

### **MCM Certificates**







THE EXCLUSIVE DISTRIBUTOR OF PHOMI MCM IN GCC الموزع الحصري لمواد فومى بدول الخليج

info@gbs.sa.com - +966 11 2030800

showroom 1 - Building 3491 - Anas bin malik road - Almalqa - Riyadh KSA



Date: 21 Jun 2021

# **TO WHOM IT MAY CONCERN**

### We PHOMI MCM CO. LTD here by certified that **GREEN BUILDING SOLUTION** شركة حلول المباني الخضراء

CR#1010266859

Address: ANAS BIN MALIK STREET RIYADH, SAUDI ARABIA TEL.: +966 1 12030800 //

is only the Exclusive Distributor of HOMI products in Kingdom of Saudi Arabia.

Your Sincerely,

ADD: No.23, Guangpu Zhong Rd, Modern Avernue, Science City, Huangpu District, Guangzhou, Guangdong, China. 510700 rel.: +86 20-3463 6425 PHOMI MCM CO., LTD



### 亞洲國際創新發明大獎 Asia International Innovative Invention Award

2019

![](_page_3_Picture_1.jpeg)

發明機構 This is to certify that

### 廣西福美新材料有限公司

發明項目 for the invention

改性無機複合材料及其製造方法

榮獲 has been awarded

金獎 Gold Award

李遠發 主席 Chairman Lee Yuen Fat

香港創新科技及製造業聯合總會 Hong Kong Federation of Innovative Technologies and Manufacturing Industries

包科日

![](_page_3_Picture_12.jpeg)

呂新榮博士 首席评委 Chief Jury Dr.Lui Sun Wing

亞洲國際創新發明大獎

2018 Best of IBS Awards

Most Innovative Building Product

NAHB BS

-

MCM Cladding by Phorni USA

![](_page_5_Picture_0.jpeg)

### **CERTIFICATE** OF COMPLIANCE

![](_page_6_Picture_1.jpeg)

PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG

COLD

# Phomi MCM Co Ltd

### See product list below

UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

Product tested in accordance with UL 2821 test method to show compliance to emission limits on UL 2818. Sectopm 7.1.

Commercial furniture and furnishings are tested in accordance with ANSI/BIFMA M7.1-2011 and determined to comply with ANSI/BIFMA X7.1-2011 and ANSI/BIFMA e3-2014e Credit 7.6.1, 7.6.2, and 7.6.3. Panel based workstations are modeled n the open plan environment. Casegood systems and individual furniture items are modeled in the private office environment. Seating products are modeled in the seating environment. classroom model in the California Department of Public Health (CDPH) Standard Method v1.2.

Building Products are determined compliant in accordance with California Department of Public Health (CDPH) Standard Method V1.1-2010, Using the applicable exporsure scenario.

![](_page_6_Picture_10.jpeg)

"Agreement". The Certificate Holder is authorized to use the UL Mark for the identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified UL investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively dates unless there is non-compliance with the Agreement.

### **CERTIFICATE** OF COMPLIANCE

# **UL GREENGUARD Certified Products Listing**

| Product Name   | Certification              | Status          | Certificate<br>Number | Certification Period      | Restrictions |
|--|----------------------------|-----------------|-----------------------|---------------------------|--------------|
| 2.5 mm Modified inorganic powder composite building decorative material—MCM Facing Brick Serie | GREENGUARD Gold Certified  | Certified       | 155948-420            | 09/12/2019-<br>09/12/2020 |              |
| 2.5mm Modified inorganic powder composite building decorative material—MCM Leather Serie       | GREENGUARD Gold Certified  | Certified       | 155949-420            | 09/12/2019-<br>09/12/2020 |              |
| 2.5mm Modified inorganic powder composite building decorative material——Wood Serie             | GREENGUARD Gold Certified  | Certified       | 155950-420            | 09/12/2019-<br>09/12/2020 |              |
| 2.5-10.0mm Modified inorganic powder composite building decorative material—Stone Serie        | GREENGUARD Gold Certified  | Certified       | 155951-420            | 09/12/2019-<br>09/12/2020 |              |
| 2.5-5.0mm Modified inorganic powder composite<br>building decorative material——Weaving Serie   | GREENGUARD Gold Certified  | Certified       | 155952-420            | 09/12/2019-<br>09/12/2020 |              |
| Please r   | efer to current certificat | es on ul.com/sp | og for compl          | ete compliance ir         | nformation.  |

![](_page_7_Picture_3.jpeg)

"Agreement"). The Certificate Holder is authorized to use the UL Mark for the identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified UL investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively dates unless there is non-compliance with the Agreement.

### The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

The

United

States

America

### **United States Patent**

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2)or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

her Staret tes

Acting Director of the United States Patent and Trademark Office

![](_page_9_Picture_0.jpeg)

Europäisches Patentamt European Patent Office Office européen des brevets

### URKUNDE

Es wird hiermit bescheinigt, dass für die in der Patentschrift beschriebene Erfindung ein europäisches Patent für die in der Patentschrift bezeichneten Vertragsstaaten erteilt worden ist.

### CERTIFICATE

### CERTIFICAT

It is hereby certified that a European patent has been granted in respect of the invention described in the patent specification for the Contracting States designated in the specification. Il est certifié qu'un brevet européen a été délivré pour l'invention décrite dans le fascicule de brevet, pour les Etats contractants désignés dans le fascicule de brevet.

Europäisches Patent Nr.

European patent No.

Brevet européen nº

### 2157139

Patentinhaber

Proprietor of the patent

Titulaire du brevet

Shi, Lei Jiein Science and Technology Garden Zhongcun Panyu District Guangzhou Guangdong 511495/CN

Benoît Battistelli

Präsident des Europäischen Patentamts President of the European Patent Office Président de l'Office européen des brevets

EPA/EPO/OEB 2031 07.10

München, den Munich, Fait à Munich, le

26.03.14

![](_page_10_Picture_0.jpeg)

### PHOMI MCM CO., LTD.

### **Technical Data**

| Product Specifications   |                                  |                                     |  |  |
|--|----------------------------------|-------------------------------------|--|--|
| Material Composition   | Modified Clay Material           |                                     |  |  |
| Installation   | Acrylic Adhesive or Equal        | Acrylic Adhesive or Equal           |  |  |
| Patent   | United States patent No. 8505840 | / European patent No. 2157139       |  |  |
| Test Data  |                                  |                                     |  |  |
| CE Certificate   | EN 15102:2007+A2:2011            | Compliant                           |  |  |
| Fire Rating  | ASTM E84-15/EN 13501-            | Class A                             |  |  |
|  | 1+A1:2010                        |                                     |  |  |
| Freeze-Thaw Cycling  | ASTM C1026-13                    | Weight Loss - 0.42%                 |  |  |
|  |                                  | Appearance – No visible change      |  |  |
| Water Absorption   | ASTM C97/C97M-15                 | 12.4%                               |  |  |
| Bulk Specific Gravity  |                                  | 1.83                                |  |  |
| Stain Resistance   | ANSI Z124.6-2007                 | Total Rating: 7.6                   |  |  |
|  | Clause 5.2                       | Max Stain Depth: 0.101 mm           |  |  |
| Chemical Resistance  | ANSI Z124.6-2007                 | No visible change                   |  |  |
|  | Clause 5.5                       |                                     |  |  |
| Abrasion Resistance  | ASTM C241/C241M-15               | Total Score: 8                      |  |  |
| Static Coefficient   | ASTM C1028-07                    | Dry Condition: 1.11                 |  |  |
| of Friction  |                                  | Wet Condition: 0.70                 |  |  |
| UV – Light aging   | ASTM G154-12a Cycle1             | Gray Scale 4.0                      |  |  |
| Exposure   | ASTM D2244-154                   | ΔΕ* .                               |  |  |
|  | ASTM 2616-12                     | ΔL ab 2.6                           |  |  |
| Chemical Composition   |                                  |                                     |  |  |
| PVC Free   |                                  | None Detected                       |  |  |
| Phthalate Free   | EN 14372:2004                    | None Detected                       |  |  |
| Respirable Crystalline Silica  | OSHA Silica Rule                 | Clay not part of substances of note |  |  |
| Compliant  |                                  | in OSHA standard                    |  |  |
| SVHC - Substances of Very High Conc  | ern (151 substances)             | None detected – REACH Compliant     |  |  |
| VOC – Volatile Organic Compounds   |                                  | None Detected – Class A             |  |  |
| Safety Data Sheet - SDS Prepared in accordance with US Regulation 29 CFR 1910.1200 |                                  |                                     |  |  |

### QIMA YOUR EYES IN THE SUPPLY CHAIN

### شهادة مطابقة إرسالية للمنتجات المستوردة Shipment Conformity certificate for imported products

![](_page_11_Picture_2.jpeg)

| Certificate Number      | CN-21-0326864   | Issue Date                 | 23/08/2021 |
|-------------------------|---|----------------------------|------------|
| Certificate Type        | Shipment Conformity Certificate for Imported Products | Commercial Registration No | 1010266859 |
| Establishment Address   | الرياض حي الصحافة شارع ثمامة                          | Shipment country           | China      |
| Product Certificate No. | 00187-059-20-308404                                   |                            |            |

|                      | Product an   | d Manufacturer Data |
|----------------------|--|---------------------|
| Model type           | MCM  | Trade Mark PHOMI    |
| Product Name         | Artificial stone   |                     |
| Product Description  | SA50 -   |                     |
| Country of origin    | China  |                     |
| Production Date      |  |                     |
| HS Code              | 681019100003   |                     |
| Technical Regulation | Technical Regulation for Building Materials - Part 2: Insulation and Claddin | ng Materials        |
| Manufacturer name    | PHOMI CO.LTD   |                     |
| Manufacturer Address |  |                     |
| Exporter name        | PHOMI MCM CO, LTD  | Exporter Address    |

CB Organization Office Responsible manager signature

23/08/2021 03:20

![](_page_11_Picture_9.jpeg)

![](_page_12_Picture_0.jpeg)

### Registration Approval Letter

September 04, 2021

### Attention : GREEN BUILDINGS SOLUTIONS COMPANY FOR CONTRACTING

### CR Number : 1010266859 Supplier Type: Materials Vendor + Service Provider Country : Saudi Arabia

We are pleased to inform you that GREEN BUILDINGS SOLUTIONS COMPANY FOR CONTRACTING is now registered in the Saudi Aramco Supplier Management System under Vendor Code No. 10107007, provided your company continues to meet all relevant Saudi Arabian and Saudi Aramco standards.

This registration, however, should not be construed as a commitment by Saudi Aramco to procure from you. Being registered as a supplier only grants your company the opportunity, along with other registered sources, to respond to requests for submitting proposals in accordance with Saudi Aramco's established policies and procedures. All procurement instruments including but not limited to service contracts, purchase agreements, or purchase orders will be issued based on the name and address included in your commercial registration (CR), as stated in your Supplier Registration.

Saudi Aramco wishes to remind you that being recognized as a supplier carries with it serious obligations and responsibilities to act in a legal and ethical manner. We wish to remind you of the Saudi Aramco Supplier Code of Conduct (SCOC) which you acknowledged. Failure to abide by the principles set forth in the SCOC can result in adverse actions being taken by Saudi Aramco against you including suspension of you as a supplier. Saudi Aramco also expects each of its suppliers to satisfy each of the requirements of any procurement instrument which might be placed and to act responsibly and reliably as a supply chain supplier.

Material Suppliers should apply for Saudi Aramco Supplier Portal access by forwarding a request to portal-registration@aramco.com. The Supplier Portal is the main electronic business tool used between Saudi Aramco and its suppliers and serves to improve the flow and accuracy of key supply chain information.

For further information or assistance please contact the Saudi Aramco Supplier Help Desk by forwarding a request to SupplierHelpDesk@aramco.com or via the unified call center 800-116-1168 for In-Kingdom suppliers or +966 (11) 290-8950 for Out-of-Kingdom suppliers.

Moamar Khazal Al Usaimi, Supervisor Supplier Registration Unit Supplier Relationship Management Div

It is the responsibility of the supplier to update Saudi Aramco Supplier Registration Profile through Ariba for the following:

- 1. Change of Name / Commercial Registration Number / Address / Owner(s)
- 2. Any change of the supplier location
- 3. Discontinue supply of approved commodities (9COMs and 9CATS)

This is an electronically generated letter by Saudi Aramco. To verify Supplier approval status, please contact Supplier Help Desk at supplierhelpdesk@aramco.com

![](_page_13_Picture_0.jpeg)

### **Test Verification of Conformity**

### Verification Number: 220228007-SHF-VOC001

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. This verification is part of the full test report<s> and should be read in conjunction with it <them>.

| Applicant Name & Address:   | PHOMI MCM CO., LTD.<br>15/F, BUILDING A2, MODERN AVENUE, SCIENCE CITY, HUANGPU DISTRICT,<br>GUANGZHOU                               |
|---|---|
| Product Description:  | Phomi Flexi Econic Clay   |
| Ratings & Principle<br>Characteristics:                                     | <b>Class A</b><br>Flame spread index, FSI = 25,   |
| Models/Type References:<br>Brand Names:<br>Specification <s>/Standards:</s> | Smoke developed index, SDI = 20<br>Slate series<br>/<br>ASTM E84-19a  |
| Verification Issuing Office Name & Address:                                 | Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch<br>Plant 5. No. 6958 Dave Road. Fengxian District. Shanghai. China |
| Date of Tests:<br>Test Report Number(s):                                    | 2022-02-28 - 2022-03-14<br>220228007SHF-001   |

As Specified in 10.2.3.3 of NFPA 101 Life Safety Code 2021:

Chapter 10 Interior Finish, Contents, and Furnishings

Section 10.2.3 Interior Wall or Ceiling Finish Testing and Classification

10.2.3.3 Interior Wall and Ceiling Finish Materials Tested in Accordance with ASTM E84 or ANSI/UL 723. Interior wall and ceiling finish materials shall be classified in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials, or* ANSI/UL 723, *Standard Test Method for Surface Burning Characteristics of Building Materials*, except as indicated in 10.2.3.4 and 10.2.3.5, and shall be grouped in the following classes in accordance with their flame spread and smoke developed indexes.

- (1) Class A: Flame spread index 0-25; smoke developed index 0-450.
- (2) Class B: Flame spread index 26-75; smoke developed index 0-450.
- (3) Class C: Flame spread index 76-200; smoke developed index 0-450.

Harnison 1

Signature

Name: Harrison Li Position: Asst. Technical Manager Date: 14<sup>th</sup> March,2022

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

![](_page_14_Picture_0.jpeg)

### **VERIFICATION OF CONFORMITY**

No. IN-XM-CP-5612-14052

It has been stated that the construction product

Modification of inorganic powder composite building decoration materials sheet

(MCM FLEX-CLAY, Unfired Flexi Clay Cladding & Flooring)

Intended use: wallcoverings

produced in the manufacturing plant and placed on the market by

### PHOMI MCM CO., LTD. 112 ZHONGSHENG ROAD, PANYU DISTRICT, GUANGZHOU, CHINA

is submitted by the manufacturer to the further testing of samples taken at the factory in accordance with a prescribed test plan and that the third party- SGS-CSTC Standards Technical Services Co., Ltd. has performed the determination of the product type as required for Regulation 305/2011/EU and the assessment and verification of conformity at system 4.

This verification attests that all provisions concerning assessment of constancy of performance at system 4 and the performances described in Annex ZA of the standards

EN 15102:2007+A1:2011 Decorative wallcoverings-Roll and panel form products

were applied and that the relevant test report no. is XMCCM140300198-3.1A, XMCCM140300198-3.2A This verification is customer voluntary act and refers to the tested samples only-type representative of the tested

product. The manufacturer is obligated to apply factory production control. This verification is valid from Jun 04, 2014 until Jun 03, 2017 and remains valid as long as the manufacturing conditions in the plant or the factory production control itself are not modified significantly.

Issued since Jun 27, 2014

Authorised by

Signer Manager

Ferin ZHENG **Industrial Services** 

SGS-CSTC Standards Technical Services Co., Ltd. Xiamen Branch 31 Xianghong Road, Xiang'An Torch Industrial Zone, Xiamen, Fujian Province, China t+86 (0)592 5766485 f+86 (0)592 5765380 Industrial.China@sgs.com

www.sgs.com **CE-CPR VOC 130701** 

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![](_page_14_Picture_24.jpeg)

![](_page_15_Picture_0.jpeg)

No. : GZIN150901320CCM-02 Date : Mar. 16, 2016 Page: 1 of 10

CLIENT NAME: PHOMI MCM CO., LTD. ADDRESS: 112 ZHONGSHENG ROAD, PANYU DISTRICT, GUANGZHOU, CHINA

| The following sample(s) | was/ | were submitted and identified on behalf of the client as: |
|-------------------------|------|---|
| Sample Name             | :    | MCM FLEX-CLAY, Unfired Flexi Clay Cladding & Flooring     |
| SGS Ref. No.            | :    | GZIN150901320CCM-02                                       |
| Test Performed          | :    | Selected test(s) as requested by applicant                |
| Date of Receipt         | :    | Sep. 09, 2015   |
| Test Period             | :    | Sep. 09, 2015 to Feb. 24, 2016                            |
|                         |      |   |
| Test result(s)          | :    | Please refer to the following page(s)                     |
|                         |      | *******To be continued*******                             |

Signed for and on behalf of SGS-CSTC Standards Technical Services Co.,Ltd Guangzhou Branch

![](_page_15_Picture_6.jpeg)

Jay Xue Authorized signatory

\*\* Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The report should not be reproduced except in full without written approval from the Company

![](_page_15_Picture_9.jpeg)

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198 Kezhu Road, Scientech Park, Economic & Technical Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075080 www.sgsgroup.com.cn 中国・广州・经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075080 e sgs.china@sgs.com

![](_page_16_Picture_0.jpeg)

No. : GZIN150901320CCM-02 Date : Mar. 16, 2016 Page: 2 of 10

### Summary of test results

| NO. | Test items                       | Test methods   | Te   | Test results  |                          |
|-----|----------------------------------|--|--|---|--------------------------|
| 1   | Freeze-Thaw Cycling              | With reference to ASTM<br>C1026-13 and Client's<br>requirement     | Weigh<br>Appearance                        | nt loss: 0.42<br>e: No visible  | 2%<br>change             |
| 2   | Water absorption                 | ASTM C97/C97M-15   |  | 12.4%   |                          |
| -   | Bulk specific gravity            |  |  | 1.83  |                          |
| 3   | Stain resistance test            | ANSI Z124.6-2007<br>Clause 5.2                                     | Tota<br>The maxi<br>C<br>(See tab          | Total rating: 76<br>The maximum stain depth:<br>0.101mm<br>(See table 1 and note 1) |                          |
| 4   | Chemical resistance test         | ANSI Z124.6-2007<br>Clause 5.5                                     | See table 2                                |   |                          |
| 5   | Static coefficient of friction   | ASTM C1028-07 <sup>ε1</sup>  | Dry condition: 1.11<br>Wet condition: 0.70 |   | 0                        |
| 6   | Abrasion resistance              | ASTM C241/C241M-15 <sup>£1</sup>                                   | 8  |   |                          |
| 7   | Light Ageing Test-UV<br>Exposure | V ASTM G154-12a Cycle1 & Ex<br>ASTM D2244-15a & ASTM d<br>D2616-12 |  | Gray<br>scale<br>4.0  | ∆E* <sub>ab</sub><br>2.6 |

\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_16_Picture_6.jpeg)

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![](_page_17_Picture_0.jpeg)

No. : GZIN150901320CCM-02 Date : Mar. 16, 2016 Page: 3 of 10

### **Test Information:**

Sample description: See photo

Test item 1: Freeze-Thaw Cycling

Test method: With reference to ASTM C1026-13 and Client's requirement

### Test condition:

Specimen: 76×76×3.28mm

Condition: 1 Drying in  $150\pm5^{\circ}$ ,  $24h\rightarrow2$  Boiling water,  $5h\rightarrow3$  Soaking for an additional  $24h\rightarrow4$  Freeze in  $-3^{\circ}$ ,  $1min\rightarrow5$  Thaw in  $5^{\circ}$ ,  $1min\rightarrow4^{\circ}$  is a cycle, There are 20 cycles $\rightarrow6$  Drying in  $150\pm5^{\circ}$  for  $24h\rightarrow7$  Cooling in the desiccators until room temperature

### **Test result:**

Weight loss: 0.42% Appearance: No visible change

Test item 2: Water absorption and Bulk specific gravity

Test method: ASTM C97/C97M-15

### Test condition:

Specimen: 50×50×3.28mm

Condition:  $60\pm2^{\circ}C$ ,  $48h\rightarrow$ Distilled water,  $22\pm2^{\circ}C$ , 48h

### Test result:

Water absorption: 12.4%

Bulk specific gravity: 1.83

\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_17_Picture_21.jpeg)

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![](_page_18_Picture_0.jpeg)

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Test item 3: Stain resistance test

Test method: ANSI Z124.6-2007 Clause 5.2

### **Test condition:**

Specimen: 100×100×3.28mm

Reagents: (see table 1)

Test time: 16h

### **Test result:**

Table 1: Test result of stain resistance test

| Beagent                  | Rat                    | ting                     |
|--------------------------|------------------------|--------------------------|
| hougon                   | Covered                | Uncovered                |
| Black crayon             | 5(stain depth:0.076mm) | 5(stain depth:0.081mm)   |
| Black liquid shoe polish | 5(stain depth:0.091mm) | 5(stain depth:0.085mm)   |
| Blue washable Ink        | 5(stain depth:0.083mm) | 5(stain depth:0.080mm)   |
| Gentian violet solution  | 5(stain depth:0.102mm) | 5(stain depth:0.103mm)   |
| Beet juice               | 1                      | 1                        |
| Grape juice              | 1                      | 1                        |
| Lipstick                 | 5(stain depth:0.091mm) | 5(stain depth:0.092mm)   |
| Hair dye                 | 5(stain depth:0.012mm) | 5(stain depth:0.102mm)   |
| lodine solution          | 5(stain depth:0.101mm) | 5(stain depth:0.092mm)   |
| Wet tea bag              | 1                      | 1                        |
| Total rating             | 76 (The maxim          | um stain depth: 0.101mm) |

Total rating: 76

The maximum stain depth: 0.101mm

\*\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_18_Picture_15.jpeg)

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![](_page_19_Picture_0.jpeg)

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Note: 1.Cleaning procedures:

- 1.1 The specimen shall be washed with tap water and cheesecloth or soft bristle brush using 20 scrub cycles with normal hang pressure and dried by blotting. A stain shall be defined as a change in surface texture or a change in color. Specimens not staining at this point shall have a rating or 1-non-sraining.
- 1.2 Stains present after initial wash with water shall be washed with alcohol or naphtha using cheesecloth or soft bristle brush for 20 cycles using normal hand pressure. The specimens shall be washed with tap water and dried by blotting. Specimens not staining at this point shall have a rating of 2-removable by alcohol or naphtha.
- 1.3 Stains present after the aforementioned cleanings shall be scrubbed 20 scrub cycles with standard souring powder and wet cheesecloth or soft bristle brush using normal hand pressure. The specimens shall be washed with tap water and dried by blotting. Reduction of gloss due to scrubbing with standard scouring power shall not constitute staining. Specimens whose strain is removed by the standard souring powder shall have a rating of 3-removable by first application of standard scouring powder.
- 1.4 Stains present after the aforementioned cleanings shall be scrubbed 40 scrub cycles with standard souring powder and wet cheesecloth or soft bristle brush using normal hand pressure. The specimens shall be washed with tap water and dried by blotting. Reduction of gloss due to scrubbing with standard scouring power shall not constitute staining. Specimens whose strain is removed by this additional shall have a rating of 4-removable by two standard scouring powder scrubbings.
- 1.5 Any specimen with stain remaining after the aforementioned cleanings shall have a rating of 5.Any specimen with stain remaining after the above cleanings shall be tested to determine the depth of staining. The affected area shall be cut and lightly sanded with 600 grit abrasive cloth until the stain is removed. The depth shall be measured to the nearest 0.025mm.

Test item 4: Chemical resistance test

Test method: ANSI Z124.6-2007 Clause 5.5

### Test condition:

Specimen: 100×100×3.28mm Reagents: (see table2) Test time: 16h Test result: See table 2

\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_19_Picture_14.jpeg)

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![](_page_20_Picture_0.jpeg)

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| Beagent                                   | Results           |                   |  |  |
|---|-------------------|-------------------|--|--|
| neagent                                   | Covered           | Uncovered         |  |  |
| Naphtha                                   | No visible change | No visible change |  |  |
| Ethyl alcohol                             | No visible change | No visible change |  |  |
| Amyl acetate                              | No visible change | No visible change |  |  |
| Household ammonia (10%)                   | No visible change | No visible change |  |  |
| Citric acid (10%)                         | Lightly affected  | Lightly affected  |  |  |
| Urea 6% water solution                    | No visible change | No visible change |  |  |
| Hydrogen peroxide solution (3%)           | No visible change | No visible change |  |  |
| Concentrated sodium hypochlorite solution | No visible change | No visible change |  |  |
| Toluene                                   | No visible change | No visible change |  |  |
| Ethyl acetate                             | No visible change | No visible change |  |  |
| Lye solution (1% to 2%)                   | No visible change | No visible change |  |  |
| Acetone                                   | No visible change | No visible change |  |  |
| Trisodium phosphate ( 5%)                 | No visible change | No visible change |  |  |
| Vinegar                                   | No visible change | No visible change |  |  |
| Pine oil                                  | No visible change | No visible change |  |  |

Table 2: Test result of chemical resistance test

\*\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_20_Picture_6.jpeg)

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![](_page_21_Picture_0.jpeg)

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Test item 5: Static coefficient of friction

### Test method: ASTM C1028-07<sup>ε1</sup>

### Test condition:

Specimen: 200×200×3.28mm

Contact area: 75×75mm<sup>2</sup>

Load: 23.8kg

### Test result:

Dry condition: 1.11 Wet condition: 0.70

### Test item 6: Abrasion resistance

### **Test Method:**

ASTM C241/C241M-15<sup>£1</sup> Standard Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic Specimens: 50mm×50mm×25mm, 3pcs

### Test Result:

Testing surface: see the photo

| Specimens identification No. | 1 | 2 | 3 |
|------------------------------|---|---|---|
| Abrasive hardness            | 8 | 8 | 7 |
| Mean abrasive hardness       |   | 8 |   |

Note: The test item 6 was carried out by a SGS internal laboratory.

\*\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_21_Picture_19.jpeg)

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![](_page_22_Picture_0.jpeg)

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### Test item 7: Light Ageing Test-UV Exposure

### Test method: ASTM G154-12a Cycle1 & ASTM D2244-15a & ASTM D2616-12

### Test condition:

Exposure cycle:

ASTM G154-12a cycle 1

Lamp type: UVA-340

8h UV at (60±3)°C BPT, 0.89W/(m2•nm)@340nm

4h condensation at (50±3)℃ BPT

Exposure duration: 2500h

### **Test result:**

| Sample | Exposure duration | Gray scale(See note 1) | $	riangle E^*_{ab}$ (See note 2) |
|--------|-------------------|------------------------|----------------------------------|
| 1      | 2500h             | 4.0                    | 2.6                              |

Note:

1. According to ASTM D2616-12, the gray scale was determined under the D65 standard light, with scale 5.0 as the best and scale 1.0 as the worst.

2.  $\triangle E^*_{ab}$  was measured by sphere spectrophotometer under D65 standard light source and with 10° observer. The results exclude specular reflection condition, 25mm aperture.

3. This test report supersedes the test report GZIN150901320CCM-01, the original test reports (paper and electronic) are voild.

\*\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_22_Picture_19.jpeg)

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![](_page_23_Picture_0.jpeg)

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![](_page_23_Figure_3.jpeg)

![](_page_23_Picture_4.jpeg)

\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

![](_page_23_Picture_6.jpeg)

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![](_page_24_Picture_0.jpeg)

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![](_page_24_Picture_3.jpeg)

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

![](_page_24_Picture_5.jpeg)

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![](_page_25_Picture_0.jpeg)

No. : GZIN151001492CCM Date : Nov. 18, 2015 Page: 1 of 8

### CLIENT NAME: PHOMI MCM CO., LTD. ADDRESS: 112 ZHONGSHENG ROAD, PANYU DISTRICT, GUANGZHOU, CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

| : MCM FLEX-CLAY       | Unfired Flexi Clay Cladding & Flooring  |
|-----------------------|---|
| : GZIN151001492C      | CM  |
| : Selected test(s) as | requested by applicant  |
| : Oct. 12, 2015       |   |
| : Oct. 19, 2015 to O  | ct. 28, 2015  |
|                       |   |
|                       | <ul> <li>MCM FLEX-CLAY</li> <li>GZIN151001492C</li> <li>Selected test(s) as</li> <li>Oct. 12, 2015</li> <li>Oct. 19, 2015 to O</li> </ul> |

Test result(s)

: Please refer to the following page(s)

\*\*\*\*\*\*\*\*To be continued\*\*\*\*\*\*\*

Signed for and on behalf of SGS-CSTC Standards Technical Services Co.,Ltd Guangzhou Branch

Chandler Wu Technical Engineer

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![](_page_25_Picture_13.jpeg)

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![](_page_26_Picture_0.jpeg)

No. : GZIN151001492CCM Date : Nov. 18, 2015 Page: 2 of 8

### **Test Result Summary**

| Test(s) Requested | Result(s) |
|-------------------|-----------|
| ASTM E84-15       | Class A   |
| Summary           |           |

Summary:

1. For further details, please refer to the following page(s).

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![](_page_26_Picture_8.jpeg)

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![](_page_27_Picture_0.jpeg)

No. : GZIN151001492CCM Date : Nov. 18, 2015 Page: 3 of 8

### TESTS AND RESULTS

### Sample information:

Thickness: Approximately 4mm

Exposure Face: Mesh face

### Test Conducted:

This test was conducted in accordance with ASTM E84-15 Standard Test Method for Surface Burning Characteristics of Building Materials

### Introduction:

The method, designated as ASTM E84-15, "Standard Method of Test for Surface Burning Characteristics of Building Materials", is designed to determine the relative surface burning characteristics of materials under specific test conditions. Results are expressed in terms of flame spread index (FSI) and smoke developed index (SDI).

The purpose of this test method is to determine the relative burning behavior of the material by observing the flame spread along the specimen. Flame spread and smoke developed index are reported. However, there is not necessarily a relationship between these two measurements.

### Sample Preparation:

Prior to testing, the specimen was conditioned to constant weight at a temperature of  $73 \pm 5^{\circ}$ F ( $23 \pm 3^{\circ}$ C) and a relative humidity of  $50 \pm 5^{\circ}$ .

The test specimen consisted of a total of 7 sections of material. The sections were butted together during testing to form the requisite specimen length.

The specimen was supported during testing by 1/6' round metal rods placed at nominal 18 inch intervals across the width of the test chamber.

![](_page_27_Picture_16.jpeg)

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![](_page_28_Picture_0.jpeg)

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### Test Procedure:

The tunnel is preheated to 150°F, as measured by the floor-embedded thermocouple located 23.25 feet downstream of the burner ports, and allowed to cool to 105°F, as measured by the floor-embedded thermocouple located 13 feet from the burners. At this time the tunnel lid is raised and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling 24 feet long, 12 inches above the floor. The lid is then lowered into place.

Upon ignition of the gas burners, the flame spread distance is observed and recorded every 15 seconds. Flame spread distance versus time is plotted ignoring any flame front recessions. If the area under the curve (A) is less than or equal to 97.5 min·ft, FSI =  $0.515 \cdot A$ ; if greater, FSI = 4900/(195 - A). Smoke developed is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, arbitrarily established as 0 and 100, respectively.

### Test Results:

| Sample                            | Flame-Spread Index<br>(FSI) | Smoke-developed Index<br>(SDI) |  |
|-----------------------------------|-----------------------------|--------------------------------|--|
| MCM FLEX-CLAY, UNFIRED FLEXI CLAY | 15                          | 25                             |  |
| CLADDING&FLOORING                 | 15                          | 25                             |  |

### **Observations of Burning Characteristics:**

Flame Front: 3.5 feet maximum. Time To Maximum Spread: 150 seconds. Test Duration: 10 minutes.

![](_page_28_Picture_10.jpeg)

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![](_page_29_Picture_0.jpeg)

No. : GZIN151001492CCM Date : Nov. 18, 2015 Page: 5 of 8

### Rating:

The National Fire Protection Association Life Safety Code 101, "Interior Wall and Ceiling Finish Classification", has a means of classifying materials with respect to Flame Spread and Smoke Developed when tested in accordance with ASTM E 84, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723, Standard for Test for Surface Burning Characteristics of Burning Materials. The classifications are as follows:

|         | Flame-Spread Index (FSI) | Smoke-developed Index(SDI) |
|---------|--------------------------|----------------------------|
| Class A | 0 - 25                   | 0 - 450                    |
| Class B | 26 - 75                  | 0 - 450                    |
| Class C | 76 - 200                 | 0 - 450                    |

### Conclusion:

Refer to the National Fire Protection Association Life Safety Code 101, "Interior Wall and Ceiling Finish Classification", the submitted sample met the requirement of Class A.

![](_page_29_Picture_8.jpeg)

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![](_page_30_Picture_0.jpeg)

No. : GZIN151001492CCM Date : Nov. 18, 2015 Page: 6 of 8

### **Graphical Results:**

![](_page_30_Figure_4.jpeg)

![](_page_30_Figure_5.jpeg)

![](_page_30_Picture_6.jpeg)

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![](_page_31_Picture_0.jpeg)

No. : GZIN151001492CCM Date : Nov. 18, 2015 Page: 7 of 8

![](_page_31_Figure_3.jpeg)

Note: The above test was carried out by a SGS internal laboratory.

![](_page_31_Picture_5.jpeg)

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![](_page_32_Picture_0.jpeg)

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### **TEST REPORT**

No. : GZIN151001492CCM Date : Nov. 18, 2015 Page: 8 of 8

![](_page_32_Figure_3.jpeg)

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

![](_page_32_Picture_5.jpeg)

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![](_page_33_Picture_0.jpeg)

No. : XMCCM140300198-3.3 Date : Jun.27, 2014 Page: 1 of 4

### PHOMI MCM CO., LTD

112 ZHONGSHENG ROAD, PANYU DISTRICT, GUANGZHOU, CHINA

| The following san | nple(s) v | was/ were submitted and identified on behalf of the client as: |
|-------------------|-----------|--|
| Sample Name       | :         | MCM FLEX-CLAY, UNFIRED FLEXI CLAY CLADDING & FLOORING          |
| Test required     | :         | French VOC Regulation  |
| Date of Receipt   | 5         | May.14, 2014   |
| Test Period       |           | May.14, 2014 to Jun. 25, 2014                                  |

### **Test Result Summary**

| No.    | Test(s) Requested                                     | Result(s)   |
|--------|---|-------------|
| 1      | French VOC Regulation                                 |             |
| For fu | urther details, Please refer to the following page(s) | 50 50 50 50 |
| 1.5    | ******** To be continued*******                       | 1 CS        |

Signed for and on behalf of SGS-CSTC Ltd.

Civi Huang Xiamen Materials Lab Technical Supervisor

![](_page_33_Picture_10.jpeg)

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![](_page_34_Picture_0.jpeg)

No. : XMCCM140300198-3.3 Date : Jun.27, 2014 Page: 2 of 4

**Test Method** 

| Test Method(s)                      | Principle        | Parameter                                       | Detection Limit    | Uncertair                | Uncertainty                                |  |
|-------------------------------------|------------------|---|--------------------|--------------------------|--|--|
| ISO 16000-3<br>ISO 16000-6          | GC/MS            | VOC<br>CMR                                      | 5 μg/m³<br>1 μg/m³ | 17.5% (RS<br>U = 2 x RSD | SD)<br>=35%                                |  |
| ISO 16000-9<br>ISO 16000-11 HPLC/UV |                  | Volatile aldehydes 5 µg/m³ U =                  |                    | 16% (RS<br>U = 2 x RSD   | 16% ( <mark>RS</mark> D)<br>= 2 x RSD= 32% |  |
| Sr 9 2                              | 22               | Test chamber parame                             | eter               | 650 . 2                  | Ser.                                       |  |
| Chamber volume<br>(L)               | 119              | Temperature (°C)                                | 23                 | Relative                 | 50   |  |
| Air change rate<br>(per hour)       | 0.5              | Loading ratio (m <sup>2</sup> /m <sup>3</sup> ) | 919                | humidity (%):            | 50   |  |
| Test condition: Samp                | le stayed in tes | t chamber during the whole                      | 28 days testing pe | riod.                    | 2  |  |
| Sample preparation I                | Edges and back   | covered with aluminum foi                       | 1. c2. c0          | 2 5                      | 250  |  |

### Test Result(s)

| State of the second              | Concentration after<br>28 days µg/m <sup>3</sup> | С          | В             | A               | A+    |
|----------------------------------|--|------------|---------------|-----------------|-------|
| TVOC                             | 16   | >2000      | <2000         | <1500           | <1000 |
| Formaldehyde                     | 57   | >120       | <120          | <60             | <10   |
| Acetaldehyde                     | <5   | >400       | <400          | <300            | <200  |
| Toluene                          | <5   | >600       | <600          | <450            | <300  |
| Tetrachloroethylene              | <5   | >500       | <500          | <350            | <250  |
| Ethylbenzene                     | <5   | >1500      | <1500         | <1000           | <750  |
| Xylene                           | <5   | >400       | <400          | <300            | <200  |
| Styrene                          | <5   | >500       | <500          | <350            | <250  |
| 2-Butoxyethanol                  | <5   | >2000      | <2000         | <1500           | <1000 |
| Trimethylbenzene                 | <5   | >2000      | <2000         | <1500           | <1000 |
| 1,4-Dichlorobenzene              | <5   | >120       | <120          | <90             | <60   |
| CMR compounds                    | 8  | Ma         | ximum allowed | air concentrati | ion   |
| Benzene                          | <1   | <1         |               |                 |       |
| Trichloroethylene                | <1   | <1         |               |                 |       |
| Dibutyl phthalate (DBP)          | <1   | <1 <1      |               |                 |       |
| Diethylhexyl phthalate<br>(DEHP) | <1   | Star 1 5 6 |               |                 |       |

### to be continued

![](_page_34_Picture_8.jpeg)

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![](_page_35_Picture_0.jpeg)

No. : XMCCM140300198-3.3 Date : Jun.27, 2014 Page: 3 of 4

### Remark:

< Means less than

> Means higher than

This VOCs test covered only substances that can be adsorbed on Tenax-TA and that can be thermally desorbed and analyzed by gas chromatography mass spectrometric detector. If other emission occurred then these could not be monitored or with limited reliability only. The method is not optimal for very volatile compounds. For these substances small results and a higher uncertainty in the measurement cannot be excluded. All compounds identified by comparison with a mass spectrum obtained from a library. Calibrated as toluene equivalent.

### Statement

This test report is valid for the tested samples only. Without permission of the test center this test report is not permitted to be duplicated in extracts.

This test report does not entitle to carry any safety mark on this or similar products.

\*\*\*\*\*\*\*\* To be continued\*\*\*\*\*\*\*\*

![](_page_35_Picture_11.jpeg)

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XMCCM

![](_page_36_Picture_0.jpeg)

No. : XMCCM140300198-3.3 Date : Jun.27, 2014 Page: 4 of 4

**Appendix Photo:** 

755)83071443, or

(88-

![](_page_36_Picture_4.jpeg)

SGS authenticate the photos on original report only \*\*\*\*\*\*\*\*End of report\*\*\*\*

![](_page_36_Picture_6.jpeg)

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![](_page_37_Picture_0.jpeg)

No. : XMCCM140300198-3.1A Date : Jun.30, 2014 Page: 1 of 4

PHOMI MCM CO., LTD.

112 ZHONGSHENG ROAD, PANYU DISTRICT, GUANGZHOU, CHINA

| The following sam | ple(s) v | was/ were submitted and identified on behalf of the client as:              |
|-------------------|----------|---|
| Sample Name       | :        | MCM FLEX-CLAY, UNFIRED FLEXI CLAY CLADDING & FLOORING                       |
| SGS Ref. No.      | :        | CANMLC1407793201, KV-14-03020X  |
| Test required     | : :      | EN 15102:2007+A1:2011 Decorative wallcoverings-Roll and panel form products |
| Intend use        | 3        | Wall coverings  |
| Date of Receipt   | :        | May.19, 2014  |
| Test Period       | 1        | May. 19, 2014 to May. 30, 2014  |
|                   |          |   |

Test result(s)

For further details, please refer to the following page(s) \*\*\*\*\*\*\*\*\*\*\*\*\*\* To be continued\*\*\*\*\*\*

Signed for and on behalf of SGS-CSTC Ltd.

Civi Huang Xiamen Materials Lab Technical Supervisor

![](_page_37_Picture_10.jpeg)

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![](_page_38_Picture_0.jpeg)

No. : XMCCM140300198-3.1A Date : Jun.30, 2014 Page: 2 of 4

| No | Test items   | Test methods                                 | Requirement in EN 15102:2007+A1:2011   | Test results   | Verdict                  |      |
|----|--|--|--|--|--------------------------|------|
| 1  | Vinyl chloride monomer<br>(VCM)<br>(mg/kg)   | With reference to<br>EN 12149:1997<br>Test B | Max. value 0,2mg/kg  | ND   | Pass                     |      |
| 2  | Heavy metals and<br>specific elements With reference to<br>EN 12149:1997<br>Test A |  | Heavy metals and<br>specific elements With reference to<br>EN 12149:1997<br>Test A | Heavy metals and<br>specific elementsWith reference to<br>EN 12149:1997<br>Test AMax.value in mg/kg,<br>where relevant<br>See the following detail | See the following detail | Pass |
| 3  | Thermal conductivity<br>(W/(m·K))  | EN 40007/0004)                               | Declared   | 0.0590   | SP                       |      |
| 4  | Thermal resistance<br>(m <sup>2</sup> ·K/W)  | EN 12667(2001)                               | Declared   | 0.0568   | SI'                      |      |

Summary of test results:

Note: 1. ND= Not Detected (< MDL)

2. All the test items were carried out by a SGS laboratory.

\*\* To be continued\*\*\*

![](_page_38_Picture_8.jpeg)

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![](_page_39_Picture_0.jpeg)

No. : XMCCM140300198-3.1A Date : Jun.30, 2014 Page: 3 of 4

### 1. VCM (vinyl chloride monomer)

Test Method: With reference to EN12149:1997, analysis was performed by HS-GC-MS.

| Test Item(s)                | Unit  | MDL | Test Result | Requirement in EN<br>15102:2007+A1:2011<br>(Max. value) |
|-----------------------------|-------|-----|-------------|---|
| VCM(Vinyl Chloride Monomer) | mg/kg | 0.1 | ND          | 0.2   |

### 2. Soluble heavy metal

Test Method: With reference to EN12149:1997. Analysis was performed by ICP-OES.

| Test Item(s)          | Unit  | MDL | Test Result | Requirement in EN<br>15102:2007+A1:2011<br>(Max. value) |
|-----------------------|-------|-----|-------------|---|
| Soluble Lead (Pb)     | mg/kg | 5   | ND          | 90  |
| Soluble Antimony (Sb) | mg/kg | 5   | ND          | No upper limit  |
| Soluble Arsenic (As)  | mg/kg | 5   | ND          | 25  |
| Soluble Barium (Ba)   | mg/kg | 10  | 78          | 500   |
| Soluble Cadmium (Cd)  | mg/kg | 5   | ND          | 25  |
| Soluble Chromium (Cr) | mg/kg | 5   | ND          | 60  |
| Soluble Mercury (Hg)  | mg/kg | 5   | ND          | 20  |
| Soluble Selenium (Se) | mg/kg | 10  | ND          | 165   |

### Remarks:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (<MDL)

\*\*\*\*\* To be continued\*\*\*\*\*\*\*

![](_page_39_Picture_14.jpeg)

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![](_page_40_Picture_0.jpeg)

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### 3. Thermal Conductivity & Thermal Resistance

Test Method:

EN 12667(2001) Thermal performance of building materials and products -Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance.

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| Test Equipment               |   | Thermal Conductivity Tester<br>Model: HFM-436/3/1  |
|------------------------------|---|--|
| Lab Environmental Conditions |   | Ambient Temperature: $(23 \pm 2)^{\circ}$<br>Relative humidity: $(50 \pm 10)^{\circ}$  |
| Test Conditioning            |   | <ol> <li>The Thickness of the test : 0.3350 cm</li> <li>Mean temperature : 24.81 °C</li> <li>Delta T : 12.05 °C</li> <li>Temperature gradient: 3596.72 °K/m</li> </ol> |
| Test Result                  | Thermal Conductivity (W/m · K)            | 0.0590   |
|                              | Thermal Resistance (m <sup>2</sup> · K/W) | 0.0568   |

### Photo Appendix:

![](_page_40_Picture_9.jpeg)

SGS authenticate the photos on original report only Note: This report is to supersede test report No. XMCCM140300198-3.1. \*\*\*\*End of report\*\*\*\*\*

![](_page_40_Picture_11.jpeg)

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