

Designated by Government
to issue
European Technical
Approvals

KEMPEROL V210 ROOF WATERPROOFING SYSTEM

Revêtements d'étanchéité pour toitures
Dachabdichtungen

Product



- THIS CERTIFICATE EXTENDS AND REPLACES CERTIFICATE No 90/2389/C AND RELATES TO THE KEMPEROL V210 ROOF WATERPROOFING SYSTEM, A COLD LIQUID-APPLIED, UNSATURATED POLYESTER ROOF WATERPROOF MEMBRANE, REINFORCED WITH A POLYESTER FLEECE.
- The system is used as waterproofing on flat or pitched roofs, for new work or for repairing or maintaining the waterproof layer of existing structurally sound roofs with limited access.
- The system may also be used for waterproofing balconies, terraces and podiums.

continued

Regulations

1 The Building Regulations 2000 (as amended) (England and Wales)

 The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of roof waterproofing membranes with the Building Regulations. In the opinion of the BBA, the Kemperol V210 Roof Waterproofing System, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement: B4(2)	External fire spread
Comment:	The system achieved an EXT.F.AA fire rating on 19 mm plywood substrates when tested in accordance with BS 476-3 : 1958. The designation of other specifications should be confirmed by test or assessment in accordance with clause A1 of Appendix A of the Approved document. See sections 12.1 and 12.2 of this Certificate.
Requirement: C2(b)	Resistance to moisture
Comment:	Tests for water resistance on the system indicate that the material meets this Requirement. See sections 9.1 and 9.2 of this Certificate.
Requirement: Regulation 7	Materials and workmanship
Comment:	The system comprises acceptable materials when applied in accordance with this Certificate. See section 15 of this Certificate.

continued

- The components of the system are manufactured by Kemper System GmbH and Co KG.
- Installation is carried out only by specialist contractors trained and approved by the Certificate holder.

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



In the opinion of the BBA, the Kemperol V210 Roof Waterproofing System, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Mandatory Standards listed below.

Regulation:	8	Fitness and durability of materials and workmanship
Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The system comprises acceptable materials. See section 15 of this Certificate.
Regulation:	9	Building standards — construction
Standard:	2.8	Spread from neighbouring buildings
Comment:		The system can contribute to a construction satisfying this Standard, with reference to clauses 2.8.1 ⁽¹⁾⁽²⁾ and 2.8.2 ⁽¹⁾⁽²⁾ . When applied to a suitable substrate, the system may be deemed to be of designation EXT.F.AA. See sections 12.1 and 12.2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		Tests for water resistance of the membrane indicate that the use of the system can enable a roof to meet the requirements of this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.6 ⁽¹⁾⁽²⁾ . See sections 9.1 and 9.2 of this Certificate.
Regulation:	12	Building standards — conversions
Comment:		All comments given for this system under Regulation 9, 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).

3 The Building Regulations (Northern Ireland) 2000 (as amended)



In the opinion of the BBA, the Kemperol V210 Roof Waterproofing System, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The system comprises acceptable materials. See section 15 of this Certificate.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		Tests for water resistance of the membrane indicate that the use of the system can enable a roof to meet the requirements of this Regulation. See sections 9.1 and 9.2 of this Certificate.
Regulation:	E5	External fire spread
Comment:		The system will enable a roof to be unrestricted under the requirements of this Regulation. See sections 12.1 and 12.2 of this Certificate.

4 Construction (Design and Management) Regulations 2007

Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, CDM co-ordinator or planning supervisor, designer and contractors to address their obligations under these Regulations.

See section: 6 Delivery and site handling (6.1, 6.3 and 6.4) of this Certificate.

Technical Specification

5 Description

5.1 The Kemperol V210 Roof Waterproofing System is a cold liquid-applied, unsaturated polyester coating reinforced with a polyester fleece (Kemperol Fleece).

5.2 The system is made up by mixing and applying the following components in the correct proportions on site:

- V210 basic resin — unsaturated polyester resins, dissolved in a reactive monomer (styrene), supplied in two parts, component A and B. Component B already contains the required accelerator level
- Catalyst C — a white powder, based on benzoyl peroxide
- Kemperol Fleece 165 or 200 — a polyester reinforcement.

5.3 The characteristics of both Kemperol fleeces are listed in Table 1.

Table 1 Nominal characteristics of fleeces

	165	200
Weight per unit area (gm ⁻²)	165	200
Tensile strength (N 50 mm ⁻¹)	250	350
Elongation at break (%)	40	40

5.4 Ancillary materials available are:

- Kemperol C3 Inhibitor — for use with V210 when applied by hand, to extend the pot life beyond 20 minutes in temperatures exceeding 25°C
- Kemperol Cold Activator — for use with V210 at temperatures below 10°C
- Kemperol EP primer — a two-compound, solvent-free epoxy primer for use as a surface pre-treatment
- Kemperol BSF-R Primer — an aqueous dispersion of ethylene vinyl acetate for use as a surface pre-treatment⁽¹⁾
- Kemperol D Primer — a two-component, solvent free polyurethane for use as a surface pre-treatment⁽¹⁾
- Kemperol R Primer — a fast curing, two-component, solvent-free polyurethane for use as a surface pre-treatment⁽¹⁾
- Kemperol Topcoat — UV-stable, transparent coating for sealing quartz aggregate
- Kemperdur kiln-dried quartz aggregate — for use on balconies, where increased resistance to foot traffic is required
- talc powder — to remove residual tackiness on the surface of V210
- Kemperol Reinforcement Strip — used to reinforce joints in fleece reinforcement when a flush joint detail is required.

(1) See section 8.1 for list of suitable substrates.

5.5 The system is available in mid grey and anthracite colours as standard. Other colours are available on request.

Quality control

5.6 Checks are carried out on raw materials and on the basic resin for styrene content, viscosity, gel time, Shore-A hardness, tensile strength and elongation at break after hardening.

5.7 Site checks include:

- prior to application — suitability of substrate and application conditions
- during application — evenness and exclusion of bubbles
- on completion — inspection to ensure coating has fully cured, and is fully adhered.

6 Delivery and site handling

6.1 Components of the systems are delivered to site packaged as given in Table 2.

Table 2 Details of packaging

Components	Packaging	Weight (kg)
Kemperol V210		
Component A	metal can	9.4
		23.4
Component B	metal can	10.0
		25.0
Hardener C	plastic bag	0.6
		1.6

6.2 Each container is marked with the manufacturer's name and the BBA identification mark incorporating the number of this Certificate.

6.3 All containers should be stored under cover in a cool, dry and ventilated place away from other chemicals. Components kept in sealed containers can be stored for six months, but the storage temperature should be preferably below 20°C.

6.4 The materials classified under The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3) bear the appropriate hazard warning label. The flashpoints and classification of components are given in Table 3.

Table 3 Flashpoint and hazard classification

Materials	Flashpoint (°C)	Classification
Kemperol V210 resins		
Component A	32	flammable ⁽¹⁾ , irritant
Component B	32	flammable ⁽¹⁾ , irritant
Kemperol D Primer		
Component A	>200	—
Component B	>200	harmful
Kemperol R Primer		
Component A	>200	—
Component B	>200	harmful
Kemperol EP Primer		
Component A	>100	irritant, dangerous for the environment
Component B	>110	corrosive, dangerous for the environment
Kemperol Catalyst Powder	—	oxidising, irritant
Kemperol BSF-R Primer	—	irritant
Kemperol Cold Activator	—	corrosive liquid
Kemperol C3 Inhibitor	—	harmful

(1) These components should be stored in accordance with the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972.

Design Data

7 General

7.1 The Kemperol V210 Roof Waterproofing System is satisfactory for use as waterproofing on flat, including completely flat, or pitched roofs, for new work or for repairing or maintaining the waterproof layer of existing structurally sound roofs with limited access.

7.2 Installation must be carried out only by specialist contractors trained and approved by the Certificate holder.

7.3 When designing flat roofs, twice the minimum finished fall should be assumed, unless a detailed analysis of the roof is available, including overall and local deflection and direction of falls. Flat roofs are defined for the purpose of this Certificate as those roofs having a minimum finished fall of 1:80. Pitched roofs are defined as those having falls in excess of 1:6.

7.4 Decks to which the product is to be applied must comply with the relevant requirements of BS 8218 : 1998, BS 8217 : 2005 or, where appropriate, NHBC Standards, Chapter 7.1 or the *Zurich Building Guarantee Technical Manual*, Section 4 *Superstructure*, Sub-section, *Flat roofs* (pages 266 to 268).

7.5 Limited access roofs are defined for the purpose of this Certificate as those roofs subjected only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters. Areas designed as balconies, terraces or podiums should be protected with a traditional finish such as paving slabs, tiles or decking, or a suitable resin wear course⁽¹⁾.

(1) This can be supplied by the Certificate holder, whose advice should be sought when considering such application.

8 Substrates

8.1 Before Kemperol V210 can be applied to the following substrates they must be treated with the appropriate primer in accordance with the manufacturer's instructions:

- mastic asphalt to BS 8218 : 1998
- aluminium to CP 143-1 : 1958
- copper
- lead
- zinc
- steel to CP 143-10 : 1973
- stainless steel V2A
- fibre reinforced cement sheeting
- concrete and concrete screeds cured sufficiently to achieve the required bond strength
- lightweight concrete
- tiles (glazed and unglazed)
- timber
- glass
- acrylic glazing
- bituminous felts including polymer modified hot and cold-applied bitumens and bitumen emulsions
- polyurethane insulation board
- PVC.

8.2 Acceptable adhesion should be confirmed by test, if necessary (see section 10).

8.3 Kemperol V210 must not be applied directly to the following substrates:

- polyethylene films
- cellophane films
- polystyrene foam boards⁽¹⁾.

8.4 When application to other substrates is being considered, the advice of the manufacturer should be sought.

(1) The Certificate holder should be consulted before Kemperol V210 is used over polystyrene foam boards.

9 Weathertightness

 9.1 Data confirm that Kemperol V210 will adequately resist the passage of moisture to the inside of the building and so meet the requirements of national Building Regulations thus:

England and Wales

Approved document C, Requirement C2(b) Section 5.1

Scotland

Regulation 9, Mandatory Standard 3.10, clauses 3.10.1⁽¹⁾⁽²⁾ and 3.10.6⁽¹⁾⁽²⁾

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland

Regulation C4.

9.2 The system will maintain its integrity as a weathertight coating in all normal conditions of exposure and can accept, without damage, minor movements of the substrate.

10 Adhesion

The adhesion of Kemperol V210 to concrete, bituminous roofing felt, metals and PVC is sufficient to resist the effects of any wind suction, elevated temperature, thermal shock or structural movement likely to occur in practice. Acceptable adhesion to other substrates should be confirmed by test, if necessary.

11 Resistance to foot traffic

Kemperol V210 can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance operations. Reasonable care is required, however, to avoid puncture by sharp objects.

12 Properties in relation to fire

 12.1 When tested in accordance with BS 476-3 : 1958 a system comprising 19 mm thick plywood covered with Kemperol V210 System to a thickness of between 2 mm and 2.5 mm achieved an EXT.F.AA rating.

12.2 The designation of other specifications (eg on combustible substrates) should be confirmed by:

England and Wales

Test or assessment in accordance with Approved Document B, Appendix A, clause A1

Scotland

Test to conform to Mandatory Standard 2.8, clause 2.8.1⁽¹⁾⁽²⁾.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland

Test or assessment by a UKAS accredited laboratory, or an independent consultant with appropriate experience.

13 Precautions

13.1 Vapours from components of the system may cause irritation to the respiratory system, eyes and skin. The system should be used only in areas with sufficient ventilation to prevent the build-up of vapours. Contact with the skin, eyes and clothes must be avoided. The manufacturer's instructions and the relevant safety regulations (see section 6) for working procedures must be adhered to at all times.

13.2 Components must not be allowed to get into the waste drainage system.

14 Maintenance and repair

The repair of minor damage to the system, such as cuts and perforations, is quickly and simply achieved by applying another layer, in accordance with the manufacturer's instructions, over the damaged area irrespective of age.

15 Durability

 Kemperol V210 resin has been used in Germany since 1970 and has performed satisfactorily. Accelerated weathering tests confirm that satisfactory retention of physical properties is achieved and indicate an expected life of at least 25 years.

Installation

16 General

16.1 The Kemperol V210 Roof Waterproofing System must be applied in accordance with the manufacturer's instructions. Work must not be carried out if rain is imminent and the ambient temperature at the time of laying must lie between 5°C and 35°C.

16.2 Substrates to which the coating is to be applied must be dry, clean and free from loose particles, paint, grease and oil or other contaminants which may affect the adhesion of the systems.

16.3 Defects in the substrate should be prepared suitably prior to application, in accordance with the manufacturer's instructions.

16.4 The substrate should be primed with the appropriate primer in accordance with the manufacturer's instructions (see section 8.1).

16.5 All tools and spraying equipment should be cleaned after use, or if work is interrupted for more than 15 minutes, with methyl ethyl ketone (MEK).

16.6 When applying the system by hand, only as much as can be applied in 20 minutes at 25°C should be mixed.

16.7 With increasing temperature the reaction time and hence the pot life of the mixed resin is reduced.

16.8 At temperatures of less than 10°C the resin reaction time can be accelerated using Kemperol Cold Activator and at temperatures above 25°C inhibited using Kemperol C3 Inhibitor.

17 Application

17.1 The system is made up on site by mixing the pre-accelerated resin, Component B, the basic resin, Component A and the hardener in the proportions given in Table 4.

Table 4 Resin mix proportions (kg)

Component	20 kg kit	50 kg kit
Basic resin	9.4	23.4
Pre-accelerated resin	10.0	25.0
Hardener	0.6	1.6

17.2 The basic resin and the catalyst are mixed first using an electric or hand stirrer. The catalyst powder takes between 20 minutes and 75 minutes to dissolve in the resin depending on ambient temperature.

17.3 The basic resin/catalyst mix may be stored for up to 24 hours prior to mixing with the pre-accelerated resin, providing the temperature does not exceed 20°C.

17.4 Components A and B should be thoroughly mixed together in the ratio given in section 17.1. The resultant product should be an even colour without streaks (see sections 16.6 to 16.8).

17.5 The first coat of the mixture should be applied to the substrate at a coverage rate of 2 kgm⁻² using a lambswool roller or similar. The fleece is then rolled into the wet area and pressed free of trapped air using a lambswool roller. The fleece sheets should have end and side overlaps of at least 50 mm, and sufficient resin must remain beneath the fleece to maintain the physical properties of the system.

17.6 The second coat should be applied, while the first coat is still wet. Enough Kemperol V210 resin should be applied to ensure the fleece is fully saturated. The total coverage rate of resin is typically 3.0 kgm⁻² with a Kemperol 165 Fleece and 3.4 kgm⁻² with Kemperol 200 Fleece.

17.7 Balconies, terraces and podiums, should be protected with traditional finishes (see section 7.5).

Technical Investigations

The following is a summary of the technical investigations carried out on the Kemperol V210 Roof Waterproofing System.

18 Tests

18.1 The results of tests on the Kemperol V210 Roof Waterproofing System, carried out by MPA Nordrhein-Westfalen of Dortmund, Germany, are given in Tables 5 to 9.

18.2 Wind uplift testing before and after thermal shock was also tested satisfactorily on the Kemperol V210 Roof Waterproofing System by MPA Nordrhein-Westfalen.

Table 5 Physical properties — reinforcement

Test (units)	Method ⁽¹⁾	Mean result Kemperol Fleece 200
Weight per unit area (gm ⁻²)	DIN 53352	222
Tensile strength (N 50 mm ⁻¹)	DIN 53857-2	
longitudinal		309
transverse		349
Elongation at break (%)	DIN 53857-2	
longitudinal		46
transverse		52

(1) The test documents are detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.

Table 6 Physical properties — directional

Test (units)	Method ⁽¹⁾	Mean result V210
Tensile strength (N 50 mm ⁻¹)	DIN 53455	
longitudinal	(200 mm min ⁻¹)	940
transverse		783
Elongation at break (%)	DIN 53455	
longitudinal	(200 mm min ⁻¹)	39
transverse		48
Modulus of elasticity (1 mm min ⁻¹)	DIN 53457	
longitudinal		63.0
transverse		56.0
Tear strength (Nmm ⁻²)	DIN 53515	
longitudinal	(500 mm min ⁻¹)	33.7
transverse		32.6

(1) The test documents are detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.

Table 7 Physical properties — general

Test (units)	Method ⁽¹⁾	Mean result V210
Ash content (%)	DIN 53568-1	2.17
Shore hardness (Shore-A)	DIN 53505	
upper face		69
lower face		—
Water absorption ⁽²⁾ (%)	DIN 53495	
7 days		0.71
Water absorption ⁽³⁾ (gm ⁻²)	DIN 53495	
42 days		13.6
Water vapour permeability (gm ⁻² day ⁻¹)	DIN 53122-1 (23°C/85% RH)	2.9

(1) The test documents are detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.

(2) Full immersion.

(3) Exposure to water on one side, under a 100 mm head of water.
— not tested.

Table 8 Physical properties — percentage change on ageing

Test (units)	Method ⁽¹⁾	Mean result V210
Tensile strength (%)	DIN 53455	
heat aged ⁽²⁾	(200 mm min ⁻¹)	-8.1
water soak ⁽³⁾		+11.8
SO ₂ exposure ⁽⁴⁾		+1.9
UV ageing ⁽⁵⁾		+2.8
Elongation at break (%)		
heat aged ⁽²⁾		+30.4
water soak ⁽³⁾		-15.6
SO ₂ exposure ⁽⁴⁾		+2.9
UV ageing ⁽⁵⁾		+9.2
Modulus of elasticity (%)	DIN 53457	
heat aged ⁽²⁾	(1 mm min ⁻¹)	-5.9
water soak ⁽³⁾		+0.5
SO ₂ exposure ⁽⁴⁾		-2.1
UV ageing ⁽⁵⁾		-22.2

(1) The test documents are detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.

(2) Heat aged at 70°C for 188 days

(3) Water soak at 23°C for 118 days.

(4) SO₂ exposure for 30 days.

(5) Xenon test, weathering applied for 104 days.

Table 9 Service performance

Test (units)	Method ⁽¹⁾	Mean result
		V210
Static indentation	MOAT 27 : 5.1.9	L4
Dynamic indentation ⁽²⁾	MOAT 27 : 5.1.10	I3
Fatigue cycling ⁽²⁾ unaged heat aged ⁽³⁾	MOAT 27 : 5.1.8	no damage no damage
Tensile bond strength ⁽²⁾ (Nmm ⁻²) unaged heat aged ⁽⁵⁾ water soak ⁽⁶⁾	<i>ad hoc</i> ⁽⁴⁾ (10 mm min ⁻¹)	0.69 ⁽⁷⁾ 0.54 ⁽⁸⁾ 0.65 ⁽⁷⁾
Resistance to water pressure penetration	DIN 16935	no
Shear strength ⁽⁹⁾ (Ncm ⁻²) bituminous roofing felt copper sheet steel sheet aluminium sheet galvanized steel sheet PVC sheet	DIN 53539	> 30 ⁽¹⁰⁾ 93 95 93 117 46
Resistance to peel ⁽⁹⁾ (Ncm ⁻²) concrete bituminous roofing felt copper sheet steel sheet aluminium sheet galvanized steel sheet PVC sheet	DIN 53539	61.6 4.1 15.3 7.8 12.6 11.9 5.6

- (1) The test documents are detailed in the *Bibliography*. Numbers in the table refer to sections/parts of the various documents.
- (2) Tests carried out by the BBA on concrete substrate.
- (3) Heat aged at 80°C for 28 days.
- (4) 150 mm x 150 mm steel plates were adhered to sample using epoxy adhesive; coating was cut through to concrete around plate; a universal test machine was used to apply a tensile load.
- (5) Heat aged at 80°C for 56 days.
- (6) Water soak at 23°C for 56 days.
- (7) Failure of concrete block.
- (8) Failure of epoxy adhesive between coating and steel plate.
- (9) Substrates not primed.
- (10) Failure within bituminous felt.

19 Investigations

19.1 Data relating to the performance of the products when tested to BS 476-3 : 1958 were examined.

19.2 The results of tests used in the assessment leading to the issue of ETA-03/0025 *Roof waterproofing "Kemperol V210"* were examined.

19.3 Data in connection with Kemperol BR sealant relating to bond strength to concrete and asphalt substrates and slip resistance were examined.

19.4 Visits were made to sites in progress to assess the methods of application.

19.5 Data from previous assessments on existing successful sites in Germany were re-examined.

19.6 A user survey was performed to examine the performance in use of Kemperol V210.

19.7 A visit to the manufacturing facility in Germany was made to assess production and quality control procedures.

Bibliography

- BS 476-3 : 1958 *Fire tests on building materials and structures — External fire exposure roof test*
- BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*
- BS 8218 : 1998 *Code of practice for mastic asphalt roofing*
- CP 143-1 : 1958 *Code of practice for sheet roof and wall coverings — Aluminium, corrugated and troughed*
- CP 143-10 : 1973 *Code of practice for sheet roof and wall coverings — Galvanized corrugated steel — Metric units*
- DIN 16935 : 1986 *Polyisobutylene (PIB) Waterproofing sheet; requirements*
- DIN 53122-1 : 1974 *Testing of plastics films, elastomer films, paper, board and other sheet materials — Determination of water vapour transmission rate; Gravimetric process*
- DIN 53352 : 1971 *Testing synthetic leather and similar surfaces; Determining the basis weight*
- DIN 53455 : 1981 *Testing plastics, tensile test*
- DIN 53457 : 1987 *Testing plastics. Determining the modulus of elasticity in tensile, pressure and flexural tests*
- DIN 53495 : 1984 *Testing plastics; Determining water absorption*
- DIN 53505 : 2000 *Shore A and Shore D hardness testing of rubber*
- DIN 53515 : 1977 *Testing rubber, elastomers and plastic films. Tear propagation test using the Graves angle test with incision*
- DIN 53539 : 1979 *Testing of elastomers; Evaluation of tear propagation, adhesion and peel tests*
- DIN 53568-1 : 1974 *Testing of plastics, rubber and elastomers; Determination of residue on ignition without chemical pre-treatment of the sample*
- DIN 53857-2 : 1979 *Testing of textiles. Simplex strip test on textile surfaces; Fleece materials and other non-woven textile surfaces*
- MOAT No 27 : 1983 *General Directive for the Assessment of Roof Waterproofing Systems*

Conditions of Certification

20 Conditions

20.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- 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.

20.2 References in this Certificate to any Act of Parliament, Statutory Instrument, Directive or Regulation of the European Union, British, European or International Standard, Code of Practice, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

20.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant 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.

20.4 In granting this Certificate, the BBA is not responsible for:

- 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
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

20.5 Any information relating to the manufacture, supply, installation, use and maintenance 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 and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date 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. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.



In the opinion of the British Board of Agrément, the Kemperol V210 Roof Waterproofing System is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 95/3139 is accordingly awarded to Kemper System Ltd.

On behalf of the British Board of Agrément

Date of Fifth issue: 14th May 2007

Chief Executive

**Original Certificate issued 18th May 1995. This amended version includes correction of results relating to Physical properties (Table 8) and new Conditions of Certification.*