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Agrément Certificate

14/5117

Product Sheet 2

WECRYL LIQUID APPLIED WATERPROOFING SYSTEMS

WECRYL R 230

This Agrément Certificate Product Sheet⁽¹⁾ relates to Wecryl R 230, a polymethyl methacrylate liquid-applied waterproofing system for use as a damp-proofing and waterproofing membrane on underground structures, and for the protection from radon from the ground.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Resistance to water and water vapour — the system provides an effective barrier to the passage of water under hydrostatic pressure and water vapour from the ground (see section 6).

Resistance to underground gases — the system will restrict the ingress of radon into the structure (see section 7).

Resistance to mechanical damage — the system will accept, without damage, the limited foot traffic and loads associated with installation and in service (see section 8).

Durability — the system, under normal service conditions, will provide an effective barrier to the transmission of moisture and will restrict the ingress of radon for the life of the structure in which it is incorporated (see section 10).

The BBA has awarded this Certificate to the company named above for the system described herein. This system 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 First issue: 6 July 2022

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.

The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers **MUST** check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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Regulations

In the opinion of the BBA, Wecryl R 230, 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 presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



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

Requirement:	C1(2)	Site preparation and resistance to contaminants
Comment:		The system can contribute to a structure satisfying the conditions of this Requirement. See sections 7.1 and 7.2 of this Certificate.
Requirement:	C2(a)	Resistance to moisture
Comment:		The system will enable a structure to satisfy this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The system is acceptable. See section 10.1 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Durability, workmanship and fitness of materials
Comment:		The system satisfies the requirements of this Regulation. See section 10.1 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.1	Site preparation — harmful and dangerous substances
Standard:	3.2	Site preparation — protection from radon gas
Comment:		The system can contribute to satisfying the requirements of these Standards with regard to the control of the effects of radon, with reference to clauses 3.1.2 ⁽¹⁾⁽²⁾ , 3.1.6 ⁽¹⁾⁽²⁾ , 3.1.7 ⁽¹⁾⁽²⁾ and 3.2.2 ⁽¹⁾⁽²⁾ . See sections 7.1 and 7.2 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		The system will enable a structure to satisfy the requirements of this Standard, with reference to clauses 3.4.1 ⁽¹⁾⁽²⁾ , 3.4.2 ⁽¹⁾⁽²⁾ and 3.4.5 ⁽¹⁾⁽²⁾ to 3.4.7 ⁽¹⁾⁽²⁾ . See section 6 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The system 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.
Regulation:	12	Building standards applicable to conversions
Comment:		Comments in relation to the system 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:	23(a)	Fitness of materials and workmanship
Comment:	(b)(i)	The system is acceptable. See section 10.1 and the <i>Installation</i> part of this Certificate.
Regulation:	26(1)(b)	Site preparation and resistance to contaminants
Comment:	26(2)	The system can contribute to a construction satisfying the requirements of this Regulation. See sections 7.1 and 7.2 of this Certificate.

Regulation:	28(a)	Resistance to moisture and weather
Comment:	The system will enable a structure to satisfy the requirements of this Regulation. See section 6 of this 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.

See section: 3 *Delivery and site handling* of this Certificate.

Additional Information

NHBC Standards 2022

In the opinion of the BBA, Wecryl R 230, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 4.1 *Land quality – managing ground conditions*, 5.1 *Substructure and ground-bearing floors*, Clause 5.1.20 *Damp-proofing concrete floors* and 5.4 *Waterproofing of basements and other below ground structures*.

Where Grade 3 protection is required and the below ground wall retains more than 600 mm measured from the top of the retained ground to the lowest finished floor level, the system should be used in combination with either Type B or C waterproofing protection, as defined in BS 8102 : 2009.

In addition, in the opinion of the BBA, the system, when installed and used in accordance with this Certificate can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards for Conversions and Renovations*, taking account of other relevant guidance within the chapter and the suitability of the substrate to receive the system.

Technical Specification

1 Description

1.1 Wecryl R 230 is a polymethyl methacrylate-based liquid-applied waterproofing system.

1.2 The system comprises the following components:

- Wecryl R 230 — a polymethyl methacrylate-based waterproofing resin available in Pebble Grey (RAL 7032) and Traffic Grey (RAL 7043). Other RAL colours are available on request
- Wecryl R 230 Thix — a thixotropic version of the standard resin. For use in detailing at upstands, corners, connections and other details, available in Pebble Grey (RAL 7032) and Traffic Grey (RAL 7043). Other RAL colours are available on request
- Wecryl R 230 TT — a low-temperature installation version of the standard resin, with a modified cure system. For use, to allow application between +25 and -15°C. Available in Pebble Grey (RAL 7032) – other RAL colours are available on request
- Wekat Catalyst — a polymethyl methacrylate-based catalyst, used with all three resin versions as a two-component system
- Weplus Fleece — a 110 g·m⁻² polyester fleece for use as a reinforcement
- Wecryl 112 Primer — a pigmented or non-pigmented primer based on a two-component fast-reactive polymethyl methacrylate resin, for the preparation of asphaltic and bituminous substrates
- Wecryl 176 Primer — a pigmented or non-pigmented primer based on a two-component fast-reactive and fast-curing polymethyl methacrylate resin, for the preparation of absorbent substrates such as concrete, screeds and timber.

1.3 The Certificate holder recommends the following ancillary items for use with the system, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- WMP 113 and WMP 174s Metal Primers — one-component, acrylate-based primers for metal substrates, available in grey
- Wecryl 333 Self-Levelling Mortar — for use in levelling rough substrates of less than 10 mm depth, levelling of gradients, and as additional protection in trafficked areas such as communal walkways
- Wecryl 842 Mortar — for use in levelling rough substrates of greater than 10 mm depth and levelling of gradients
- Wecryl 488 Finish — a pigmented surface sealant, based on polymethyl methacrylate, available in Stone Grey (RAL 7030), Pebble Grey (RAL 7032) Traffic Grey (RAL 7043) and Beige (RAL 1001). Other RAL colours are available on request
- Weplus Chips — an acrylate-based topping available in black, grey and white, for use on a surface sealant coat as decorative medium
- Wecryl 410 Textured Coating — a flexible, filled, surface finish based on polymethyl methacrylate, available in Stone Grey (RAL 7030), Pebble Grey (RAL 7032) and Traffic Grey (RAL 7043)
- Wecryl 810 Surfacers — for use in filling small cracks and joints in the substrate
- WestWood Cleaning Agent — for use in cleaning the substrate prior to the installation of the system
- Wecryl 198 Primer — a combination primer for interface details and upstands with changing substrate materials
- Wecryl 821 — a pre primer for mineral substrates
- Wecryl 171 Low-Viscosity Primer — a primer for mineral substrates
- Wethan 109 FPO Primer — a one-component primer used as a bonding agent between FPO and TPO
- Wecryl R 230 Spray — a polymethyl methacrylate-based waterproofing resin for waterproofing main areas, developed specifically for spray application
- Weproof 264/264 Thix — a low-odour polymethyl methacrylate-based waterproofing resin
- Weproof 269/269 Thix — a low-odour polymethyl methacrylate-based waterproofing resin
- Wecryl 260 GM — a polymethyl methacrylate-based waterproofing resin
- Wecryl 420 Roller-Applied Coating — for use as a finish layer for Wecryl systems
- Wecryl 402 Finish — a colourless, clear sealer for surfaces with topping
- Weseal 815 — a fibre-filled waterproofing product for sealing minor penetrations, eg screws
- protection boards and membranes to protect from backfilling operations.

2 Manufacture

2.1 The liquid components of the system are manufactured by batch blending processes.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out 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.

2.3 The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Dekra Certification GmbH (Certificate 80520375).

3 Delivery and site handling

3.1 The primer and waterproofing resin components of the system are delivered to site in metal buckets weighing 10 or 25 kg which are shrink-packed on pallets. Each bucket bears a label including the product's name, batch number, date of manufacture/expiry date and safety information. Wekat Catalyst for the resin components is supplied in a plastic bag or cardboard container attached to the resin container.

3.2 Resins should be stored in cool, dry conditions in unopened sealed containers away from chemicals and sources of ignition, out of direct sunlight and at a temperature between 0 and 25°C. When stored in accordance with the Certificate holder's instructions, the resins will have a minimum shelf-life of 12 months.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the system components under the *CLP Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Wecryl R 230.

Design Considerations

4 Use

4.1 Wecryl R 230 is satisfactory for use as a fully bonded Type A waterproofing protection, as defined in BS 8102 : 2009 for the waterproofing of underground structures and as a damp-proofing membrane for solid floors in accordance with the relevant clauses of CP 102 : 1973, Section 3.

4.2 The system can be used on concrete, steel, bituminous, timber and PVC substrates to provide an effective barrier to the transmission of liquid water where Grade 1 to 3 waterproofing protection is required, as defined in BS 8102 : 2009, Table 2.

4.3 Where Grade 3 waterproofing protection is required, the environment must be controlled by the use of ventilation, dehumidification and/or air conditioning, as appropriate, to ensure that dampness does not occur.

4.4 The system is also satisfactory for use as a gas-resistant membrane to restrict the ingress of radon into buildings from landfill and naturally occurring sources.

4.5 Buildings in areas of risk should be constructed in accordance with the recommendations of BRE Report BR 211 : 2015, and following the guidance set out in BS 8485 : 2015.

4.6 The system must always be fully protected as soon as possible after it is installed prior to backfilling, in accordance with the Certificate holder's instructions.

5 Practicability of installation

The system should only be installed by installers who have been trained and approved by the Certificate holder. The Certificate holder must be consulted for suitable installers.

6 Resistance to water and water vapour



The system will resist the passage of water under hydrostatic pressure and moisture from the ground and so satisfy the relevant requirements of the national Building Regulations.

7 Resistance to underground gases



7.1 The system will restrict the ingress of radon into buildings from landfill and naturally occurring sources, and satisfy the performance requirement for a gas-resistant membrane as defined in BS 8485 : 2015.

7.2 Measured radon gas permeability on Wecryl R 230 membrane is given in Table 1.

Table 1 Measured radon diffusion coefficient for Wecryl R 230

Gas	Method	Result
Radon	ISO/TS 11665-13 : 2017	$1.098 \cdot 10^{-12} \text{ m}^2 \cdot \text{s}^{-1}$

7.3 In the opinion of the BBA, the system satisfies the criteria for a radon gas-resistant membrane given in BRE Report BR 211 : 2015.

8 Resistance to mechanical damage

- 8.1 The system can accept the limited foot traffic and light loads associated with the installation without damage.
- 8.2 The system can be damaged by sharp objects and care must be taken with exposed surfaces during construction and back filling operations.
- 8.3 Where damage does occur, the system must be repaired (see section 13).
- 8.4 The system is capable of accepting minor structural movement while remaining watertight.
- 8.5 In areas where heavy pedestrian traffic is likely during installation, an additional coat of Wecryl 333 Self-Levelling Mortar is applied with a finish coat of Wecryl 488 Finish, in accordance with the Certificate holder's instructions.

9 Maintenance

As the system is confined within the structure and has suitable durability (see section 10), maintenance is not required. However, any damage occurring before enclosure must be repaired (see section 13).

10 Durability



10.1 The system, when fully protected, in normal service conditions, will remain effective against the ingress of water and water vapour, and will restrict the ingress of radon for the lifetime of the structure in which it is incorporated.

10.2 The system must be protected as soon as practicable after installation.

Installation

11 General

- 11.1 Wecryl R 230 must be installed in accordance with the relevant requirements of BS 8102 : 2009, CP 102 : 1973 Section 3, the Certificate holder's instructions and this Certificate. Additional guidance on the use of damp-proof membranes is given in BS 8000-0 : 2014 and BS 8000-4 : 1989.
- 11.2 Concrete structures should be designed and built in accordance with BS EN 1992-1-1 : 2004 and its UK National Annex.
- 11.3 Substrates to which the system is to be applied must be sound, clean and dry, and free from laitance, adhesion-reducing particles, ice and frost.
- 11.4 The substrate must also be free from sharp projections such as nail heads and concrete nibs. Power-floated concrete, cement slurry, dirt and grease must be shot blasted or mechanically abraded to help ensure the primer can penetrate into the surface. The Certificate holder's advice must be sought as to the suitability of the substrate to receive the system and for suitable cleaning procedures, including the use of a proprietary surface cleaner/HSE approved fungicidal wash where required.
- 11.5 Rough substrates must be made good using the appropriate levelling compound in accordance with the Certificate holder's instructions.
- 11.6 Defects such as large cracks must be repaired prior to application of the system in accordance with the Certificate holder's instructions.
- 11.7 Where necessary, substrate priming must be carried out using a sheepskin roller in accordance with the Certificate holder's instructions.

11.8 Installation should not be carried out during inclement weather (eg rain, fog or snow) or when the substrate or air or material temperature is outside of the range specified in Table 2. The substrate temperature must be at least 3°C above the dew-point during application and curing.

Table 2 Usage temperature ranges

Product	Temperature range (°C)		
	Air ambient	Substrate	Material
Wecryl R 230	-5 to +35	+3 to +50	+3 to +30
Wecryl R 230 Thix	-5 to +35	+3 to +50	+3 to +30
Wecryl R 230 TT	-15 to +25	-10 to +30	+3 to +20

11.9 Previously coated areas must be checked for integrity and adequate adhesion to the substrate. Adhesion checks must be carried out to ensure that the system is compatible with the existing surface. The Certificate holder must be consulted for details of suitable test methods and requirements before use. If the substrate requires preparing after bond testing, the appropriate methods (such as high pressure washing, captive shot blasting or other mechanical abrasive methods) can be used. Advice must be sought from the Certificate holder.

11.10 To assess the suitability of a substrate to receive the system, bond tests should be carried out generally in accordance with BS EN 1542 : 1999, in consultation with the Certificate holder. If bonding problems occur, advice should be sought from the Certificate holder.

11.11 Detailing should be carried out in accordance with the Certificate holder's instructions.

11.12 Expansion or construction joints must be additionally reinforced prior to the application of the main waterproofing layer, in accordance with the Certificate holder's instructions.

11.13 Following installation, the treated surface must be tested using a non-destructive test, eg holiday test, before the system is enclosed by backfilling. Damaged areas must be repaired in accordance with section 13.

11.14 The membrane must be protected with a suitable protection board prior to backfilling. The Certificate holder should be consulted for suitable products.

11.15 All equipment should be cleaned after use with WestWood Cleaning Agent.

12 Procedure

12.1 Wekat Catalyst must be mixed with the resin in accordance with the Certificate holder's instructions using a mixing tool with twin-paddle stirrer at the slow-speed setting, in the weight ratio specified in Table 3.

Table 3 Substrate temperature to percentage catalyst

Resin	Substrate temperature to percentage catalyst				
	-10 to 2°C	3 to 14°C	15 to 34°C	35 to 39°C	40 to 50°C
Wecryl R 230/Wecryl R 230 Thix	—	4%	2%	2%	1%
Wecryl R 230 TT	6%	4%	2%	—	—

Priming

12.2 The primer is applied to the prepared substrate using a sheepskin roller, smoothing trowel or finish roller.

12.3 Once the coating has cured, a second coat of primer should be applied to cover any defects, ensuring that a continuous pore free primer film is achieved.

12.4 The primer coat must be allowed to dry prior to overcoating with Wecryl R 230/-Thix/-TT waterproofing membrane, ensuring that any minimum/maximum drying times are observed in accordance with the Certificate holder's instructions.

Wecryl R 230/-Thix/-TT Waterproofing

12.5 Wecryl R 230/-Thix/-TT resin is applied using a sheepskin roller or brush at a minimum application rate of $1.5 \text{ kg}\cdot\text{m}^{-2}$ for the waterproofing of details, such as penetrations and expansion joints.

12.6 Weplus Fleece is immediately applied into the wet resin and embedded using a sheepskin roller, ensuring that any trapped air pockets are removed.

12.7 A second layer of Wecryl R 230/-Thix/-TT resin is applied (wet in wet) at a minimum application rate of $1 \text{ kg}\cdot\text{m}^{-2}$, ensuring that the fleece is saturated. Typical application rates for various situations are:

- | | |
|--|--------------------------------------|
| • smooth substrates | $2.5 \text{ kg}\cdot\text{m}^{-2}$ |
| • fine-grained substrates | $3 \text{ kg}\cdot\text{m}^{-2}$ |
| • rough substrates | $3.5 \text{ kg}\cdot\text{m}^{-2}$ |
| • below Wecryl 488 Finish/Wecryl 333 Self-Levelling Mortar | $2.5 \text{ kg}\cdot\text{m}^{-2}$. |

12.8 Fleece overlaps must be at least 5 cm wide.

12.9 If existing expansion joints have to be waterproofed, a joint tape and two layers of waterproofing with fleece reinforcement are applied along the centre of the joint.

12.10 The main area is waterproofed in the same way as the details and these are integrated with a minimum fleece overlap of 5 cm.

12.11 Under loose-laid surfacing supplied by others (eg stone slabs or timber flooring), once the waterproofing has cured, an additional layer of Wecryl R 230/-Thix/-TT resin is applied at a minimum application rate of $1.5 \text{ kg}\cdot\text{m}^{-2}$. This protects the waterproofing layer from the mechanical loads of the surfacing supplied by others.

12.12 Under fully bonded surfacing supplied by others (eg tiles), once the waterproofing has cured, an additional layer of Wecryl R 230/-Thix/-TT resin is applied at a minimum application rate of $1.5 \text{ kg}\cdot\text{m}^{-2}$ and topped with a generous amount of fire-dried quartz sand while still wet. The topping gives the surface the necessary roughness that allows the subsequent surfacing supplied by others to be bonded onto the base.

12.13 If work is interrupted or when it is completed, the tools must be cleaned thoroughly with WestWood Cleaning Agent within the pot life of the material (approximately 10 minutes), using a brush.

12.14 Once installed, the membrane should be inspected, including the use of an appropriate integrity test agreed with the Certificate holder. Any damage to the membrane must be repaired in accordance with section 13.

13 Repair

13.1 Any damage to the system must be repaired as soon as possible to ensure that the integrity of the waterproofing is maintained.

13.2 Minor damage to the system can be repaired by cleaning back to the unweathered material and recoating the damaged area with the membrane at the appropriate application rate stated in section 12.

14 Tests

Tests were carried out on samples of Wecryl R 230 and the results assessed to determine:

- watertightness (60 kPa)
- resistance to water penetration.

15 Investigations

15.1 An evaluation was made of the results of independent test data regarding radon gas permeability.

15.2 Existing test data were reviewed relating to:

- tensile strength and elongation
- water vapour diffusion resistance coefficient (μ)
- tensile bond strength on concrete, steel, bitumen sheet, timber and plastic
- dynamic indentation
- static indentation
- resistance to fatigue cycling
- resistance to low temperatures
- resistance to high temperatures
- heat ageing
- resistance to UV ageing
- resistance to water exposure at 60°C
- the effect of application temperatures
- the effect of day joints
- water exposure

15.3 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

Bibliography

BRE Report BR 211 : 2015 *Radon — Guidance on protective measures for new buildings*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*

BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8102 : 2009 *Code of practice for protection of below ground structures against water from the ground*

BS 8485 : 2015 + A1 : 2019 *Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings*

BS EN 1542 : 1999 — *Products and systems for the protection and repair of concrete structures — Test methods — Measurement of bond strength by pull-off*

BS EN 1992-1-1 : 2004 + A1 : 2014 *Eurocode 2 Design of concrete structures — General rules and rules for buildings*

NA + A2 : 14 to BS EN 1992-1-1 : 2004 + A1 : 2014 UK National Annex to *Eurocode 2: Design of concrete structures — General rules and rules for buildings*

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

CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*

ISO/TS 11665-13 : 2017 *Measurement of radioactivity in the environment - Air: radon 222 - Determination of the diffusion coefficient in waterproof materials - membrane two-side activity concentration test method*

17 Conditions

17.1 This Certificate:

- relates only to the product/system 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
- is valid only within the UK
- 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
- is subject to English Law.

17.2 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.

17.3 This Certificate will remain valid for an unlimited period provided that the product/system 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.

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

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

17.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system 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.