-Test Exposed Side





Photo No. 3
Post-Test Exposed Side



Photo No. 4
Post-Test Exposed Side (Continued)



# Appendix C - Revision Log

Rev. #	Date	Page(s)	Revision(s)
0	11/01/2024	N/A	Original report issue