



Certificate of Compliance

This certificate is issued for the following:

FOAMGLAS® T4+, FOAMGLAS® S3, FOAMGLAS® F,
FOAMGLAS® READY BLOCK T4+, FOAMGLAS® READY BOARD T4+,
and FOAMGLAS® READY BOARD G2 T4+

Prepared for:

PCE - Pittsburgh Corning Europe nv
Albertkade 1
Tessenderlo B3980
Belgium

FM Approvals Class: 4470

Approval Identification: 3051733

Approval Granted: 1/26/2016

To verify the availability of the Approved product, please refer to www.roofnav.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in RoofNav, an online resource of FM Approvals.

A handwritten signature in dark ink that reads 'Cynthia E. Frank'.

Cynthia Frank
AVP - Manager of Materials
FM Approvals
1151 Boston-Providence Turnpike
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APPROVAL REPORT

Project No: 3051733
Class: 4470
Product Names: FOAMGLAS® T4+, FOAMGLAS® S3, FOAMGLAS® F, FOAMGLAS® READY BLOCK T4+, FOAMGLAS® READY BOARD T4+, and FOAMGLAS® READY BOARD G2 T4+ Roof Insulations
Name of Listing Company: PCE-Pittsburgh Corning Europe nv
Address of Listing Company: Albertkade 1
Tessengerlo B3980
Belgium
Customer ID: 1000001917-2
Customer website: www.amcham.be/company/pittsburgh-corning-europe-nv

Prepared by

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Phillip Smith
AVP, Principal Engineer - Materials Group

Cynthia E. Frank
AVP, Manager of Materials

1/26/2016

Date of Approval

1 INTRODUCTION

- 1.1 PCE-Pittsburgh Corning Europe nv submitted samples of their new FOAMGLAS® T4+, FOAMGLAS® S3, FOAMGLAS® F, and FOAMGLAS® READY BLOCK T4+ roof insulations to determine if they meet the Approval requirements of the Standards listed in Section 1.4, when installed in the same manner as their previously Approved FOAMGLAS Blocks roof insulation.
- 1.2 PCE-Pittsburgh Corning Europe nv submitted samples of their new FOAMGLAS® READY BOARD T4+ roof insulation to determine if they meet the Approval requirements of the Standards listed in Section 1.4, when installed in the same manner as their previously Approved FOAMGLAS Ready Board roof insulation.
- 1.3 PCE-Pittsburgh Corning Europe nv submitted samples of their new FOAMGLAS® READY BOARD G2 T4+ roof insulations to determine if they meet the Approval requirements of the Standards listed in Section 1.4, when installed in the same manner as their previously Approved FOAMGLAS Roof Board G2 T4+ roof insulation.
- 1.4 This report may be freely reproduced only in its entirety and without modification.

1.5 Standards

Title	Number	Issue Date
Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Noncombustible Roof Deck Construction	4470	6/2012
American National Standard for Evaluating the Simulated Wind Uplift Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures	4474	3/2004 (R2010)

1.6 Listing

The products and assemblies will be listed in RoofNav, an on-line resource of FM Approvals. Formulations, drawings and specifications are on file at FM Approvals.

2 DESCRIPTIONS

- 2.1 FOAMGLAS® T4+ roof insulation consists of an expanded glass core with no facers. The boards have a density of 115 kg/m³ (7.2 lb/ft³), measure 600 x 450 mm (23.6 x 17.7 in.), and are manufactured in thickness of 40 – 180 mm (1.6 – 7.1in.).
- 2.2 FOAMGLAS® S3 roof insulation consists of an expanded glass core with no facers. The boards have a density of 130 kg/m³ (8.1 lb/ft³), measure 600 x 450 mm (23.6 x 17.7 in.), and are manufactured in thickness of 40 – 180 mm (1.6 – 7.1in.).
- 2.3 FOAMGLAS® F roof insulation consists of an expanded glass core with no facers. The boards have a density of 165 kg/m³ (10.3 lb/ft³), measure 600 x 450 mm (23.6 x 17.7 in.), and are manufactured in thickness of 40 – 160 mm (1.6 – 6.3 in.).
- 2.4 FOAMGLAS® READY BLOCK T4+ roof insulation consists of an expanded glass core. The top of the board is provided with a black modified bitumen top facer. The bottom of the board has no facer. The boards have a density of 115 kg/m³ (7.2 lb/ft³), measure

1200 x 600 mm (47.2 x 23.6 in.), and are manufactured in thickness of 40 – 180 mm (1.6 – 7.1in.).

2.5 FOAMGLAS® READY BOARD T4+ roof insulation consists of an expanded glass core. The top of the board is provided with a black modified bitumen top facer. The bottom of the board is provided with a white glass fiber facer. The boards have a density of 115 kg/m³ (7.2 lb/ft³), measure 1200 x 600 mm (47.2 x 23.6 in.), and are manufactured in thickness of 40 – 180 mm (1.6 – 7.1in.).

2.6 FOAMGLAS® READY BOARD G2 T4+ roof insulation consists of an expanded glass core with white glass fiber top and bottom facers. The boards have a density of 115 kg/m³ (7.2 lb/ft³), measure 1200 x 600 mm (47.2 x 23.6 in.), and are manufactured in thickness of 40 – 180 mm (1.6 – 7.1in.).

2.7 All other products are as described in RoofNav.

3 EXAMINATIONS AND TESTS

3.1 All components, except those in Sections 2.1 – 2.5, were produced under the FM Approvals Surveillance Audit program as indicated by FM Approvals labels. All samples were considered to be representative of standard production and were examined and tested as indicated below. Components incorporated into test samples were selected by FM Approvals personnel. Test samples were prepared by, or under the supervision of, FM Approvals personnel. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.

3.2 Several performance requirements and tests required by the Standard have been waived due to previous successful testing. See Table 1 below for details.

TABLE 1	
FM Standard 4470 Performance Requirement	Original Project ID(s)
Combustibility From Above the Roof Deck	<p><u>Siplast Inc. Roof Covers:</u> 0C8A0.AM, 0P4A7.AM, 0T0A2.AM, 3B5A0.AM, 3B7A2.AM, 1T5A8.AM, & 3026320</p> <p><u>Soprema Inc. (USA) Roof Covers:</u> 2P2A7.AM, 0P7A2.AM, 1W18A1.AM, 3B1A0.AM, 3028631, 3029098, 3044630, 3045101, 3045734, & 3002351</p> <p><u>Dergibum Americas, Inc. Roof Covers:</u> 2Y3A2.AM, 3024750, 3044067, 3017037, 3038554, & 3049890</p>
Combustibility From Below the Roof Deck	Included
Hail Damage Resistance Test	Waived ¹
Water Leakage Resistance Test	Waived ¹
Foot Traffic Resistance Test	Included
Susceptibility to Heat Damage Test	Included
Corrosion Resistance Test	Waived ²
Wind Uplift Resistance	Included

¹ All roof covers are Approved for the OEM, all roof covers included are FM Approved by FM Approvals and have been previously tested in accordance with FM Approvals Standard 4470.

² All fasteners are Approved for the OEM, no new fasteners included.

4 MARKING

- 4.1 The manufacturer shall mark each product and/or packaging with the manufacturer's name and product trade name. In addition, product and/or packaging must be marked with the Approval Mark of FM Approvals.
- 4.2 Markings denoting Approval by FM Approvals shall be applied by the manufacturer only within and on the premises of manufacturing locations that are under the FM Approvals Surveillance Audit program.
- 4.3 The manufacturer agrees that use of the FM Approvals name or Approval Mark is subject to the conditions and limitations of the Approval by FM Approvals. Such conditions and limitations must be included in all references to Approval by FM Approvals.

5 REMARKS

- 5.1 The securement of the roof system must be enhanced at the building corners and perimeter as outlined in FM Global Property Loss Prevention Data Sheet 1-29.
- 5.2 The roof cover must be installed using a roof perimeter flashing system Approved by FM Approvals. See RoofNav.

6 SURVEILLANCE AUDIT

The manufacturing facilities at the following location shall be visited on a routine basis. The facility processes and quality control procedures in place have been determined to be satisfactory to manufacture products identical to that tested and Approved. An FM Approved Products/Specification Tested Revision Request Form shall be submitted to FM Approvals for requesting to manufacture products at any additional or alternate manufacturing facilities which are not listed below.

Audit Location:

Albertkade 1
Tessengerlo B3980
Belgium

7 MANUFACTURER'S RESPONSIBILITIES

- 7.1 The manufacturer shall notify FM Approvals of any planned change in the Approved products, prior to general sale or distribution, using the FM Approved Products/Specification Tested Revision Request Form. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals.
- 7.2 To ensure compliance with his procedures in the field, the manufacturer shall supply to the installer such necessary instruction or assistance required to produce the desired performance achieved in the tests.

7.3 In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

8 DOCUMENTATION

The following document describes the new PCE-Pittsburgh Corning Europe nv FOAMGLAS® T4+, FOAMGLAS® S3, FOAMGLAS® F, FOAMGLAS® READY BLOCK T4+, FOAMGLAS® READY BOARD T4+, and FOAMGLAS® READY BOARD G2 T4+ roof insulations and is on file at FM Approvals.

Document Title	Issue Date
Surveillance Audit Manual	January 2016

9 CONCLUSIONS

9.1 Test results from this and previous programs indicate that the submitted products as evaluated, meet the requirements FM Approvals Standards listed in section 1.3 when installed as follows:

9.1.1 New FOAMGLAS® T4+, FOAMGLAS® S3, FOAMGLAS® F, and FOAMGLAS® READY BLOCK T4+ roof insulations: when installed in the same manner as the currently Approved FOAMGLAS Blocks roof insulation.

9.1.1.1 Meets wind rating of existing assemblies to a maximum Class 1-210 when adhered to substrate in concrete deck construction.

9.1.1.2 New FOAMGLAS® READY BOARD T4+ roof insulation: when installed in the same manner as the previously Approved FOAMGLAS Ready Board roof insulation.

9.1.2.1.1 Meets wind rating of existing assemblies to a maximum Class 1-165 when adhered to substrate in concrete deck construction.

9.1.1.3 New FOAMGLAS® READY BOARD G2 T4+ roof insulation: when installed in the same manner as the previously Approved FOAMGLAS Roof Board G2 T4+ roof insulation.

9.1.2.1.2 Meets wind rating of existing assemblies to a maximum Class 1-165 when adhered to substrate in concrete deck construction.

- 9.2 Tests show that the tested roof constructions in and of themselves would not create a need for automatic sprinklers.
- 9.3 Since a duly signed Master Agreement is on file for this customer, Approval is effective as of the date of this report.
- 9.4 Continued Approval will depend upon satisfactory field experience and periodic Facilities and Procedures Audits.

PROJECT DATA RECORD: 3051733
ORIGINAL TEST DATA: See Table 1 Above.