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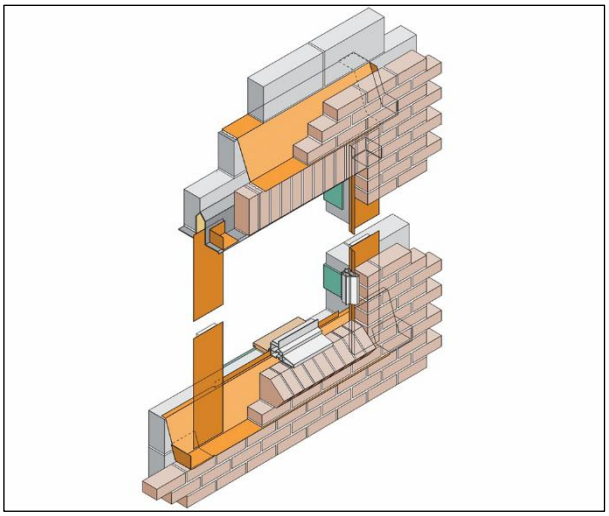
Agrément Certificate
97/3310
Product Sheet 1 Issue 5

IKO INSULATED DPCs

HYLOAD INSULATED DPC

This Agrément Certificate Product Sheet(1) relates to Hyload Insulated DPC, a polymeric damp-proof course (DPC) with insulation adhered, for use where a cavity is closed around window and door openings. The product does not constitute a cavity barrier against the penetration of smoke and flame.

(1) Hereinafter referred to as 'Certificate'.



The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review

KEY FACTORS ASSESSED

Section 1. Mechanical resistance and stability
Section 2. Safety in case of fire
Section 3. Hygiene, health and the environment
Section 4. Safety and accessibility in use
Section 5. Protection against noise
Section 6. Energy economy and heat retention
Section 7. Sustainable use of natural resources
Section 8. Durability

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Fifth issue: 13 February 2025
Originally certified on 24 February 1997

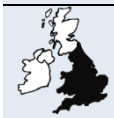
Hardy Giesler
Chief Executive Officer

SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Hyload Insulated DPC, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



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

Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The product can contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	**C2(c)**	**Resistance to moisture**
Comment:		The product can contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	**L1(a)(i)**	**Conservation of fuel and power**
Comment:		The product can contribute to satisfying this Requirement. See section 6 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**25B**	**Nearly zero-energy requirements for new buildings**
Regulation:	**26**	**CO_2 emission rates for new buildings**
Regulation:	**26A**	**Fabric energy efficiency rates for new dwellings (applicable to England only)**
Regulation:	**26A**	**Primary energy rates for new buildings (applicable to Wales only)**
Regulation:	**26B**	**Fabric performance values for new dwellings (applicable to Wales only)**
Regulation:	**26C**	**Target primary energy rates for new buildings (applicable to England only)**
Regulation:	**26C**	**Energy efficiency rating (applicable to Wales only)**
Comment:		The product can contribute to satisfying these Regulations. See section 6 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Fitness and durability of materials and workmanship**
Comment:		The product can contribute to a construction satisfying this Regulation. See sections 8 and 9 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product can contribute to satisfying this Standard, with reference to clause 3.10.1[(1)(2)]. See section 3 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product can contribute to satisfying this Standard, with reference to clauses 3.15.1[(1)(2)], 3.15.4[(1)(2)] and 3.15.5[(1)(2)]. See section 3 this Certificate.
Standard:	6.1(b)(c)	Energy demand
Comment:		The product can contribute satisfying this Standard, with reference to clauses 6.1.1[(1)] and 6.1.2[(2)]. See section 6 of this Certificate.

Standard: Comment:	6.2	Building insulation envelope The product can contribute to satisfying this Standard, with reference to clauses 6.2.3(1), 6.2.4(2), 6.2.6(1), 6.2.7(2), 6.2.8(1), 6.2.9(1)(2), 6.2.10(2), 6.2.11(1)(2) and 6.2.12(1). See section 6 of this Certificate.
Standard: Comment:	7.1(a)(b)	Statement of sustainability The product can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the product can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4(1), 7.1.6(1)(2), 7.1.7(1), 7.1.9(2) and 7.1.10(2). See section 6 of this Certificate.
Regulation: Comment:	**12**	**Building standards – conversion** All comments given for the product under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1(1)(2) and Schedule 6(1)(2). (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)**	**Fitness of materials and workmanship** The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation: Comment:	**28(b)**	**Resistance to moisture and weather** The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation: Comment:	**29**	**Condensation** The product can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation Comment:	**39(a)(i)**	**Conservation measures** The product can contribute to satisfying this Regulation. See section 6 of this Certificate.
Regulation: **Regulation:** Comment:	**40(2)** **43B**	**Target carbon dioxide emission rate** **Nearly zero-energy requirements for new buildings** The product can contribute to satisfying these Regulations. See section 6 of this Certificate.

Additional Information

NHBC Standards 2025

In the opinion of the BBA, Hyload Insulated DPC, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, 6.1 External masonry walls.

Fulfilment of Requirements

The BBA has judged Hyload Insulated DPC to be satisfactory for use as described in this Certificate. The product has been assessed for use with timber, PVC-U or metal window and door frames, to provide an insulated DPC at areas where a cavity wall is closed. The product does not constitute a cavity barrier against the penetration of smoke and flame.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment. Hyload Insulated DPC consists of an insulation bonded to a strip of a polymeric DPC.

The DPC strip overlaps the insulation at both edges to allow for the extension of the DPC into the window or door and cavity.

The product has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Value
DPC	Hyload Trade(1)
insulation type	Cross-linked polyethylene foam
insulation thickness (mm)	17
DPC thickness (mm)	0.9
length (m)	8
DPC x insulation width (mm)	165 x 100, 180 x 100, 225 x 140

(1) The DPC is the subject of BBA Certificate 95/3133, Product Sheet 3.

Ancillary Items

Hyload DPC Jointing Tape is a 100 mm wide double-sided adhesive tape, protected on both sides by silicone release paper, used for jointing lengths of the DPC, and is essential to use with the product and has been assessed with the product.

Product assessment – key factors

The product was assessed for the following key factors, and the outcome of the assessment is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Structural performance

1.1.1 The product is non-load bearing.

1.1.2 Use of the product does not obviate the need for conventional wall ties around the openings.

1.1.3 Lintels are required above window and door openings.

1.1.4 Window and door frames must be fixed to the masonry by conventional means.

1.1.5 The product will not have an adverse effect on the structural stability of brickwork or blockwork walls constructed in the conventional manner in accordance with normal good practice, as defined in the Standards listed in section 9.1.2 of this Certificate.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

The Certificate holder has not declared a reaction to fire classification to BS EN 13501-1 : 2018 for the product.

2.2 Resistance to fire

The product does not constitute a cavity barrier against the penetration of smoke and flame. Therefore, it must be used in conjunction with cavity barriers where required and in accordance with the requirements defined in the documents supporting the national Building Regulations.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Properties in relation to water

3.1.1 The result of a resistance to water transmission tests is given in Table 2.

Table 2 Resistance to water transmission

Product assessed	Assessment method	Requirement	Result
Hyload Trade DPC Membrane	Resistance to water transmission under pressure to BS EN 1928 : 2000	2 kPa	Pass

3.1.2 On the basis of data assessed, the product forms an effective vertical DPC at the jambs of the opening. The use of a cavity tray may be required at the head of an opening to provide additional protection.

3.1.3 The window jambs and sills frame-to-wall gap must not exceed the DPC element thickness, so that effective damp-resistant contact can be made with the window frame or frame rebate.

3.1.4 The product can be used with a check reveal detail. This feature will provide enhanced resistance to water penetration and is conventional practice in Scotland and Northern Ireland. The use of the product in these situations may require the use of non-standard sizes and must be discussed with the Certificate holder, although such advice is outside the scope of this Certificate.

3.2 Condensation

3.2.1 The results of a water vapour permeability test is given in Table 3.

Table 3 Water vapour permeability

Product assessed	Assessment method	Requirement	Result
Hyload Trade DPC Membrane	Water vapour permeability to BS 3177 : 1959	Value achieved	1.57 $g \cdot m^{-2} \cdot 24h^{-1}$

3.2.2 Example junctions incorporating the product were assessed for the minimum temperature factor and the results are given in Table 4.

Table 4 Minimum temperature factors(1)

Products assessed	Assessment method	Requirement	Result (f_{RSI})
Hyload Insulated DPC	BS EN ISO 10211 : 2017	≥ 0.75 for dwellings	0.857

(1) The modelling was based on the following construction and an adiabatic boundary at the window frame location, set back 30 mm into the wall cavity:
- 102.5 mm standard brickwork (λ = 0.77 $W \cdot m^{-1} \cdot K^{-1}$)
- full filled insulation in the cavity (λ = 0.034 $W \cdot m^{-1} \cdot K^{-1}$)
- 100 mm Aircrete block (λ = 0.15 $W \cdot m^{-1} \cdot K^{-1}$)
- uPVC extrusion ((λ = 0.13 $W \cdot m^{-1} \cdot K^{-1}$)
- 15 mm dense plaster (λ = 0.25 $W \cdot m^{-1} \cdot K^{-1}$)
- DPC (λ = 0.13 $W \cdot m^{-1} \cdot K^{-1}$)
- 17 mm thick polyethylene foam insulation (λ_D = 0.039 $W \cdot m^{-1} \cdot K^{-1}$)
- mortar λ = 0.94 $W \cdot m^{-1} \cdot K^{-1}$).

3.2.3 On the basis of data assessed, the construction in Table 4 can contribute to limiting the risk of local surface condensation. The performance of other junctions must be determined in accordance with the requirements of the documents supporting the national Building Regulations.

3.2.4 Under normal domestic conditions, the level of interstitial condensation associated with the product will be low and the risk of any resultant damage minimal.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Data were assessed for the following characteristics.

6.1 Thermal conductivity

The Certificate holder has declared a thermal conductivity of the polyethylene insulation as 0.039 $W \cdot m^{-1} \cdot K^{-1}$, but this value has not been independently validated by the BBA.

6.2 Thermal performance

6.2.1 Example junctions incorporating the product, using the core insulation conductivities given in section 6.1 were assessed for linear thermal transmittance and the result is given in Table 5.

Table 5 Linear thermal transmittance(1)

Product assessed	Assessment method	Requirement	Result - heat loss rates ψ-values (psi)
Hyload Insulated DPC	BS EN ISO 10211 : 2017, BRE Report BR 497 : 2016 and BRE IP 1/06	Value achieved	0.064 $W \cdot m^{-1} \cdot K^{-1}$

(1) The modelling was based on the following construction and an adiabatic boundary at the window frame location, set back 30 mm into the wall cavity:
- 102.5 mm standard brickwork (λ = 0.77 $W \cdot m^{-1} \cdot K^{-1}$)
- full filled insulation in the cavity (λ = 0.034 $W \cdot m^{-1} \cdot K^{-1}$)
- 100 mm Aircrete block (λ = 0.15 $W \cdot m^{-1} \cdot K^{-1}$)
- uPVC extrusion ((λ = 0.13 $W \cdot m^{-1} \cdot K^{-1}$)
- 15 mm dense plaster (λ = 0.25 $W \cdot m^{-1} \cdot K^{-1}$)
- DPC (λ = 0.13 $W \cdot m^{-1} \cdot K^{-1}$)
- 17 mm thick polyethylene insulation (λ_D = 0.039 $W \cdot m^{-1} \cdot K^{-1}$)
- mortar λ = 0.94 $W \cdot m^{-1} \cdot K^{-1}$).

6.2.2 On the basis of data assessed, the construction given in Table 5 can contribute to limiting heat loss.

6.2.3 The performance of other junctions must be determined in accordance with BS EN ISO 10211 : 2017 and BRE Report BR 497 : 2016, or the default junction performances permitted in the relevant national Building Regulations guidance must be adopted.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the product were assessed.

8.2 Specific test data were assessed as given in Table 6.

Table 6 Durability

Product assessed	Assessment method	Requirement	Result
Hyload Trade DPC Membrane	Low temperature flexibility to BS EN 1109 : 2013	Value achieved	-15°C

8.2.1 The tensile shear strength of joints, effect of water soak on joints, tensile strength/elongation at break, effect of ageing at high temperatures were assessed on the basis of existing test data for representative related products.

8.2.2 The product is compatible with all construction materials likely to be encountered. it is unaffected by water-based salt solution timber preservatives. Where there is doubt about the compatibility with materials in contact with the product, the advice of the Certificate holder's Technical Department must be sought, but such advice is outside the scope of this Certificate.

8.3 Service life

Under normal service conditions, the product will have a life equivalent to the structure in which it is incorporated, provided it is designed and installed in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Masonry walls into which the product is incorporated must be constructed in accordance with the national Building Regulations and one or more of the following technical specifications:

- BS 8000-0 : 2014
- BS 8000-3 : 2020
- BS EN 1996-1-1 : 2022 and its UK National Annex
- BS EN 1996-1-2 : 2024 and its UK National Annex
- BS EN 1996-2 : 2024 and its UK National Annex
- BS EN 1996-3 : 2023 and its UK National Annex
- PD 6697 : 2019.

9.1.3 Installation must follow normal good practice for the detailing of DPCs, in accordance with the relevant clauses of BS 8000-3 : 2020, BS 8000-4 : 1989, BS 8215 : 1991 and PD 6697 : 2019, BRE Digest 380 and the Certificate holder's instructions.

9.1.4 The inner surface of the window/door frame must be set back as appropriate to overlap the product.

9.1.5 The width of the insulation must be sufficient to cover the masonry cavity closer and avoid any risk of condensation through cold bridging.

9.1.6 Side projections of the DPC must project beyond the masonry closer into the cavity, and not be bridged by mortar. The DPC projection into the opening must be located within the frame, with the end projection always at the bottom.

9.1.7 The DPC must not be secured by nailing. When required, the product may be given temporary support by turning the material over onto the top of the blockwork and holding in position with masonry.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions.

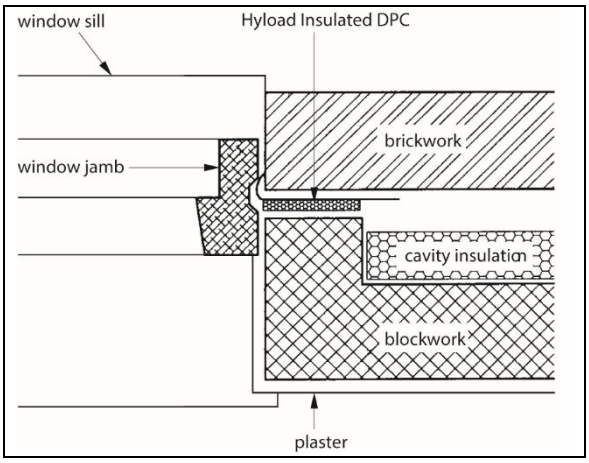
9.2.3 Installation can be carried out using traditional methods, with lengths cut to size on site using normal hand tools.

9.2.4 The product is sufficiently robust and flexible to allow manipulation and positioning within the cavity. However, care must be taken during site handling and cavity cleaning to avoid damaging the insulation and composite bond. If any significant damage occurs, the material must be replaced.

9.2.5 The cavity wall construction is built using conventional good practice, and return headers are installed as appropriate at openings for window and door frames.

9.2.6 The product is placed vertically in the cavity, with the insulation towards the inner leaf and aligned with the return header (see Figure 1).

Figure 1 Typical installation



9.2.7 The vertically installed DPC is dressed into the sill cavity tray, and located behind the head cavity tray or sealed to the soffit of the lintel.

9.2.8 The product is cut to the required length using a sharp knife.

9.2.9 Where lap joints occur, the DPC must overlap by a minimum of 100 mm, and the insulation strips must be tight-butted and the joint completely sealed using Hyload DPC Jointing Tape.

9.2.10 Door frames installed with proprietary fixings which cannot be set back into the wall cavity by 30 mm may require additional thermal insulation, eg insulated dry lining, to minimise excessive heat loss and the risk of excessive surface condensation, but such materials are outside the scope of this Certificate.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information to achieve the performance described in this Certificate. Installation of the product must be carried out by a competent contractor, familiar with this type of product.

9.4 Maintenance and repair

As the product is confined within the wall cavity and has suitable durability, maintenance is not required.

10 Manufacture

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the product is supplied in rolls, on pallets, in the quantities and packaging given in Table 7. Each roll has a label bearing the name of the Certificate holder's name, product name, product code, dimensions and the BBA logo incorporating the number of this Certificate.

Table 7 Packaging and quantity

Grade	Size (mm)	Quantity	Package type	Quantity per pallet
Hyload Insulated DPC	165	5	Polythene bags	45
	180	5	Polythene bags	45
	225	4	Polythene bags	36

11.2 Pallets must be stored under cover, away from direct sunlight.

† ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by BSI (Certificate Q05233).

Bibliography

BRE Digest 380 *Damp-proof courses*

BRE Information Paper IP 1/06 *Assessing the effects of thermal bridging at junctions and around openings*

BRE Report BR 497 : 2016 *Thermal performance of buildings*

BS 3177 : 1959 *Method for determining the permeability to water vapour of flexible sheet materials used for packaging*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*
BS 8000-3 : 2020 *Workmanship on construction sites — Code of practice for masonry*
BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8215 : 1991 *Code of practice for design and installation of damp-proof courses in masonry construction*

BS EN 1109 : 2013 *Flexible sheets for waterproofing — Bitumen sheets for roof waterproofing — Determination of flexibility at low temperature*

BS EN 1928 : 2000 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness*

BS EN 1996-1-1 : 2022 *Eurocode 6 — Design of masonry structures — General rules for reinforced and unreinforced masonry structures*
BS EN 1996-1-2 : 2024 *Eurocode 6 — Design of masonry structures — General rules — Structural fire design*
BS EN 1996-2 : 2024 *Eurocode 6 — Design of masonry structures — Design considerations, selection of materials and execution of masonry*
BS EN 1996-3 : 2023 *Eurocode 6 — Design of masonry structures — Simplified calculation methods for unreinforced masonry structures*

BS EN 13163 : 2012 *Thermal insulation products for buildings — Factory made expanded polystyrene (EPS) products — Specification*

BS EN 13166 : 2022 *Thermal insulation products for buildings — Factory made phenolic foam (PF) products — Specification*

BS EN ISO 9001 : 2015 + A1 : 2024 *Quality management systems — Requirements*

BS EN ISO 10211 : 2017 *Thermal bridges in building construction — Heat flows and surface temperatures — Detailed calculations*

PD 6697 : 2019 *Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2*

Conditions of Certificate

Conditions

1 This Certificate:

- relates only to the product that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product
- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.