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Agrément Certificate 05/4250

Product Sheet 1

# **WICKES ROOFLINE SYSTEMS**

# **WICKES PVC-UE ROOFLINE SYSTEM**

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to the Wickes PVC-UE Roofline System, comprising white fascia, soffit and barge boards, soffit ventilator and accessories, for external use at the roofline as a substitute for timber or other conventional materials, and suitable for new and existing domestic and non-domestic buildings.

(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<sup>†</sup>
- formal three-yearly review.<sup>†</sup>

#### **KEY FACTORS ASSESSED**

**Ventilation** — the ventilated soffit board can contribute towards providing the necessary roof space ventilation (see section 6).

**Strength and stability** — in terms of wind loading resistance, the system can be used in all areas of the UK (see section 7).

**Performance in relation to fire** — the cellular boards achieve a Class 1/Class 1Y surface spread of flame classification when tested in accordance with BS 476-7: 1997 (see section 8).

**Durability** — the system will retain its impact resistance and its decorative function for a period in excess of 35 years with only minor changes in surface appearance (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: 10 August 2020

Originally certificated on 14 September 2005

Q.l

Chief Executive Officer

Hardy Giesler

This Certificate was amended on 22 May 2024 as part of a transition of The BBA Agrément Certificate scheme delivered under the BBA's ISO/IEC 17020 accreditation. This Certificate was issued originally under accreditation to ISO/IEC 17020 format will take place at the next Certificate review. The BBA is a UKAS accredited inspection Body (No.4345). Readers MUST check the validity 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 must not be relied upon.

**British Board of Agrément** 

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# Regulations

In the opinion of the BBA, the Wickes PVC-UE Roofline System, 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:

C2(b) Resistance to moisture

Comment: The system will contribute to providing protection against the penetration of moisture to

the inner surface of the building on which it is installed. See section 4.1 of this

Certificate.

Requirement:

C2(c) Resistance to moisture

Comment: The soffit ventilators can contribute to enabling a roof to satisfy this Requirement. See

sections 6.1 to 6.4 of this Certificate.

Regulation: 7(1) Materials and workmanship

Comment: The system is acceptable. See section 10.1 and the *Installation* part of this Certificate.

Regulation: 7(2) Materials and workmanship

Comment: The system may be restricted in some cases by this Regulation. See section 8.1 of this

Certificate.



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

Regulation: 8(1)(2) Durability, workmanship and fitness of materials

Comment: The system is acceptable. See sections 9 and 10.1 and the *Installation* part of this

Certificate.

Regulation: 9 Building standards applicable to construction

Standard: 3.10 Precipitation

Comment: The system will contribute to satisfying this Standard with reference to clause 3.10.1<sup>(1)(2)</sup>,

by giving protection against the penetration of moisture to the inner surface of the

building on which it is installed. See section 4.1 of this Certificate.

Standard: 3.15 Condensation

Comment: The soffit ventilators can contribute to enabling a roof to satisfy this Standard, with

reference to clauses  $3.15.1^{(1)(2)}$ ,  $3.15.3^{(1)(2)}$ ,  $3.15.5^{(1)(2)}$  and  $3.15.7^{(1)(2)}$ . See sections 6.1 to

6.4 of this Certificate.

Regulation: 12 Building standards applicable to conversions

Comment: All comments given for 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 Fitness of materials and workmanship

Comment: The system is acceptable. See section 10.1 and the *Installation* part of this Certificate.

Regulation: 28 Resistance to ground moisture and weather

Comment: The system will contribute to providing protection against the penetration of moisture to

the inner surface of the building on which it is installed. See section 4.1 of this

Certificate.

Regulation: 29 Condensation

Comment: The soffit ventilators can contribute towards enabling a roof to satisfy the requirements

of this Regulation. See sections 6.1 to 6.4 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 sections: 3 Delivery and site handling (3.2) and 12 General (12.3 and 12.7) of this Certificate.

#### **Additional Information**

#### **NHBC Standards 2020**

In the opinion of the BBA, the Wickes PVC-UE Roofline System, 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 7.1 *Flat roofs and* balconies and 7.2 *Pitched roofs*.

# **Technical Specification**

# 1 Description

1.1 The Wickes PVC-UE Roofline System comprises a range of white cellular PVC-U (PVC-UE) fascia and barge boards (see Figure 1), plain and vented soffits (see Figure 2) and ancillary components including extruded trims and injection-moulded joints (see Figure 3). The cellular boards comprise a closed-cell cellular PVC-U core, beneath an outer weathering impact-modified PVC-U skin.

#### Fascia/barge boards

1.2 The fascia/barge boards are available in thicknesses of 9, 18 and 22 mm, in a range of widths from 100 to 450 mm, in standard 5 m lengths with a nominal density 550 kg·m $^{-3}$  and with a nominal skin thickness of 0.5 mm (see Figure 1).

#### Soffit boards

1.3 Soffit ventilator products, which include vented cellular boards, vented hollow boards and a ventilator trim (for ventilating the roof void) are available (see Figures 2 and 3).

#### Trims and ancillaries

- 1.4 A range of impact-modified PVC-U extruded trims and injection mouldings of PVC-U are available (see Figure 3).
- 1.5 The recommended fixings for use with various components of the system are listed in Table 1.

Table 1 System components and their recommended fixings		
Component thickness	Type of fixing	
9 mm capping board and timber backing board	50 mm long (FN50) nails	
18 mm Euroboard and 22 mm Ogee board	65 mm long (FN65) nails	
9 mm utility board, Euro soffit board and rigid hollow		
soffit board	30 mm long (FP30) pins	
9 mm capping board	Stainless steel 50 mm long capping screws (CS50), with a	
	plastic cover	
100 mm rigid hollow soffit panel	Stainless steel 25 mm long cladding pins (CP25)	

1.6 A PVC solvent adhesive is used to secure joint and corner trims. The Certificate holder can recommend suitable materials for this purpose, but their performance is outside the scope of this Certificate.

Figure 1 Cellular boards 18 mm 18 mm 9 mm 150 mm 100 mm 350 mm 300 mm 450 mm 450 mm BEEB 450/DEB 350 or 450 EB 150-300 UB 100-605 9 mm 9 mm 22 mm 22 mm 150 mm 350 mm 150 mm 175 mm 200 mm or 300 mm 350 mm 450 mm OCB 150-300 DOCB 350 or 450 OGE 150, 175 or 225 DOGE 400/BEOGE 400 9 mm 9 mm 150 mm 350 mm 300 mm 450 mm 35 mm 35 mm CB 150-300 DCB 350 or 450/BECB 450

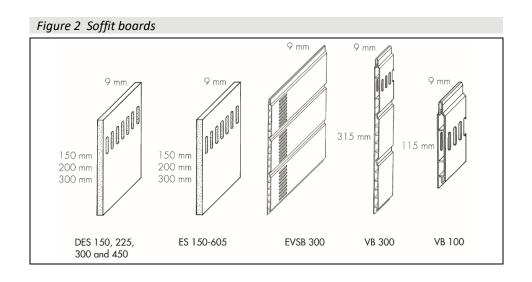


Figure 3 Selection of typical components and trims 300 mm 300 mm 350 mm DCBJT DOGCT **DCBCT** 50 mm 40 mm 10 mm *€* 10 mm **∠** 30 mm 40 mm 40 mm PT 30 PJ 40 25 mm FET 40 15 mm € 10 mm 25 mm 60 mm BC 25 SV 10 BNJT BNCT CBECT 135 DOGICT 90 DCBICT 90

#### 2 Manufacture

- 2.1 Cellular PVC-U is formed by the evolution of gas from sodium bicarbonate present in the foamable PVC-U compound. The PVC-UE boards are manufactured by co-extruding a high-impact calcium/zinc PVC-U skin compound onto a calcium/zinc foamable core compound, and cooling and forming to section. A clear protective polyethylene film is applied to the outer face of the extrusion before the board is cut to length.
- 2.2 The trims are extruded from rigid PVC-U using conventional extrusion and injection-moulding techniques.
- 2.3 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.

# 3 Delivery and site handling

- 3.1 Standard 5 m lengths of boards and rigid extruded trims are sold in packs sealed in polythene sleeves bearing the Certificate holder's product code. Pack quantities vary depending on the type of profile. Mouldings are generally supplied in bags.
- 3.2 The packs should be unloaded by hand to avoid damage and stored on a clean, level surface in their protective wrapping. Stacks must not exceed one metre in height and be restrained to prevent collapse. If stored externally, the packs should be kept under cover, away from direct sunlight.
- 3.3 Care must be taken when handling PVC-UE boards and trims to avoid contact with solvents or materials containing volatile organic components.

# **Assessment and Technical Investigations**

The following is a summary of the assessment and technical investigations carried out on the Wickes PVC-UE Roofline System.

# **Design Considerations**

# 4 General



- 4.1 The Wickes PVC-UE Roofline System is suitable for use externally to provide a protective and decorative trim at the roofline as fascia, soffit and barge boards where timber or other conventional materials would normally be used. The system will contribute to providing protection against the penetration of moisture to the inner surface of the building.
- 4.2 The soffit ventilation products provide a means of ventilating the roof void.
- 4.3 The system must be fixed only to structurally sound building substrates, at centres not exceeding 600 mm. Rafter feet and gable ladders should be adequately supported by noggings to ensure rigidity. Replacement, rather than over fixing of existing fascia, is recommended. Timber roof structures to which the system is fixed must be designed and constructed in accordance with the relevant national Building Regulations and BS EN 1995-1-1: 2004 and its UK National Annex.
- 4.4 The cellular PVC-UE components have a similar coefficient of thermal expansion to that of conventional solid PVC-U. A 5 mm gap should be provided at the end of each board, (ie 10 mm at the joint trim between boards), to allow for movement. Care should be taken not to install the system in extremes of temperature. The recommended temperature for installation is between 5 and 25°C.

# 5 Practicability of installation

The system is designed to be installed by a competent general builder, or a contractor, experienced with this type of system.

#### 6 Ventilation



6.1 Ventilation products can contribute towards providing the necessary roof space ventilation (see Table 2).

6.2 For other products, ventilation should be provided in accordance with the documents supporting the national Building Regulations. Guidance on the provision of adequate ventilation is given in the documents supporting the national Building Regulations and BS 5250: 2011, Clause H. Designers should take regard of roof size, complexity and air permeability of roof coverings when determining the location and size of ventilation openings.

Table 2 Vented boards' and trims' open area		
Product	Open area (mm²-per metre run)	Width of a continuous slot with the same area <sup>(1)</sup> (mm)
Vented cellular soffit board	11 500	11.5
Vented hollow soffit board	10 200	10.2
Soffit ventilator trim	12 100	12.1

<sup>(1)</sup> At eaves level.

#### Cold pitched roofs >10° and <75° with an LR type underlay

6.3 The ventilated soffit boards and trims in Table 2 are suitable.

#### Cold pitched roofs >15° and <75° with an HR type underlay

- 6.4 The ventilated soffit boards and trims in Table 2 are suitable. For pitches exceeding 35°, spans exceeding 10 m or lean to or monopitch roofs, additional high level ventilation will also be required.
- 6.5 When providing roof space ventilation, it is essential that the airway should not be allowed to become blocked by the loft insulation. This may be achieved by the use of a suitable insulation retainer producing an air passage with a geometric free area at least equal to that of the ventilated soffit ventilator used.

# 7 Strength and stability

- 7.1 When installed in accordance with this Certificate and taking to account the site-specific circumstances, the system will withstand, without damage or permanent deflection, the wind loads likely to be encountered in the UK. In exposed locations, care should be taken to ensure that all profiles are adequately fixed.
- 7.2 The system has adequate resistance to the hard and soft body impacts likely to occur in practice.
- 7.3 PVC-U gutters, as specified in BS EN 607: 2004, may be screw-fixed directly to Ogee and Euroboards. Gutter bracket spacings must not exceed one metre; reduced spacings are recommended in areas of high exposure eg the Scottish Highlands, and the advice of a suitably experienced and competent individual should be sought in such situations. Other lightweight gutters may also be screw-fixed provided the maximum bracket-loading, covered in BS EN 1462: 2004, is not exceeded. For all other boards, all gutters should be fixed through the fascia to rafter ends or sound timber.
- 7.4 Alongside the exception detailed in section 7.3, the fascia boards are not loadbearing and must not be used independently to support fixtures such as roof tiles, gutters, other roof structure components or television aerials. Suitably fixed telephone wires and power cables may be run along the boards, but the main brackets for these services should be fixed through the fascia to structurally sound timber.

#### 8 Performance in relation to fire



8.1 Selected cellular boards achieved the fire classifications to BS 476-7: 1997 shown in Table 3 of this Certificate. The performance of the other products has not been classified.

Table 3 Roofline boards – Classifications to BS 476-7 : 1997		
Board thickness (mm)	Classification	
9	Class 1Y	
22	Class 1	

8.2 Where it is normal practice to carry the eaves box over, between dwellings, it is important that the box is fire stopped at compartment walls.

#### 9 Maintenance



- 9.1 The system can be cleaned by washing with water and mild detergent. Abrasive or solvent-based cleaners must not be used. For the removal of more resistant stains, the Certificate holder's advice must be sought. If repairs are required, the material can be cut and drilled using normal woodworking tools.
- 9.2 The dimensions of the slots in the ventilation products are such that the risk of blockage is limited. However, blockage by insects and debris would impair their performance as vents, and the slots should be examined periodically and cleared if necessary.

# 10 Durability



- 10.1 The system is as durable as conventional solid PVC-U and the boards will retain adequate impact resistance for a period in excess of 35 years.
- 10.2 The system will retain its decorative function for the service life of the system with only minor changes in surface appearance.
- 10.3 Paint must not be applied as, with all PVC products, it can adversely affect the impact strength of the cellular PVC-U sections.
- 10.4 Where the timber substrate is preservative treated, care must be taken to ensure that sufficient time is allowed for complete fixation of the preservative to avoid corrosion of screws and nails used to fix the components.

#### 11 Reuse and recyclability

The PVC-U and PVC-UE profile materials can be recycled.

#### Installation

#### 12 General

- 12.1 Installation of the Wickes PVC-UE Roofline System must be carried out in accordance with the Certificate holder's instructions and the requirements of this Certificate (see Figure 4).
- 12.2 The components of the system are worked using normal woodworking tools for cutting, drilling and shaping. Handsaws should have a fine-toothed blade. Hand-held and bench-mounted power tools with a carbide-tipped blade should be run at speeds similar to, or higher than, those normally used for timber.
- 12.3 When using power tools to cut or shape the components, eye protection and a coarse particle dust mask must be used.

- 12.4 Fascia, soffit and barge boards should be fixed to preservative-treated, structurally sound, solid timbers at centres not exceeding 600 mm, using the screws and nails specified by the Certificate holder.
- 12.5 Existing support timbers should be checked for soundness and, where necessary, replaced. Existing fascia board should not be used as a support/backing board for a cover board.
- 12.6 Sarking felt should be checked to ensure that it is in good condition and extends onto the verge rafter, over the fascia and into the gutter at the eaves. A continuous fillet or eaves protection system should be installed at the eaves to prevent the felt sagging between the rafters. Damaged or worn felt should be replaced in accordance with good practice.
- 12.7 Normal precautions should be taken when working at roof level. The use of protective goggles when cutting and nailing is recommended.
- 12.8 Ventilation products should be selected and installed so that the roof ventilation conforms to the relevant national Building Regulations.
- 12.9 Ogee and Euroboard fascia boards may be used directly to support PVC-U and other lightweight gutters (see section 7.3).

#### 13 Procedure

- 13.1 Selected boards and accessories are assembled and cut to size.
- 13.2 Rafter feet are cut to a line.
- 13.3 Noggings, soffit bearers, battens, eaves fillets, brackets and other additional timber supports are fixed to a sound substrate.
- 13.4 Protective films should be removed prior to fixing by peeling of as nailing progresses along the board.
- 13.5 The summary for the installation details of fascia, soffit and barge boards (see sections 13.7 to 13.17) should be read with reference to the typical installation diagrams shown in Figure 4.
- 13.6 All capping board profiles should be fixed either to a sound timber support or a 6 mm plywood backboard.

#### Fascias

- 13.7 Fascia boards are fixed to rafter feet or, where relevant, to support timber at centres not exceeding 600 mm using at least two fixings per rafter. When the system is installed in particularly exposed locations, it is recommended that the fascia boards are fixed to support timbers at reduced centres.
- 13.8 Butt joints between fascia boards should be made at the rafter end and covered with a butt joint trim, glued using a PVC solvent adhesive to the end of one board. Provision for expansion (minimum 10 mm gap) should be allowed between boards all boards should be fixed to the rafter.
- 13.9 Corner trims are used to cover corner joints. The trims, with mitred ends, are glued using PVC solvent adhesive to the end of one board. Provision for expansion (minimum 5 mm gap) should be allowed between boards; all boards should be fixed to the rafter.

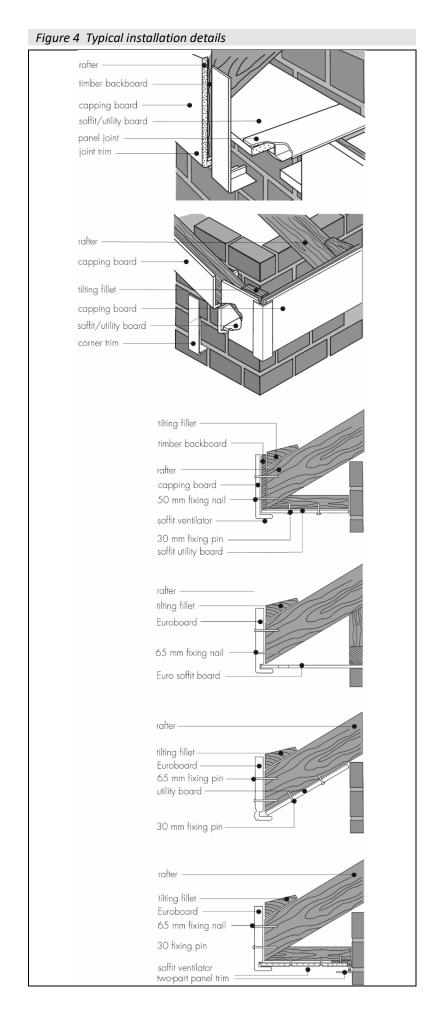
### Soffits

- 13.10 Soffit board is used to construct the soffit.
- 13.11 The board is cut to size and fitted into the groove at the rear of the fascia or sat on the top of the capping board at the rafter end.
- 13.12 The boards are fixed to rafter feet, soffit bearers or other timber support at centres not exceeding 600 mm along their length or 200 mm along their width, using the specified nails.

- 13.13 Where required, soffit boards may be joined along their length or width using a soffit jointing strip.
- 13.14 To comply with the requirements of the documents supporting the national Building Regulations, vented soffit board or soffit ventilator trims should be used as required.

#### **Barge boards**

- 13.15 Barge boards are installed by fixing fascia boards to a gable ladder or noggings, using the procedures given in sections 13.16 and 13.17.
- 13.16 Barge boards meeting at a ridge should be mitred to the appropriate angle, allowing 5 mm for expansion between the ends of each board. To conceal the joint, a cover joint trim is fixed to the end of one board using a low-modulus neutral cure silicone. Further low-modulus neutral cure silicone sealant may be applied between the ends of the boards as an additional fixing.
- 13.17 Box ends are constructed from fascia board and trims to suit the roof pitch and overhang requirement. Any timber framework required in the construction of the box end must be treated.



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#### **Technical Investigations**

#### 14 Tests

- 14.1 Tests were carried out on the PVC-UE profiles to determine:
- voidage
- thickness of layers
- density
- impact strength
- flexural strength and modulus of elasticity
- colour stability
- resistance to gutter loading
- impact strength after UV ageing
- suitability of adhesive.
- 14.2 Tests were carried out on the PVC-U trims to determine:
- heat reversion
- stress relief.

# 15 Investigations

- 15.1 An examination was made of existing data relating to:
- reaction to fire performance
- colour stability.
- 15.2 The manufacturing process, including the methods adopted for quality control, were examined and details were obtained of the quality and composition of the materials used.
- 15.3 The practicability of the installation was assessed.
- 15.4 An assessment was made of the resistance of the products to wind loading.
- 15.5 An assessment was made of the acceptability of soffit ventilators in satisfying or contribute to satisfying ventilation requirements.

# **Bibliography**

BS 476-7 : 1997 Fire tests on building materials and structures — Method of test to determine the classification of the surface spread of flame of products

BS 5250 : 2011 + A1 : 2016 Code of practice for control of condensation in buildings

BS EN 607 : 2004 Eaves gutters and fittings made of PVC-U — Definitions, requirements and testing

BS EN 1995-1-1:2004 + A2:2014 Eurocode 5:Design of timber structures — General — Common rules and rules for buildings

NA to BS EN 1995-1-1 : 2004 + A1 : 2008 UK National Annex to  $Eurocode\ 5$  :  $Design\ of\ timber\ structures\ - General\ - Common\ rules\ and\ rules\ for\ buildings$ 

BS EN 1462 : 2004 Brackets for eaves gutters — Requirements and testing

# **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
- 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.
- 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, UKNI or 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.

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