

## Master Builders Solutions UK Ltd

Swinton Hall Road  
Swinton  
Manchester M27 4EU



Tel: +44 (0) 7917 233 229

e-mail: [stuart.davidson@masterbuilders.com](mailto:stuart.davidson@masterbuilders.com)

website: [www.master-builders-solutions.com/en-gb](http://www.master-builders-solutions.com/en-gb)

**Agrément Certificate**

**21/5889**

Product Sheet 1 Issue 2

### MASTERLIFE HYDRO-EXPANSIVE WATERBARS

#### MASTERLIFE WP 910/912

This Agrément Certificate Product Sheet<sup>(1)</sup> relates to MasterLife WP 910/912, comprising a flexible synthetic elastomer hydro-expansive waterstop and hydro-expansive mastic, used to waterproof construction joints and penetrations in underground waterproof reinforced concrete structures.

(1) Hereinafter referred to as 'Certificate'.

#### The assessment includes

##### Product factors:

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

##### Process factors:

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

##### Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



#### KEY FACTORS ASSESSED

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

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 14 September 2023

Originally certified on 20 April 2021

Hardy Giesler  
Chief Executive Officer

*This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.*

*The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).*

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

*The Certificate should be read in full as it may be misleading to read clauses in isolation.*

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

#### British Board of Agrément

1<sup>st</sup> Floor, Building 3, Hatters Lane  
Croxley Park, Watford  
Herts WD18 8YG

©2023

tel: 01923 665300  
[clientservices@bbacerts.co.uk](mailto:clientservices@bbacerts.co.uk)  
[www.bbacerts.co.uk](http://www.bbacerts.co.uk)

## SUMMARY OF ASSESSMENT AND COMPLIANCE

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

### Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that MasterLife WP 910/912, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



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

<b>Requirement:</b>	<b>C2(a)</b>	<b>Resistance to moisture</b>
Comment:		The products provide an effective barrier to water under hydrostatic pressure. See section 3 of this Certificate.
<b>Regulation:</b>	<b>7(1)</b>	<b>Materials and workmanship</b>
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.



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

<b>Regulation:</b>	<b>8(1)</b>	<b>Fitness and durability of materials and workmanship</b>
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>9</b>	<b>Building standards – construction</b>
Standard:	3.4	Moisture from the ground
Comment:		The products are an effective barrier to water under hydrostatic pressure, with reference to clauses 3.4.1 <sup>(1)(2)</sup> , 3.4.5 <sup>(1)(2)</sup> and 3.4.7 <sup>(1)(2)</sup> of this Standard. See section 3 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The products 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.
<b>Regulation:</b>	<b>12</b>	<b>Building standards – conversions</b>
Comment:		All comments given for the products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> .
		(1) Technical Handbook (Domestic).
		(2) Technical Handbook (Non-Domestic).



#### The Building Regulations (Northern Ireland) 2012 (as amended)

<b>Regulation:</b>	<b>23(1)(a)(i)</b>	<b>Fitness of materials and workmanship</b>
Comments:	<b>(iii)(b)(i)</b>	The products are acceptable. See sections 8 and 9 of this Certificate.
<b>Regulation:</b>	<b>28(a)</b>	<b>Resistance to moisture and weather</b>
Comment:		The products are an effective barrier to water under hydrostatic pressure. See section 3 of this Certificate.

## Additional Information

### NHBC Standards 2023

In the opinion of the BBA, MasterLife WP 910/912, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 5.4 *Waterproofing of basements and other below ground structures* (requiring proprietary waterproofing materials to comply with Technical Requirements R3).

Unless it can be demonstrated that the water table is permanently below the underside of the slab, the products must be used within a Type B<sup>(1)</sup> waterproofing protection product, in combination with either a Type A<sup>(1)</sup> or C<sup>(1)</sup> waterproofing protection where Grade 3<sup>(1)</sup> 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).

(1) As defined in BS 8102 : 2022.

## Fulfilment of Requirements

The BBA has judged MasterLife WP 910/912 to be satisfactory for use as described in this Certificate. The products have been assessed as flexible, synthetic elastomer hydro-expansive waterstop and hydro-expansive mastic, for use at construction joints and penetrations in underground reinforced and waterproof concrete structures.

## ASSESSMENT

### Product description and intended use

The Certificate holder provided the following description for the products under assessment. MasterLife WP 910/912 consists of:

- MasterLife WP 910 — a red hydro-expansive waterbar based on synthetic polymer technology that swells on contact with water. The product has nominal cross-sectional dimensions of 20 x 10 mm
- MasterLife WP 912 — a grey one-component, moisture-curing synthetic polymer gun-applied mastic that swells on contact with water, used to adhere MasterLife WP 910 to concrete surfaces. The product can also be used as a waterstop around penetrations through waterproof concrete structures, eg pipes and cable ducts.

#### Ancillary Items

The following ancillary items are essential to use with MasterLife WP 910 and have been assessed with the product:

- masonry nails with nominal 10 mm washers — to ensure MasterLife WP 910 does not move out of position at changes of direction.

The Certificate holder recommends the following ancillary items for use with MasterLife WP 912 at penetrations, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- rapid-set plugging mortars.
- plugging system for tie holes.

#### Applications

The products are satisfactory for use as a Type B (structurally integral) protection (as defined in BS 8102 : 2022) to waterproof construction joints and penetrations in underground waterproof reinforced concrete structures.

The products have not been assessed for use in movement joints.

## Product assessment – key factors

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

### 1 Mechanical resistance and stability

#### 1.1 Adhesion

1.1.1 Results of adhesion tests are given in Table 1.

*Table 1 Results of adhesion tests*

Product assessed	Assessment method	Requirement	Result
MasterLife WP 910 adhered to concrete surface using MasterLife WP 912	Tensile bond strength to a BBA test specification 24 hours curing time	Value achieved	0.35 MPa

1.1.2 On the basis of data assessed, the products have satisfactory strength and adhesion.

1.1.3 Substrates must be dry and free from contamination, which could affect the adhesion of the products.

### 2 Safety in case of fire

Not applicable.

### 3 Hygiene, health and the environment

Data was assessed for the following characteristics.

#### 3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 2.

**Table 2 Results of water resistance and product swelling tests**

Product assessed	Assessment method	Requirement	Result
MasterLife WP 910	Unrestrained swelling and recovery to a BBA test method	No detrimental effect	Pass
MasterLife WP 912	Unrestrained swelling and recovery to a BBA test method	No detrimental effect	Pass
MasterLife WP 910	Unrestrained swelling and recovery MFPA Leipzig GmbH test method	No detrimental effect	Pass
MasterLife WP 910	Confined swell pressure to a BBA test method	Value achieved	15 bar achieved after 28 days
MasterLife WP 912	Confined swell pressure to a BBA test method	Value achieved	23 bar achieved after 28 days
MasterLife WP 910	Confined swell pressure to a MFPA Leipzig GmbH test method	Value achieved	29 bar achieved after 21 days
MasterLife WP 910 bonded to the concrete by	Resistance to hydrostatic pressure to a Vattenfall R&D in-house test method Test 1 – Exposure to 3 bar of water pressure Test 2 – Exposure to 6 bar of water pressure	No water penetration	Pass
MasterLife WP 912	Resistance to hydrostatic pressure to a Vattenfall R&D in-house test method Exposure to 8 bar of water pressure for 7 days	No water penetration	Pass
MasterLife WP 910	Impermeability (repeated soak and dry cycle) to a MFPA Leipzig GmbH test method Exposure to 5 bar of water pressure for 14 days Test cycle carried out three times	No water penetration	Pass

3.1.2 The unconfined products will expand in excess of 200% by volume in neutral pH water.

3.1.3 The expansion of the products in an alkaline solution of calcium hydroxide with a pH up to 12.0 and an acidic solution of sulphuric acid with a pH down to 5.0, will be similar to that in neutral water and will not affect the products' ability to form an effective seal.

3.1.4 The products will shrink on drying but will re-hydrate on wetting without detriment to their ability to swell.

3.1.5 On the basis of data assessed, the products form an effective barrier to water under pressure from the ground.

3.1.6 The ability of the products to expand and form an effective seal can be adversely affected by the groundwater chemistry, eg saline conditions, and the products have not been assessed for use under conditions other than those detailed in Table 2. The Certificate holder must be consulted for advice on specific applications, service conditions and groundwater chemistry, but such advice is outside the scope of this Certificate.

3.1.7 The products will develop significant pressure when confined within a concrete structure and must be covered by at least 80 mm of well compacted reinforced concrete from each edge to reduce the risk of damaging the concrete.

3.1.8 An appropriate safety factor must be applied to the maximum water pressures given in Table 2 and the use of additional waterproof protection must be considered, depending on the specific risks associated with any particular structure.

## 4 Safety and accessibility in use

Not applicable.

## 5 Protection against noise

Not applicable.

## **6 Energy economy and heat retention**

Not applicable.

## **7 Sustainable use of natural resources**

Not applicable.

## **8 Durability**

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

### 8.2 Service life

8.2.1 Under normal service conditions, the products will have a life at least equivalent to the structure in which they are incorporated, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

8.2.2 The durability of the products may be affected if they are dislodged or damaged during or following installation; therefore, care must be taken to ensure that the products remain in position and are not dislodged when concrete is poured over them, or damaged during subsequent actions, eg vibration.

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

### 9 Design, installation, workmanship and maintenance

#### 9.1 Design

The products swell on contact with water and must be fully confined within the concrete structure to form an effective seal.

#### 9.2 Installation

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

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.2.3 Installation must be carried out in accordance with the relevant requirements of BS 8102 : 2022.

9.2.4 To avoid premature swelling, the products must be protected from contact with water until enclosed in the structure and must not be placed during rain or when rain is forecast.

9.2.5 The products are intended for use on a sound and well compacted concrete substrate. The substrate must be:

- clean and free from surface contamination
- smooth
- dry
- at a temperature between +5 and +35°C
- free of dust, dirt and other debris (if present, must be removed using a stiff brush and/or suitable mechanical means).

#### 9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information and a site visit to witness an installation in progress. To achieve the performance described in this Certificate, installation of MasterLife WP 910/912 must be carried out by a competent general builder, or a contractor, experienced with these types of products.

#### 9.4 Maintenance and repair

As the products are confined within the structure and have suitable durability, maintenance is neither possible nor required.

### 10 Manufacture

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

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

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

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

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

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

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

## **11 Delivery and site handling**

11.1 The Certificate holder stated that the products are delivered to site in packaging bearing the Certificate holder's name and traceability information.

11.2 MasterLife WP 910 is supplied in cartons consisting of three rolls of 10 m lengths, individually sealed in a polythene bag. Each carton has a nominal weight of 9.9 kg.

11.3 MasterLife WP 912 is available in either 310 ml aluminium cartridges or 600 ml foil sausages. Cartridges are packed in cartons, with 12 cartridges per carton, weighing approximately 3.7 kg. The 600 ml sachets are packed in cartons with 12 sachets per carton, weighing approximately 7.3 kg.

11.4 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.4.1 The products must be stored in cool, dry conditions away from direct sunlight.



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

### Construction (Design and Management) Regulations 2015

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

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

### CLP Regulations

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

### Management Systems Certification for production

The management systems of the manufacturer have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by TUV SUD Management Service GmbH (Certificate 12 104 60146/079 TMS) and Euro Quality System (Certificate 170308/112B).

### Additional information on installation

#### Placing and fixing

A.1 MasterLife WP 912 is applied centrally along the joint at a width slightly wider than MasterLife WP 910.

A.2 MasterLife WP 910 is then pressed into the MasterLife WP 912 so that the mastic exudes at the edges.

A.3 A minimum of 80 mm concrete coverage must be ensured around all edges. The Certificate holder must be consulted on minimum wall height, but such advice is outside the scope of this Certificate.

A.4 Where MasterLife WP 912 is used as the primary waterstop, eg at penetrations, the product must be applied as a continuous bead at least 10 mm in diameter and positioned so as to ensure a minimum concrete coverage of 80 mm around all edges.

A.5 Roll ends and/or cut ends must be overlapped tightly by at least 5 cm and sealed with MasterLife WP 912. Where necessary, such as at changes of direction, MasterLife WP 910 may be temporarily secured using a masonry nail fixing and suitable washer until MasterLife WP 912 is fully cured. The temporary fixing should be removed prior to concrete placement. The Certificate holder must be consulted for suitable fixings.

#### Enclosing

A.6 Prior to enclosing in the structure, the products must be inspected for damage and premature swelling. Damaged and/or swollen products must be replaced at this stage.

A.7 Concrete is poured to enclose the system, compacting well around the waterstop but taking particular care not to dislodge or cause damage during the process.

## Bibliography

BS 8102 : 2022 *Protection of below ground structures against water ingress – Code of practice*

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

## 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 marking and CE marking.

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

**British Board of Agrément**

1<sup>st</sup> Floor, Building 3, Hatters Lane  
Croxley Park, Watford  
Herts WD18 8YG

©2023

tel: 01923 665300  
clientservices@bbacerts.co.uk  
[www.bbacerts.co.uk](http://www.bbacerts.co.uk)