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## BRITISH BOARD OF AGRÉMENT ASSESSMENT REPORT – V4

Ref: S265948

Engineered Foam Products  
Livingston. EH54 5DJ

EPS 70 Grey

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A handwritten signature in blue ink, appearing to read 'John Albon', is positioned above the 'Authorised by' text.

Prepared by:  
Martin Oxley – Principal Certification Scientist

Authorised by:  
John Albon – Head of Assurance

Date: 12<sup>th</sup> January 2023

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On behalf of the British Board of Agrément

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This Report only relates to the fitness for purpose of the EPS boards of the specific product, grade, and manufacturing location for inclusion in compatible EWIS installations and does not constitute or indicate any universal approval, Certification, or endorsement of the product.

**Client: Engineered Foam Products Ltd**

**Job Nos: S265948 & S165700**

**Report by: Martin Oxley**

**Work period: October 2020 to December 2022**

## **1 Introduction**

This report relates to Engineered Foam Products Ltd expanded polystyrene boards (EPS), for use in external wall insulation systems (EWIS). Engineered Foam Products Ltd. produce and supply flat EPS board products for use in conjunction with BBA-Certificated EWIS installations. This report is intended to provide well-founded confidence as to the fitness for purpose of the EPS boards, for inclusion in compatible EWIS installations, where the characteristics of the boards satisfy the system requirements.

It does not cover the use of the products in a particular EWIS system, which would require separate BBA assessment for the specific components incorporated.

## **2 Independently assessed characteristics**

The characteristics of the EPS 70 Grey boards, as given in Table 1, have been independently assessed and verified.

<i>Table 1 Characteristics</i>		
<i>Characteristic</i>	<i>Standard</i>	<i>Value</i>
EPS colour	-	Grey
Compressive stress (at 10% deformation)	EN 826	>70 kPa
Size	EN 822	1200 x 600 mm
Thickness	EN 823	20 to 200 mm
Thermal conductivity ( $\lambda_D$ )	EN 13163	0.030 ( $W \cdot m^{-1} \cdot K^{-1}$ )
Edge profile	-	Square
Density	EN 1602	16.5 $kg \cdot m^{-3}$ - nominal
Reaction to fire classification	EN 13501-1	Class E
Dimensional stability	EN 1604	DS(70,90)1
Shear strength	BS EN 12090	>65 kPa
Shear modulus	BS EN 12090	>850 kPa
Tensile strength perpendicular to face	BS EN 1607	>110 kPa
Water vapour transmission, $\mu$	EN 12086	20 – 40

## **3 Applicability of use**

The Engineered Foam Products Ltd EPS boards for EWIS installations are satisfactory for use in EWI Systems which are subject of a current BBA Agrément Certificate and where the characteristics listed in Table 1 meet or exceed the system requirements. At the request of the Certificate holder, the Engineered Foam Products Ltd board may be included in the system Quality Plan as an approved supplier.

## 4 Compliance with Building Regulations

In the opinion of the BBA, Engineered Foam Products Expanded Polystyrene (EPS) Insulation for External Wall Insulation Systems (EWIS), if installed as part of a BBA-Certificated EWIS system, can satisfy, or contribute to satisfying the relevant requirements of the following Building Regulations as part of a complete system.



### The Building Regulations 2010 (England and Wales) (as amended)

<b>Requirement:</b>	<b>A1</b>	<b>Loading</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which can sustain and transmit wind loads to the substrate wall.
<b>Requirement:</b>	<b>B3(4)</b>	<b>Internal fire spread</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which is restricted by this Requirement.
<b>Requirement:</b>	<b>B4(1)</b>	<b>External fire spread</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which is restricted by this Requirement.
<b>Requirement:</b>	<b>C2(c)</b>	<b>Resistance to moisture</b>
Comment:		The product forms part of an external wall insulation system (EWIS) and can contribute to minimising the risk of interstitial and surface condensation.
<b>Requirement:</b>	<b>L1(a)(i)</b>	<b>Conservation of fuel and power</b>
Comment:		The product can contribute to satisfying this Requirement
<b>Regulation:</b>	<b>7(1)</b>	<b>Materials and workmanship</b>
Comment:		The product can contribute to an external wall insulation system (EWIS) that is acceptable.
<b>Regulation:</b>	<b>7(2)</b>	<b>Materials and workmanship</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which is restricted by this Regulation.
<b>Regulation:</b>	<b>26</b>	<b>CO<sub>2</sub> emission rate for new buildings</b>
<b>Regulation:</b>	<b>26A</b>	<b>Fabric energy efficiency rates for new dwellings (applicable to England only)</b>
<b>Regulation:</b>	<b>26A</b>	<b>Primary energy consumption rates for buildings (applicable to Wales only)</b>
<b>Regulation:</b>	<b>26B</b>	<b>Fabric performance values for new dwellings (applicable to Wales only)</b>
<b>Regulation:</b>	<b>26C</b>	<b>Target primary energy rates for new buildings (applicable to England only)</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which can contribute to satisfying these Regulations.



### The Building (Scotland) Regulations 2004 (as amended)

<b>Regulation:</b>	<b>8(1)(2)</b>	<b>Fitness and durability of materials and workmanship</b>
Comment:		The product can contribute to a construction satisfying this Regulation.
<b>Regulation:</b>	<b>8(3)</b>	<b>Fitness and durability of materials and workmanship</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which is restricted by this Regulation.
<b>Regulation:</b>	<b>9</b>	<b>Building standards applicable to construction</b>
Standard:	<b>1.1</b>	<b>Structure</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which can sustain and transmit wind loads to the substrate wall.

Standard: Comment:	2.4	Cavities The product forms part of an external wall insulation system (EWIS) which is restricted by this Standard, with reference to clauses 2.4.2 <sup>(1)(2)</sup> .
Standard: Comment:	2.6	Spread to neighbouring buildings The product is restricted by this Standard, with reference to clauses 2.6.4 <sup>(1)(2)</sup> , 2.6.5 <sup>(1)</sup> and 2.6.6 <sup>(2)</sup> .
Standard: Comment:	2.7	Spread on external walls The product forms part of an external wall insulation system (EWIS) which is restricted by this Standard and is acceptable for use more than one metre from a boundary, with reference to clauses 2.7.1 <sup>(1)(2)</sup> and 2.7.2 <sup>(2)</sup> and Annex 2A <sup>(1)</sup> .
Standard: Comment:	3.15	Condensation The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 <sup>(1)(2)</sup> , 3.15.4 <sup>(1)(2)</sup> and 3.15.5 <sup>(1)(2)</sup> .
Standard: Standard: Comment:	6.1(b) 6.2	Carbon dioxide emissions Buildings insulation envelope The product can contribute to a system satisfying these Standards, with reference to clauses (or parts of) 6.1.1 <sup>(1)</sup> , 6.1.2 <sup>(1)(2)</sup> , 6.1.3 <sup>(1)(2)</sup> , 6.1.6 <sup>(1)</sup> , 6.1.10 <sup>(2)</sup> , 6.2.1 <sup>(1)(2)</sup> , 6.2.3 <sup>(1)</sup> , 6.2.4 <sup>(2)</sup> , 6.2.5 <sup>(2)</sup> , 6.2.6 <sup>(1)</sup> , 6.2.7 <sup>(1)</sup> , 6.2.8 <sup>(2)</sup> , 6.2.9 <sup>(1)(2)</sup> , 6.2.10 <sup>(1)</sup> , 6.2.11 <sup>(1)</sup> , 6.2.12 <sup>(2)</sup> and 6.2.13 <sup>(1)(2)</sup> .
Standard: Comment:	7.1(a)(b)	Statement of sustainability The product can contribute to a system satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting the bronze level of sustainability as defined in this Standard. In addition, the system can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4 <sup>(1)(2)</sup> [Aspect 1 <sup>(1)(2)</sup> and 2 <sup>(1)</sup> ], 7.1.6 <sup>(1)(2)</sup> [Aspect 1 <sup>(1)(2)</sup> and 2 <sup>(1)</sup> ] and 7.1.7 <sup>(1)(2)</sup> [Aspect 1 <sup>(1)(2)</sup> ].
Regulation: Comment:	12	<b>Building standards applicable to conversions</b> All comments given under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



## The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation: Comment:	23(1)(a)(i)(iii)(b)(i)(ii)	<b>Fitness of materials and workmanship</b> The product can contribute to an external wall insulation system (EWIS) which is acceptable.
Regulation: Comment:	23(2)	<b>Fitness of materials and workmanship</b> The product forms part of an external wall insulation system (EWIS) which is restricted by this Regulation.
Regulation: Comment:	29	<b>Condensation</b> The product can contribute to minimising the risk of interstitial condensation.

<b>Regulation:</b>	<b>30</b>	<b>Stability</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which can sustain and transmit wind loads to the substrate wall.
<b>Regulation:</b>	<b>35(4)</b>	<b>Internal fire spread</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which is restricted by this Regulation.
<b>Regulation:</b>	<b>36(a)</b>	<b>External fire spread</b>
Comment:		The product forms part of an external wall insulation system (EWIS) which is restricted by this Regulation.
<b>Regulation:</b>	<b>39(a)(i)</b>	<b>Conservation measures</b>
<b>Regulation:</b>	<b>40</b>	<b>Target carbon dioxide emission rate</b>
<b>Regulation:</b>	<b>43B</b>	<b>Nearly zero-energy requirements for new buildings</b>
Comment:		The product can contribute to satisfying these Regulations.

**End of report**