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Agrément Certificate
25/7495
Product Sheet 1 Issue 1

INDEX ROOF WATERPROOFING MEMBRANES

FLEXTER TESTUDO ROOFING MEMBRANES

This Agrément Certificate Product Sheet(1) relates to Flexter Testudo Roofing Membranes, a range of glass fibre/polyester reinforced, atactic polypropylene (APP) and styrene butadiene styrene (SBS) polymer-modified bitumen membranes, for use as fully or partially bonded waterproofing on flat and pitched roofs with limited access.

(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 issue: 21 November 2025

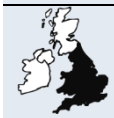
Hardy Giesler
Chief Executive Officer

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 Flexter Testudo Roofing Membranes, 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)

Requirement:	**B4(1)**	**External fire spread**
Comment:		The products are restricted by this Requirement in some circumstances. See section 2 of this Certificate.
Requirement:	**B4(2)**	**External fire spread**
Comment:		On a suitable substructure, the products may enable a roof to be unrestricted by this Requirement. See section 2 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The products, including joints, will enable a roof to satisfy this Requirement. See section 3 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)(2)**	**Fitness and durability of materials and workmanship**
Comment:		The use of the products satisfies the requirements of this Regulation. See sections 8 and 9 of this Certificate.
Regulation:	**9**	**Building standards – construction**
Standard:	2.8	Spread from neighbouring buildings
Comment:		The products, when applied to a suitable substructure, may enable a roof to be unrestricted by this Standard, with reference to clause 2.8.1[(1)(2)]. See section 2 of this Certificate.
Standard:	3.10	Precipitation
Comment:		The products, including joints, will enable a roof to satisfy this Standard, with reference to clauses 3.10.1[(1)(2)] and 3.10.6[(1)(2)]. 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.
Regulation:	**12**	**Building standards – conversion**
Comment:		Comments in relation to the products 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(1)(a)(i) (iii)(b)(i)**	**Fitness of materials and workmanship**
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The products, including joints, will enable a roof to satisfy this Regulation. See section 3 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		The products are restricted by this Regulation in some circumstances. See section 2 of this Certificate.
Regulation:	**36(b)**	**External fire spread**
Comment:		On a suitable substructure, the products may enable a roof to be unrestricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2025

In the opinion of the BBA, Flexter Testudo Roofing Membranes, 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 7.1 *Flat roofs, terrace and balconies.*

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

NHBC Standards do not cover the refurbishment of existing roofs.

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

Fulfilment of Requirements

The BBA has judged Flexter Testudo Roofing Membranes to be satisfactory for use as described in this Certificate. The products have been assessed for use in exposed or protected specifications as fully or partially bonded waterproofing on flat and pitched roofs with limited access.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. Flexter Testudo Roofing Membranes consist of:

- Flexter Testudo P 3 mm — an APP polymer-modified bitumen, talc finish underlay, reinforced with 180 $g \cdot m^{-2}$ polyester composite and backed with a thermofusible film
- Flexter Testudo P 4 mm — an APP polymer-modified bitumen, talc finish underlay or capsheet, reinforced with 180 $g \cdot m^{-2}$ polyester composite and backed with a thermofusible film
- Flexter Testudo P 25/4 mm — an APP polymer-modified bitumen, talc finish underlay or capsheet, reinforced with 180 $g \cdot m^{-2}$ polyester composite and backed with a thermofusible film

- Mineral Flexter Testudo P 3 mm — an APP polymer-modified bitumen, mineral finish capsheet, reinforced with 180 g·m^{-2} polyester composite and backed with a thermofusible film
- Mineral Flexter Testudo P 4 mm — an APP polymer-modified bitumen, mineral finish capsheet, reinforced with 180 g·m^{-2} polyester composite and backed with a thermofusible film
- Mineral Flexter Testudo SA 4 mm — an APP polymer-modified bitumen, mineral finish capsheet, reinforced with 180 g·m^{-2} polyester composite and backed with a with a removeable liner over the adhesive compound on the underside
- Flexter Testudo Biarmato 3 mm — an APP polymer-modified bitumen, talc finish underlay, reinforced with 180 g·m^{-2} glass fibre/polyester composite and backed with a thermofusible film
- Flexter Testudo Biarmato 4 mm — an APP polymer-modified bitumen, talc finish underlay or capsheet, reinforced with 180 g·m^{-2} glass fibre/polyester composite and backed with a thermofusible film
- Testudo SA Base 3 mm — an SBS polymer-modified bitumen, self-adhesive plain finish underlay with thermofusible film, reinforced with 110 g·m^{-2} stabilised polyester composite with a removeable liner over the adhesive compound on the underside.

The products have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Components					
	Flexter Testudo Spunbond Polyester	Flexter Testudo Spunbond Polyester 25/4 mm	Mineral Flexter Testudo Spunbond Polyester	Mineral Flexter Testudo SA	Flexter Testudo Biarmato	Testudo SA Base
Thickness (mm)	3 4	4	3 4	4	3 4	3
Roll width (m)	1	1	1	1	1	1
Roll length (m)	8, 10	8, 10	8, 10	8, 10	8, 10	8, 10
Mass per unit area (kg·m^{-2})	3.2 4.3	4.3	4.2 5.2	4.2	3.2 4.2	3.6
Upper surface finish	Anti-adhesive talc	Anti-adhesive talc	Mineral chippings	Mineral chippings	Anti-adhesive talc	Film
Lower surface finish	Thermofusible polyethylene	Thermofusible polyethylene	Thermofusible polyethylene	Self-adhesive	Thermofusible polyethylene	Self-adhesive bitumen with peel off film

Ancillary Items

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

- INDEVER — a bituminous primer for application to porous substrates
- air and vapour control layer (AVCL)
- insulation adhesive
- insulation boards
- mechanical fixings – for use on roof falls in excess of 5° (1:11)
- roof drain outlets/scuppers — a range of overflow and outlets for rainwater drainage
- edge trims and termination details — for use at perimeters and upstands
- lightning conductor clips
- rooflights
- walkways
- edge protection system
- type 3G bitumen membranes.

Applications

- Flexter Testudo Spunbond Polyester 3 mm is for use as a fully or partially bonded waterproofing underlay on flat and pitched roofs with limited access
- Flexter Testudo Spunbond Polyester 4 mm is for use as a fully or partially bonded underlay or capsheet on flat or pitched roofs with limited access or a protected waterproofing layer on flat roofs with limited access
- Flexter Testudo Spunbond Polyester 25/4 mm is for use as a fully or partially bonded underlay or capsheet on flat or pitched roofs with limited access or a protected waterproofing layer on flat roofs with limited access or under heavy protection
- Mineral Flexter Testudo Spunbond Polyester 3 mm is for use as a fully or partially bonded capsheet on flat or pitched roofs with limited access
- Mineral Flexter Testudo Spunbond Polyester 4 mm is for use as a fully or partially bonded capsheet on flat or pitched roofs with limited access
- Mineral Flexter Testudo SA 4 mm is for use as a self-adhesive mineral capsheet in an exposed system on flat or pitched roofs with limited access
- Flexter Testudo Biarmato 3 mm is for use as a protected waterproofing layer on flat roofs with limited access
- Flexter Testudo Biarmato 4 mm is for use as a fully or partially bonded capsheet on flat pitched roofs with limited access
- Testudo SA Base 3 mm is for use as a self-adhered waterproofing underlay on flat and pitched roofs with limited access or a protected waterproofing underlay on flat roofs with limited access.

Definitions for products and applications inspected

The following terms are defined for the purpose of this Certificate as:

- flat roofs — a roof having a minimum finished fall of 1:80
- pitched roofs — a roof having a fall in excess of 1:6
- limited access roofs — a roof subject only to pedestrian traffic for maintenance of the roof covering, cleaning of gutters, etc.

Product assessment – key factors

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

1 Mechanical resistance and stability

Not applicable.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 External fire spread

2.1.1 When tested to CEN/TS 1187 : 2012 and classified to EN 13501-5 : 2016, the constructions[(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)] given in Table 2 achieved a B_{ROOF}(t4) classification for slopes below 10°.

Table 2 Tested constructions

Layer	System 1[1]	System 2[2]	System 3[3]	System 4[4]	System 5[5]	System 6[6]	System 7[7]
Substrate[15]	18 mm OSB						
Primer[15]	Primer 610						
AVCL[15]	Flexter VCL/ALU / Selftene BV HE Alu 2.4 mm						
Adhesive[15]	SikaRoof Adhesive-200 / SikaRoof Board Adhesive						
Insulation[15]	Recticel Powerdeck F 50 mm	Rockwool Hardrock Multifix 60 mm	Recticel Powerdeck F 150 mm	Recticel Powerdeck F 150 mm	Rockwool Hardrock Multifix 170 mm	Recticel Powerdeck F 150 mm	Rockwool Hardrock Multifix 170 mm
Adhesive[15]		Not applicable		SikaRoof Adhesive-200 / SikaRoof Board Adhesive			
Insulation[15]		Not applicable		Recticel Powerdeck F 50 mm	Rockwool Hardrock Multifix 85 mm	Recticel Powerdeck F 150 mm	Rockwool Hardrock Multifix 185 mm
Primer[15]	Primer 610						
Self-adhesive underlay[15]	Flexter Base SA 3 mm / Selftene Base HE 3 mm						
Waterproofing	Mineral Flexter Testudo 4 mm						
Layer	**System 8[8]**	**System 9[9]**	**System 10[10]**	**System 11[11]**	**System 12[12]**	**System 13[13]**	**System 14[14]**
Substrate	18 mm OSB						
Primer[15]	Primer 610						
AVCL[15]	Flexter VCL/ALU / Selftene BV HE Alu 2.4mm						
Adhesive[15]	SikaRoof Adhesive-200 / SikaRoof Board Adhesive						
Insulation[15]	Recticel Powerdeck F 50 mm	Rockwool Hardrock Multifix 60 mm	Recticel Powerdeck F 150 mm	Recticel Powerdeck F 150 mm	Rockwool Hardrock Multifix 170 mm	Recticel Powerdeck F 150 mm	Rockwool Hardrock Multifix 170 mm
Adhesive[15]		Not applicable		SikaRoof Adhesive-200 / SikaRoof Board Adhesive			
Insulation[15]		Not applicable		Recticel Powerdeck F 50 mm	Rockwool Hardrock Multifix 85 mm	Recticel Powerdeck F 150 mm	Rockwool Hardrock Multifix 185 mm
Primer[15]	Primer 610						
Self-adhesive underlay[15]	Flexter Base SA 3 mm / Selftene Base HE 3 mm						
Waterproofing	Mineral Flexter Testudo SA 4 mm						

(1) Test and classification reports, 548344, issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(2) Test and classification reports, 548349, issued by Warringtonfire Testing and Certification Limited copies available from the Certificate holder on request.

(3)Test and classification reports, 548353, issued by Warringtonfire Testing and Certification Limited, copies from the Certificate holder on request.

(4) Test and classification reports, 548357, issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(5) Test and classification reports, 548365, issued by Warringtonfire Testing and Certification Limited, c available from the Certificate holder on request.

(6) Test and classification reports, 548361, issued by Warringtonfire Testing and Certification Limited copies available from the Certificate holder on request.

(7) Test and classification reports, 548369, issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(8) Test and classification reports, 548347 issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(9) Test and classification reports, 548353 issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(10) Test and classification reports, 5483355 issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(11) Test and classification reports, 548359, issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(12) Test and classification reports, 548367, issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.

(13) Test and classification reports, 548363, issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.
(14) Test and classification reports, 548371, issued by Warringtonfire Testing and Certification Limited, copies available from the Certificate holder on request.
(15) These components are outside the scope of this Certificate.

2.1.2 Flexter Testudo Biarmato 4 mm cannot be used exposed within 20 m of a relevant boundary.

2.1.3 On the basis of data assessed, the constructions listed in Table 2 will be unrestricted by the documents supporting the national Building Regulations with respect to proximity to a relevant boundary. Restrictions may apply at junctions with compartment walls.

2.1.4 A roof incorporating the products will also be unrestricted with respect to proximity to a relevant boundary under the national Building Regulations when used in protected specifications including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC.

2.1.5 In Wales and Northern Ireland, when used on flat roofs using a substrate designated in the supporting documents with the surface finishes listed below, the roof is also deemed to be unrestricted with respect to a relevant boundary:

- bitumen-bedded stone chippings covering the whole surface to a depth of not less than 12.5 mm
- bitumen-bedded tiles of a non-combustible material
- sand and cement screed
- macadam.

2.1.6 The classification of permissible areas of use of other specifications must be confirmed by reference to the requirements of the documents supporting the national Building Regulations.

2.2 Reaction to fire

2.2.1 The Certificate holder has declared a reaction to fire classification of Class E to EN 13501-1 : 2009 for the products, but this has not been independently validated by the BBA.

2.2.2 On the basis of data assessed, the products will be restricted in use under the documents supporting the national Building Regulations in some cases.

2.2.3 In England, the products, when used in pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on residential buildings more than 11 m in height or on other buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions must also be included in calculations of unprotected area.

2.2.4 In Wales and Northern Ireland, the products, when used in pitches greater than 70°, excluding upstands, must not be used less than 1 m from a relevant boundary, or on buildings more than 18 m in height. Restrictions apply on assembly and recreation buildings. These constructions must also be included in calculations of unprotected area.

2.2.5 In Scotland, the use of the products is unrestricted with respect to building height and proximity to a relevant boundary. However, restrictions on the overall construction may apply, depending on the reaction to fire classification achieved by the build-up, which must be established on a case-by-case basis.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

3.1.1 Results of weathertightness tests are given in Table 3.

Table 3 Weathertightness

Product assessed	Assessment method	Requirement	Result
Flexter Testudo Spunbond Polyester 4 mm	Watertightness under 60 kPa pressure to UNI EN 1928 : 2000	No leakage	Pass
Mineral Flexter Testudo Spunbond Polyester 4 mm			Pass
Flexter Testudo Biarmato 4 mm			Pass
Testudo SA Base 3 mm	Watertightness under 10 kPa pressure to BS EN 1928 : 2000	No leakage	Pass
Testudo SA Base 3 mm	Water vapour diffusion - equivalent air layer thickness (s_d) to BS EN 1931 : 2000 (23°C / 75% RH)	Value achieved	232 m
Flexter Testudo Spunbond Polyester 4 mm	Shear resistance of joints to EN 12317-1 : 1999 End joint Side joint	Value achieved	 929 N·(50 mm)$^{-1}$ 664 N·(50 mm)$^{-1}$
Flexter Testudo Spunbond Polyester 4 mm	Peel resistance of joints to EN 12316-1 : 2000 End joint Side joint	Value achieved	 60 N·(50 mm)$^{-1}$ 50 N·(50 mm)$^{-1}$
Mineral Flexter Testudo SA has been assessed using test data on the following build-ups: - 18 mm plywood deck, self-adhesive AVCL, bonded 150 mm PIR insulation board, Testudo SA Base and a self-adhesive representative related cap sheet - 18 mm plywood deck, Testudo SA Base and a self-adhesive representative related cap sheet	Dynamic wind uplift to EOTA TR-005	Value achieved	 7.0 kPa 8.5 kPa
Flexter Testudo P 4 mm, Flexter Testudo P 25/4 mm and Mineral Flexter Testudo have been assessed using test data on the following build-ups: - 18 mm plywood deck, self-adhesive AVCL, bonded 150 mm PIR insulation board, Testudo SA Base and a torch on representative related cap sheet - 18 mm plywood deck, Testudo SA Base and a torch on representative related cap sheet			 7.5 kPa 5.0 kPa

3.1.2 The dynamic wind uplift for Flexter Testudo Biarmato was assessed on the basis of test data for a relative representative product and deemed to be satisfactory.

3.1.3 On the basis of data assessed, the products, including joints, when completely sealed and consolidated, will adequately resist the passage of moisture to the interior of a building and so satisfy the requirements of the national Building Regulations.

3.1.4 The adhesion of the bonded products is sufficient to resist the effects of wind suction, elevated temperature and thermal shock conditions likely to occur in practice while remaining weathertight.

3.2 Resistance to mechanical damage

3.2.1 Results of resistance to mechanical damage tests are given in Table 4.

Table 4 Resistance to mechanical damage

Product assessed	Assessment method	Requirement	Result
Flexter Testudo Spunbond Polyester 4 mm	Tensile strength to EN 12311-1 : 1999	Value achieved	1000 N·(50 mm)$^{-1}$
	Longitudinal direction		665 N·(50 mm)$^{-1}$
	Transverse direction		
Mineral Flexter Testudo Spunbond Polyester 4 mm	Longitudinal direction		1015 N·(50 mm)$^{-1}$
	Transverse direction		665 N·(50 mm)$^{-1}$
Flexter Testudo Spunbond Polyester 25/4 mm	Longitudinal direction		715 N·(50 mm)$^{-1}$
	Transverse direction		495 N·(50 mm)$^{-1}$
Flexter Testudo Biarmato 4 mm	Longitudinal direction		640 N·(50 mm)$^{-1}$
	Transverse direction		555 N·(50 mm)$^{-1}$
Flexter Testudo Spunbond Polyester 4 mm	Elongation to EN 12311-1 : 1999	Value achieved	
	Longitudinal direction		41%
	Transverse direction		47%
Mineral Flexter Testudo Spunbond Polyester 4 mm	Longitudinal direction		43%
	Transverse direction		47%
Flexter Testudo Spunbond Polyester 25/4 mm	Longitudinal direction		50%
	Transverse direction		49%
Flexter Testudo Biarmato 4 mm	Longitudinal direction		44%
	Transverse direction		43%
Flexter Testudo Spunbond Polyester 3 mm	Static loading to EN 12730 : 2015	Value achieved	20 kg
Mineral Flexter Testudo Spunbond Polyester 3 mm	Method A		20 kg
Testudo SA Base 3 mm	Method A		10 kg
	Method B		15 kg
Flexter Testudo Spunbond Polyester 3 mm	Tear strength to EN 12310-1 : 1999	≥ 50 N	
	Longitudinal direction		Pass
	Transverse direction		Pass
Flexter Testudo Spunbond Polyester 25/4 mm	Longitudinal direction		Pass
	Transverse direction		Pass
Flexter Testudo Biarmato 3 mm	Longitudinal direction		Pass
	Transverse direction		Pass
Testudo SA Base 3 mm	Longitudinal direction		Pass
	Transverse direction		Pass
Flexter Testudo Spunbond Polyester 3 mm	Dynamic indentation to EN 12691 : 2018	Value achieved	1250 mm
Flexter Testudo Spunbond Polyester 4 mm			1250 mm
Flexter Testudo Spunbond Polyester 25/4 mm	Method A		1500 mm
Flexter Testudo Biarmato 4 mm	Method B		1000 mm
Testudo SA Base 3 mm	Method A		500 mm
	Method B		1500 mm
Flexter Testudo Spunbond Polyester 4 mm	Low temperature flexibility to EN 1109 : 1999	Value achieved	–25°C
Mineral Flexter Testudo Spunbond Polyester 4 mm			–30°C
Flexter Testudo Spunbond Polyester 25/4 mm			–30°C
Flexter Testudo Biarmato 4 mm			–20°C
Flexter Testudo Spunbond Polyester 4 mm	Heat resistance to EN 1110 : 1999	≥ 120°C	Pass
Mineral Flexter Testudo Spunbond Polyester 4 mm			Pass
Flexter Testudo Spunbond Polyester 25/4 mm			Pass
Flexter Testudo Biarmato 4 mm			Pass

3.2.2 On the basis of data assessed, the products can accept, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance while remaining weathertight. Care must be taken to avoid puncture by sharp objects or concentrated loads.

3.2.3 Where traffic in excess of the examples given in section 3.2.2 is envisaged, such as for maintenance of lift equipment, a walkway must be provided (for example, using concrete slabs supported on bearing pads).

3.2.4 The products are capable of accepting the effects of minor movement likely to occur in practice while remaining weathertight.

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 these products were assessed.

8.2 Specific test data were assessed as given in Table 5.

Table 5 Durability

Product assessed	Assessment method	Requirement	Result
Flexter Testudo Spunbond Polyester 4 mm	Dimensional stability to EN 1107-1 : 1999	Value	
	Longitudinal direction	achieved	0.2%
	Transverse direction		0.1%
Flexter Testudo Spunbond Polyester 25/4 mm	Longitudinal direction		–0.3%
	Transverse direction		0.1%
Flexter Testudo Biarmato 4 mm	Longitudinal direction		–0.2%
	Transverse direction (Upper and lower side)		0.1%
Flexter Testudo Spunbond Polyester 4 mm	Low temperature flexibility to EN 1109 : 1999	Value achieved	–5°C
Mineral Flexter Testudo Spunbond Polyester 4 mm	after heat ageing at 70°C for 180 days		–5°C
Flexter Testudo Spunbond Polyester 25/4 mm	after heat ageing at 70°C for 84 days		–25°C
Flexter Testudo Biarmato 4 mm			–15°C
Flexter Testudo Spunbond Polyester 4 mm	Heat resistance to EN 1110 : 1999	≥ 110°C	Pass
Mineral Flexter Testudo Spunbond Polyester 4 mm	after heat ageing at 70°C for 180 days		Pass
Flexter Testudo Spunbond Polyester 25/4 mm	after heat ageing at 70°C for 84 days		Pass
Flexter Testudo Biarmato 4 mm			Pass

8.3 Service life

Under normal service conditions, the products will have a life in excess of 35 years, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

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

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 Decks to which the products are to be applied must comply with the relevant requirements of BS 6229 : 2018, BS 8217 : 2005 and, where appropriate, *NHBC Standards* 2025, Chapter 7.1.

9.1.3 For design purposes of flat roofs, twice the minimum finished fall must be assumed, unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls, etc.

9.1.4 Structural decks to which the products are to be applied must be suitable to transmit the dead and imposed loads experienced in service. Allowance needs to be made for loading deflections to ensure that the free drainage of water is maintained.

9.1.5 Imposed loads, dead loading and wind loads must be calculated by a suitably experienced and competent individual in accordance with BS EN 1991-1-1 : 2002, BS EN 1991-1-3 : 2003 and BS EN 1991-1-4 : 2005, and their UK National Annexes.

9.1.6 The resistance to wind uplift for warm roofs will be dependent on the cohesive strength of the insulation and the method by which it is secured to the roof deck. This must be taken into account when selecting a suitable insulation material.

9.1.7 The ballast on protected roofs must be of a type that will not be removed or become delocalised owing to wind scour experienced on the roof.

9.1.8 Insulation materials to be used in conjunction with the products must be in accordance with the Certificate holder's instructions and be either:

- as described in the relevant clauses of BS 6229 : 2018, or
- the subject of a current BBA Certificate and be used in accordance with, and within the limitations of, that Certificate.

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, the Certificate holder's instructions and the relevant clauses of BS 8000-0 : 2014, BS 8000-4 : 1989 and BS 8217 : 2005.

9.2.3 If the roof is likely to be subjected to uncontrolled pedestrian access, the substructure must satisfy the requirements of the relevant clauses of BS 8217 : 2005, and one of the surface finishes described in clause 6.12 of the Code of Practice must be used.

9.2.4 Deck surfaces must be dry, clean and free from sharp projections such as nail heads and concrete nibs.

9.2.5 The products are laid in conditions normal to roofing work and must not be laid in rain, snow or heavy fog. If the temperature is below 5°C, suitable precautions must be taken against the formation of condensation on the substrate.

9.2.6 The waterproofing layers must always be installed with staggered overlaps and in such a manner that no counter-seams in the direction of the outlets are made, where reasonably practical.

9.2.7 The underlays must be taken a sufficient distance up all upstands and protrusions to ensure a minimum 100 mm bond and secure lap with the AVCL, where used, and must be a minimum height of 150 mm above the finished roof surface.

9.2.8 At falls in excess of 5° (1:11), precautions against slippage, and requirements for mechanical fixing as required by BS 8217 : 2005, must be observed.

9.2.9 In fully bonded installations, bonding of the capsheets is achieved by torch application ensuring a consistent pressure across the width of the roll by using a roll bar. Care must be taken not to overheat the membrane.

9.2.10 In partially bonded installations, a type 3G bitumen membrane must be loose laid edge to edge over the substrate. The membrane is fully torch-welded onto the perforated membrane, ensure that the bitumen seeps regularly into the perforations.

9.2.11 End and side laps for the capsheets are a minimum of 150 and 100 mm wide respectively, care must be taken to ensure that a continuous 5 to 10 mm extrusion of bitumen from the lap for torched joints.

9.2.12 On completion of the roof, talc-finished capsheets could have a surface finish applied in accordance with BS 8217 : 2005, clause 8.19.

9.2.13 When using the mineral surface-finished membranes on roofs with limited access, further surface protection is not required.

9.2.14 NHBC requires that the products, once installed, are inspected in accordance with *NHBC Standards* 2025 Chapter 7.1, Clause 7.1.11, including undergoing an appropriate integrity test, where required. Any damage to the products assessed in this Certificate must be repaired in accordance with section 9.4 of this Certificate and reinspected, in order to maintain the products' performance.

9.3 Workmanship

Practicability of installation was assessed on the basis of the Certificate holder's information and BS 8217 : 2005. To achieve the performance described in this Certificate, the products must only be installed by contractors who have been trained and approved by the Certificate holder.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the products in use requires that they are suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA and found to be appropriate and adequate.

9.4.2 The following requirements apply in order to satisfy the performance assessed in this Certificate:

9.4.2.1 The products must be the subject of six-monthly inspections and maintenance in accordance with the recommendations of BS 6229 : 2018, Chapter 7, and the Certificate holder's own maintenance requirements, where relevant, to ensure continued satisfactory performance.

9.4.3 In the event of damage, the capsheet can be effectively repaired, after cleaning the surrounding areas, with a patch of the appropriate capsheet over the damaged area in accordance with the Certificate holder's instructions.

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 on pallets and shrink-wrapped in polythene. Packaging bears the product name and Certificate holder's names and batch number.

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

11.2.1 Rolls must be stored upright on a clean and level surface away from excessive heat and under cover.

11.2.2 Self-adhesive products must be stored out of direct sunlight.

ANNEX A – SUPPLEMENTARY INFORMATION

Supporting information in this Annex is relevant to the products 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 product and/or components 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).

UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the products in accordance with Designated Standard EN 13707 : 2004.

CE marking

The Certificate holder has taken the responsibility of CE marking the products, in accordance with harmonised European Standard EN 13707 : 2004.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by SGS (Certificate CH15/1206.00).

Bibliography

BS 6229 : 2018 *Flat roofs with continuously supported flexible waterproof coverings — Code of practice*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*
BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*

BS EN 1928 : 2000 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness*

BS EN 1931 : 2000 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of water vapour transmission properties*

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 1991-1-3 : 2003 + A1 : 2015 *Eurocode 1 — Actions on structures — General actions — Snow loads*
NA + A2 : 18 to BS EN 1991-1-3 : 2003 + A1 : 2015 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Snow loads*
BS EN 1991-1-4 : 2005 + A1 : 2010 *Eurocode 1 — Actions on structures — General actions — Wind actions*
NA to BS EN 1991-1-4 : 2005 + A1 : 2010 UK National Annex to *Eurocode 1 — Actions on structures — General actions — Wind actions*

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

CEN/TS 1187 : 2012 *Test methods for external fire exposure to roofs*

EN 1107-1 : 1999 *Flexible sheets for waterproofing — Determination of dimensional stability — Part 1 : Bitumen sheets for roof waterproofing*

EN 1109 : 1999 *Flexible sheets for waterproofing — Bitumen sheets for roof waterproofing — Determination of flexibility at low temperature*

EN 1110 : 1999 *Flexible sheets for waterproofing — Bitumen sheets for roof waterproofing — Determination of flow resistance at elevated temperature*

EN 12691 : 2018 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to impact*

EN 12310-1 : 1999 *Flexible sheets for waterproofing — Determination of resistance to tearing (nail shank) — Part 1 : Bitumen sheets for roof waterproofing*

EN 12311-1 : 1999 *Flexible sheets for waterproofing — Determination of tensile properties — Part 1 : Bitumen sheets for roof waterproofing*

EN 12316-1 : 2000 *Flexible sheets for waterproofing — Determination of peel resistance of joints — Part 1 : Bitumen sheets for roof waterproofing*

EN 12317-1 : 1999 *Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing - Determination of shear resistance of joints*

EN 12730 : 2015 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to static loading*

EN 13501-1 : 2018 *Fire classification of construction products and building elements — Classification using data from reaction to fire tests*

EN 13501-5 : 2016 *Fire classification of construction products and building elements — Classification using data from external fire exposure to roof tests*

EN 13707 : 2004 + A2 : 2009 *Flexible sheets for waterproofing — Reinforced bitumen sheets for roof waterproofing — Definitions and characteristics*

EOTA TR-005 *Determination of the resistance to wind loads of partially bonded roof waterproofing*

UNI EN 1928 : 2000 *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness*

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
- 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
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

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.

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