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Agrément Certificate
00/3733
Product Sheet 4

OLDROYD MEMBRANE SYSTEMS

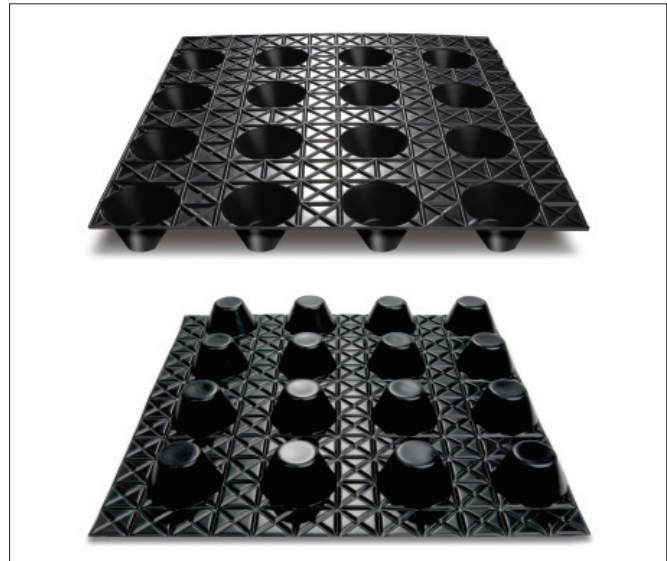
OLDROYD Xv 20

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Oldroyd Xv 20, a moulded polypropylene membrane incorporating raised studs, for damp-proofing walls and floors in new construction or existing buildings. It is for use above and below ground, over contaminated or damp backgrounds, to support dry lining and flooring.

AGRÉMENT 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 membrane is water resistant and has a high resistance to water vapour transmission (see section 5).

Resistance to salt transfer — the membrane provides an effective barrier to the transmission of salts or other contaminants from the substrate (see section 7).

Resistance to puncture, impact and loading — the membrane has a high resistance to puncture and will not be damaged by normal foot traffic during installation, or while laying concrete, or screeding. It can support the long-term loadings likely to be experienced in service without undue deformation (see section 8).

Durability — under normal conditions of use the membrane will provide an effective barrier to the transmission of salts, liquid water and water vapour for the life of the structure in which it is incorporated (see section 10).

The BBA has awarded this Agrément 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

Simon Wroe
Head of Approvals — Materials

Greg Cooper
Chief Executive

Date of First issue: 8 November 2011

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 are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, Oldroyd Xv 20 if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales)

For new construction and a 'Material Change of Use' of an existing building, as defined in Regulation 5a

Requirement:	C2(a)(b)	Resistance to moisture
Comment:		The product adequately resists the passage of moisture. See section 5.1 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

For new construction and a 'Conversion' of an existing building, as defined in Regulation 4

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards – construction
Standard:	3.3	Flooding and ground water
Comment:		The product can contribute to minimising the effects of flooding on the building fabric and/or the building element, with reference to clause 3.3.1 ⁽¹⁾⁽²⁾ . See section 5.1 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		The product adequately resists the passage of moisture, with reference to clauses 3.4.1 ⁽¹⁾⁽²⁾ , 3.4.2 ⁽¹⁾⁽²⁾ , 3.4.5 ⁽¹⁾⁽²⁾ , 3.4.6 ⁽¹⁾⁽²⁾ and 3.4.7 ⁽¹⁾⁽²⁾ . See section 5.1 of this Certificate.
Standard:	3.6(a)	Surface water drainage
Comment:		The product can contribute to satisfying this Standard, with reference to clause 3.6.3 ⁽¹⁾⁽²⁾ . See section 5.1 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The product adequately resists the passage of moisture, with reference to clause 3.10.1 ⁽¹⁾⁽²⁾ . See section 5.1 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to meeting 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 – conversions
Comment:		Comments made in relation to this 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) 2000 (as amended)

For new construction and a 'Material Change of Use' of an existing building, as defined in Regulation A9

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	C4(a)(b)	Resistance to ground moisture and weather
Comment:		The product adequately resists the passage of moisture. See section 5.1 of this Certificate.

Construction (Design and Management) Regulations 2007

Construction (Design and Management) Regulations (Northern Ireland) 2007

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

See section: 1 *Description* (1.2) of this Certificate.

Additional Information

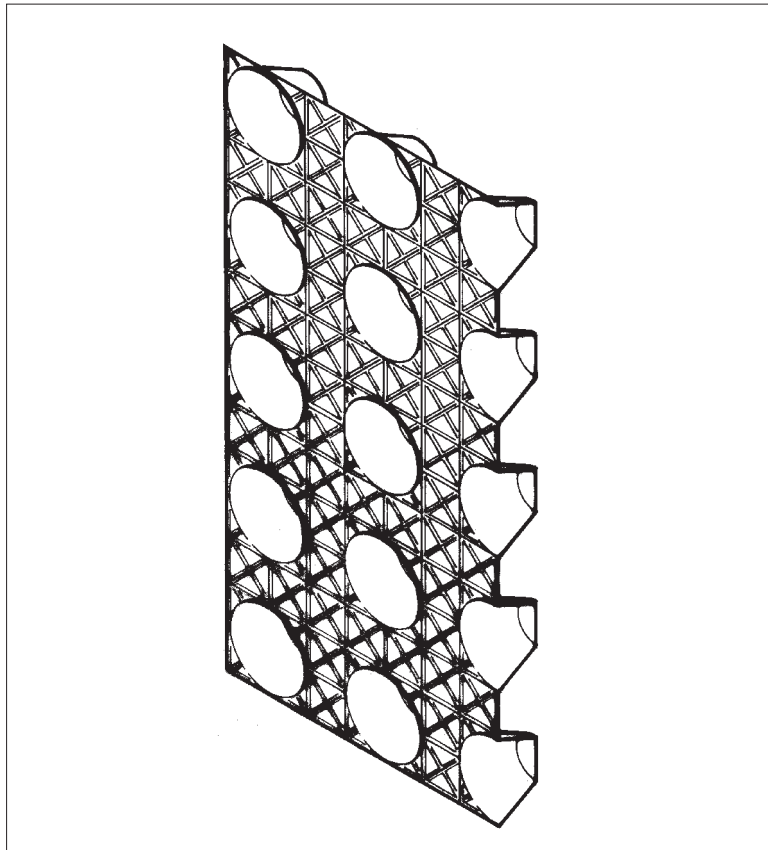
NHBC Standards 2011

NHBC accepts the use of Oldroyd Xv 20, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapters 5.1 *Substructure and ground bearing floors* and 5.2 *Suspended ground floors*.

1 Description

1.1 Oldroyd Xv 20 membrane is a black polypropylene sheet, incorporating a relief pattern of intersecting reinforcing ribs, moulded to form raised studs at 60 mm centres (see Figure 1).

Figure 1 Oldroyd Xv 20



1.2 The membrane is available with the dimensions of:

Thickness (mm)	0.8
Stud height (mm)	20
Weight per unit area ($\text{kg}\cdot\text{m}^{-2}$)	0.9
Roll length (m)	15
Roll width (m)	2.0
Weight per roll (kg)	27
Air gap volume ($\text{l}\cdot\text{m}^{-2}$)	15

1.3 Ancillary items used with the membrane include:

- Oldroyd Jointing Tape — 30 mm wide and 1 mm thick butyl tape for the jointing of laps and detailing at corners
- Oldroyd Jointing Rope — 10 mm diameter extruded butyl sealant for sealing the membrane to concrete floors, and for detailing
- Oldroyd Overseal Tape — 75 mm, 150 mm or 200 mm wide and 1 mm thick butyl tape for the oversealing of laps and details
- Oldroyd Pipe Collars — 12 mm to 110 mm diameter, used in conjunction with Oldroyd Jointing Tape and Rope to seal pipes protruding from the membrane
- Oldroyd Brick Plugs — plastic plugs for fixing the membrane to walls and vaulted ceilings. Wooden stud work or a proprietary aluminium framing system is screwed into these plugs, eliminating the need to make further holes in the membrane.

Manufacture

1.4 The membrane is formed in a continuous process in which polypropylene is extruded into sheets and vacuum formed to produce the studs and intersecting reinforcing ribs.

1.5 Quality control is exercised over raw materials, during manufacture and on the final product.

2 Delivery and site handling

2.1 The membrane is delivered to site in rolls packaged in polythene wrapping, palletised and stretch-film wrapped. The product is labelled with the product name, manufacturer's name, and the BBA identification mark incorporating the number of this Certificate.

2.2 Rolls should be stored on end, under cover and protected from sharp objects, sunlight and high temperatures.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Oldroyd Xv 20.

Design Considerations

3 Use

3.1 Oldroyd Xv 20 is satisfactory for use as a damp-proof membrane on walls and floors, above and below ground, in new construction or in existing buildings over contaminated or damp backgrounds. It can support a dry lining, screed or flooring, in situations:

- on damp floors in underground situations subject to high groundwater levels, and perennial moisture
- in conjunction with a remedial dpc system where the walls and floors have a high salt content, and/or it is necessary to complete the installation immediately without allowing a period for initial drying
- over walls and floors which have a friable or painted surface, are contaminated with oil or mould, or have a high salt content
- as a waterproofing membrane in areas subject to vibration.

3.2 Depending on the application required and the site conditions, the membrane may be used:

- as an underfloor damp-proof membrane
- as a dry lining for walls, ventilated into the room via aeration slots at the top and bottom of the wall or via passive air vents, where access through an external wall is available
- together with other Oldroyd membranes covered by this Certificate, in a sealed system covering the floor, wall and ceiling with provision made for the disposal of water build-up behind the membrane via a sump and pump.

3.3 The membrane has not been assessed for use in chemically contaminated areas, such as brownfield sites. The membrane consists of a 0.8 mm thick polypropylene membrane and, in the opinion of the BBA, meets the criteria for a radon barrier according to BRE Report (BR 211 : 1999) *Radon : guidance on protective measures for new dwellings*. However, the effectiveness of the joint sealing system against radon has not been assessed by the BBA.


3.4 The system is satisfactory for use in Type C (drained protection) constructions in accordance with BS 8102 : 2009, Section 10.

3.5 Under normal operating conditions the membrane is not affected by underfloor heating.

4 Practicability of installation

The membrane should be installed by competent remedial damp-proofing contractors.

5 Resistance to water and water vapour

 5.1 The membrane is water resistant and has a high resistance to water vapour transmission. However, the system as installed is not resistant to hydrostatic pressure and, consequently, the measures described in the *Installation* section must be followed to ensure that the membrane acts as a drainage layer with no excessive build-up of water behind the system.

5.2 All joints and fixings must be sealed with Oldroyd sealing products, and drainage channels and gullies, or sumps and pumps should be installed as necessary to disperse excess or standing water.

6 Risk of condensation

6.1 As with any room, there is a need to control the generation and dispersal of moisture in the internal environment and to select appropriate and robust designs to minimise the risk of both surface and interstitial condensation, especially where insulation is used over the membrane.

6.2 In common with most waterproofing membranes, the product has a very high resistance to vapour diffusion, and when placed on the cold side of a construction may increase the risk of interstitial condensation. A calculation should be carried out to BS 5250 : 2002 and designers should consider appropriate techniques for managing the safe egress of moisture vapour with care, and in particular the effect of moisture on any materials at or in contact with materials below the local dew-point.

7 Resistance to salt transfer

The system provides an effective barrier to the transmission of salts or other contaminants from the substrate.

8 Resistance to puncture, impact and loading

8.1 The membrane has a high resistance to puncture and will not be damaged by normal foot traffic during installation, or whilst laying concrete or screeds.

8.2 The membrane can support the long-term imposed loadings defined in the UK National Annex to BS EN 1991-1-1 : 2002, Table NA.2, categories A to D, without undue deformation.

9 Maintenance

9.1 As the membrane is confined within a wall or floor space and has suitable durability (see section 10), maintenance is not required.

9.2 Regular maintenance of all gullies, sumps and pumps must be conducted to ensure that a build-up of water does not occur behind the membrane.

10 Durability



Under normal conditions of use the product will provide an effective barrier to the transmission of salts, liquid water and water vapour for the life of the structure in which it is incorporated.

Installation

11 Survey

11.1 Where conditions are damp, a full survey is necessary by a specialist surveyor to diagnose the cause and to establish if treatment is required.

11.2 If rising damp to above ground elevations is found, a remedial treatment is conducted in accordance with the relevant Agrément Certificate, BS 6576 : 2005 and The Property Care Association *Code of Practice for Installation of Remedial Damp-proof Courses in Masonry Walls*.

11.3 Appropriate remedial measures are taken to rectify major causes of damp conditions or water ingress, and to repair structural defects.

12 Surface preparation

12.1 When used in new constructions the concrete base must be laid in accordance with BS 8204-1 : 2003.

12.2 If a board covering is to be laid directly on the membrane, the concrete base must have a surface regularity with a maximum permissible departure of 5 mm from the underside of a 2 m straight edge, resting in contact with the floor, in accordance with BS 8204-1 : 2003.

12.3 When used in existing buildings any unsound plaster, render or screed is removed to expose the substrate and cleaned with a stiff brush to remove loose material, laitance, salt residue, mould or adhesive. If mould is present the substrate is treated with a fungicidal wash in accordance with the Certificate holder's instructions.

12.4 Uneven substrates should be dubbed out with a cement-sand (1:4) or cement-lime-sand (1:1:6) render to achieve a flat finish, and allowed to cure before the membrane is fixed.

13 Procedure

General

13.1 Oldroyd Xv 20 may be used in combination with any of the appropriate Oldroyd membranes which are the subject of other Product Sheets of this Certificate.

13.2 The membrane should always be used with the flanged edge positioned in front of and overlapping the previously installed membrane width. Joints with the flanged edge are sealed using Oldroyd Jointing Tape, while stud-to-stud joints (without the flanged edge) are sealed by overlapping the membrane by 100 mm to 150 mm and positioning Oldroyd Overseal Tape over, or Oldroyd Jointing Rope between, the last two rows of studs.

13.3 Fixings are made through the membrane studs into 10 mm holes, drilled centrally through the studs to a depth of at least 75 mm. Oldroyd Brick Plugs, to which Oldroyd Jointing Rope has been applied around the rim, are inserted into the holes and carefully hammered flush with the membrane. Oldroyd Jointing Rope forms a sealing gasket between the plug and membrane.

13.4 Spacing between fixings will depend on the application and the nature of the substrate, but should be kept to a maximum of 600 mm horizontally and 800 mm vertically.

13.5 On walls, preservative-treated timber battens of minimum dimensions 19 mm by 38 mm or a proprietary aluminium framing system are fixed into the plug's fixing hole using No 12 (5.5 mm diameter) screws with a maximum screwing-in depth of 25 mm.

Walls

13.6 Installation of the membrane is usually commenced at the top of the construction. The membrane may require initial fixing on a ceiling or along the upper edge of a wall, prior to final fixing along batten runs. For joints where the

flanged edge is not used, the two membrane sheets are overlapped by a minimum of 200 mm, and for horizontal joints the lower sheet is always positioned in front of the upper sheet.

13.7 The installation is conducted over windows and the membrane is then cut away to expose them. For doors and other obstructions, the membrane is installed up to the perimeter. In both cases the surfaces are primed and the gaps sealed with Oldroyd Overseal Tape.

13.8 Power cables, points and light switches preferably should be remounted in front of the membrane.

13.9 In below-ground installations, the practice of leaving the top of the wall membrane unsealed where there is no requirement for a ceiling membrane to be installed, may need to be reconsidered in cases where ingress of gases, odours, or vermin is a consideration (such as in proximity to food preparation areas). The advice of the Certificate holder should be sought in these situations.

13.10 In above-ground installations the build up of water vapour behind the membrane is controlled by ventilating into the room via ventilation gaps provided at the ceiling and skirting board levels or via passive air vents where access through an external wall is available.

Floors

13.11 Floors must have a drainage outlet point. There should be a fall towards the outlet point or a drainage channel made around the circumference of the floor, to ensure that water can flow to the outlet.

13.12 The membrane is rolled out 'studs down' over the floor, and consecutive membrane widths are laid so the flanged edge overlaps the first sheet by the width of the 70 mm flange. The joints are sealed with Oldroyd Jointing Tape. Where a stud to stud joint occurs it is sealed using Oldroyd Sealing Rope.

13.13 Fixings must not be applied through the floor membrane.

13.14 The membrane is cut within 5 mm of any pipes and services in the floor, and the gap filled with Oldroyd Jointing Rope. Where appropriate an Oldroyd Pipe Collar should be fitted and sealed using Oldroyd Jointing Tape, otherwise a patch of membrane is overlaid and sealed to the service with Oldroyd Jointing Rope, and its circumference sealed with Oldroyd Jointing Tape.

13.15 Where appropriate, at wall/floor junctions and corners of the installation, the membrane may be cut flush and the gap between the wall and floor membranes sealed with runs of Oldroyd Jointing Tape.

13.16 Alternatively, the floor membrane may be turned up by 100 mm at the wall. At corners a cut is made and the membrane folded and sealed with Oldroyd Jointing Tape or Rope. The overlap between the wall and floor membranes is sealed with either a run of Oldroyd Jointing Rope (for joints without flanged edges) or a single run of Oldroyd Jointing Tape (for flanged joints).

14 Dry lining of walls

Gypsum plasterboard to BS EN 520 : 2004, or similar dry lining boards which are the subject of a current BBA Certificate, are fixed to the battens with galvanized screws or nails, positioned a minimum of 12 mm from the edge of the board. Care should be taken to ensure that penetration of the plasterboard screws or nails is less than the batten depth to avoid puncturing the membrane.

15 Finishing works

After the system has been installed and the walls dry-lined, permanent decorations may be applied. Temporary permeable decorations (necessary with traditional, cement-based waterproofers) are not necessary with this system.

16 Floor membrane coverings

16.1 If required, extruded closed-cell polystyrene insulation boards, minimum density $30 \text{ kg}\cdot\text{m}^{-3}$, may be laid over the membrane.

16.2 Suitable tongue-and-groove flooring board panels should be selected in accordance with BS EN 12871 : 2010, and loose-laid over the membrane to within 10 mm of the walls. The panels are staggered and the joints sealed with a thermoplastic wood adhesive to BS EN 204 : 2001.

16.3 Alternatively, the membrane is covered by concrete or screed a minimum of 50 mm thick (65 or 75 mm thick if laid over insulation in light or normal situations respectively) in accordance with BS 8204-1 : 2003. Care should be taken to ensure the membrane is not displaced when placing the concrete or screed.

16.4 Proprietary screeds may also be considered, which can generally be laid at thicknesses less than 50 mm, but the use of these products with the membrane has not been assessed by the BBA and is outside the scope of this Certificate.

17 Tests

Tests were carried out and the results assessed to determine:

- thickness
- resistance to nail tear
- resistance to long-term loading
- resistance to short-term compression.

18 Investigations

18.1 A user survey of treated installations and contractors was conducted to establish the system's performance in use.

18.2 An assessment was made of the scope of use and durability of the system in relation to the generic properties of the membrane.

18.3 The manufacturing process and quality control procedures were evaluated and details were obtained of the quality and composition of the materials used.

Bibliography

BS 5250 : 2002 *Code of practice for control of condensation in buildings*

BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*

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

BS 8204-1 : 2003 *Screeds, bases and in situ floorings. Concrete bases and cementitious levelling screeds to receive floorings. Code of practice*

BS EN 204 : 2001 *Classification of thermoplastic wood adhesives for non-structural applications*

BS EN 520 : 2004 *Gypsum plasterboards — Definitions, requirements and test methods*

BS EN 1991-1-1 : 2002 *Eurocode 1 : Actions on structures — General actions— Densities, self-weight, imposed loads for buildings*

NA to BS EN 1991-1-1 : 2002 *UK National Annex to Eurocode 1 : Actions on structures — General actions— Densities, self-weight, imposed loads for buildings*

BS EN 12871 : 2010 *Wood-based panels. Performance specifications and requirements for load bearing boards for use in floors, walls and roofs*

Property Care Association COP09 *Code of Practice for Installation of Remedial Damp-proof Courses in Masonry Walls*

19 Conditions

19.1 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.

19.2 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.

19.3 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.

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

19.5 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
- individual 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.

19.6 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.