



# TEST REPORT

ISSUED BY **British Board of Agrément**  
DATE OF ISSUE **6 January 2016**  
SERIAL NUMBER **58056THD**

REPORT PREPARED BY

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AUTHORISED BY

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CLIENT: MMB Developments Ltd  
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JOB No: T958056

## 1 INTRODUCTION

The test specimen was produced by the client at the BBA on 23 November 2015 and described as Retrofoam 150 mm thickness urea formaldehyde foam cavity insulation, batch number 2300013673, foaming agent catalyst batch number C978401. The foam was sprayed into a 600 mm x 600 mm x 175 mm mould. Due to the freshly sprayed foam being very fragile the sample was stored in the mould for one week until it was firm enough to remove it without damage.

## 2 METHOD

Heat Flow Meter Method of ISO 8301 : 1991 and BS EN 12667 : 2001 using the BBA single specimen symmetric test facility designated K5.

Specimen thickness was measured in accordance with BS EN 12667 : 2001.

## 3 SPECIMEN PREPARATION

The test specimen was assigned the BBA designation number S257599/4 and stored in a well-ventilated position in an air-conditioned room at  $23 \pm 2^\circ\text{C}$ ,  $50 \pm 5\%$  RH until it had dried and constant mass was achieved. The specimen was milled flat to 150 mm thickness and tested.

## 4 MEASURED PROPERTIES

Thermal conductivity W/(m·K)	Thermal resistance m <sup>2</sup> ·K/W	Density kg/m <sup>3</sup>	Mean temperature (°C)
0.0365 ± 2.5%	4.13 ± 2.5%	22	10.2

**The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k=2$ , providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with ISO/IEC 17025:2005.**

This report provides traceability of measurement to recognised national standards, and to the units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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## 5 RESULTS

### Test details

Relative mass change during conditioning	9.30%
Cold face temperature	0.2°C
Hot face temperature	20.2°C
Average temperature difference across specimen	20.0 K
Relative mass change during test	9.80%
Average imposed specimen thickness	150.7 mm
Mean heat flux	4.85 W/m <sup>2</sup>
Direction of heat flux	Upwards
Interface medium	None
Applied load	4.5 kPa
Cold face emissivity	0.89
Hot face emissivity	0.89
Duration of test (hh:mm)	4:18
Duration of steady state (hh:mm)	2:30
Date of test completion	23 December 2015
Age of specimen (days)	30
Angle of orientation	0°

### Calibration details

Date of last verification Jan-16

Certified reference material

Type: Resin Bonded Glass Fibre Board, Ref: IRMM-440,  
Cal Date: 23 Dec 2008

## 6 COMMENTS

None

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## 7 REPORT CONDITIONS

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