



Web Dynamics Ltd

Moss Lane
Blackrod
Bolton
Lancashire BL6 5JB
Tel: 01204 695666 Fax: 01204 695333
e-mail: web@webdynamics.co.uk
website: www.webdynamics.co.uk

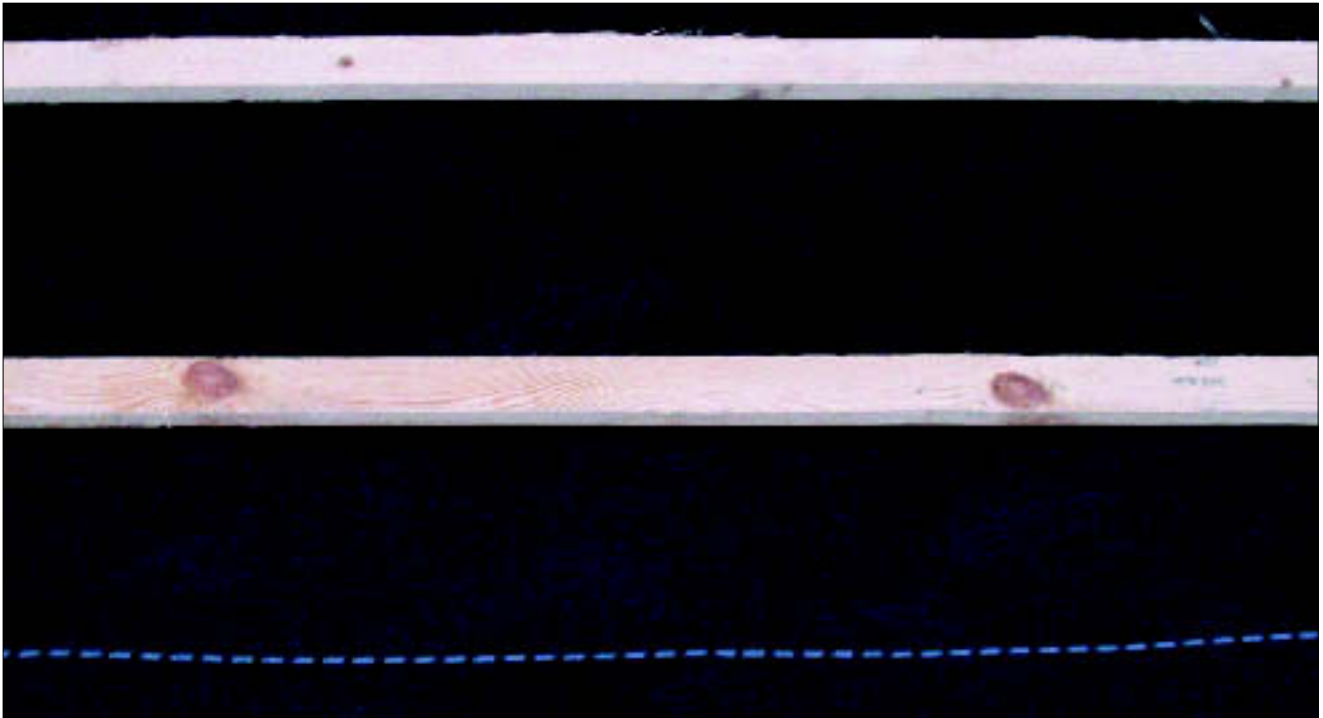
**Agrément
Certificate
No 05/4280**

Designated by Government
to issue
European Technical
Approvals

WEB 56 ROOF TILE UNDERLAY

Sous-toiture
Dachunterspannbahn

Product




• THIS CERTIFICATE RELATES TO WEB 56 ROOF TILE UNDERLAY, FOR USE AS AN UNSUPPORTED ROOF LINING MATERIAL FOR TILED OR SLATED PITCHED ROOFS.

- The product prevents the ingress of wind-blown rain or snow.
- The product is resistant to tearing during installation and flexible at low ambient temperatures.

Regulations

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

 The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of roof waterproofing with the Building Regulations. In the opinion of the BBA, WEB 56 Roof Tile Underlay, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement: C2(b)

Resistance to moisture

Comment:

Tests for weather resistance indicate that the product contributes towards a tiled or slated roof meeting this Requirement. See sections 10.1 and 10.2 of this Certificate.

Requirement: Regulation 7

Materials and workmanship

Comment:

The product is an acceptable material. See section 14 of this Certificate.

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2 The Building (Scotland) Regulations 2004



In the opinion of the BBA, WEB 56 Roof Tile Underlay, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Mandatory Standards as listed below.

Regulation:	8	Fitness and durability of materials and workmanship
Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The product can contribute to a construction satisfying this Regulation. See section 14 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards – construction
Standard:	3.10	Precipitation
Comment:		The product is an acceptable material under this Standard with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ and 3.10.7 ⁽¹⁾⁽²⁾ . See sections 10.1 and 10.2 of this Certificate.
Regulation:	12	Building standards – conversions
Comment:		All comments given for this product under Regulation 9, also apply to this Regulation with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).

3 The Building Regulations (Northern Ireland) 2000



In the opinion of the BBA, WEB 56 Roof Tile Underlay, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is an acceptable material. See section 14 of this Certificate.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		The product will contribute towards a roof satisfying this Regulation. See sections 10.1 and 10.2 of this Certificate.

4 Construction (Design and Management) Regulations 1994 (as amended)

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

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

See section: 5 *Description* (5.2).

Technical Specification

5 Description

5.1 WEB 56 Roof Tile Underlay consists of a spunbonded, UV-stabilised, polypropylene fabric (70 gm^{-2}), laminated with a UV-stabilised film and a spunbonded, UV-stabilised, polypropylene fabric (50 gm^{-2}).

5.2 The product is available in rolls with the characteristics of:

roll width/length (m)	1.0/45	1.5/30
weight per unit area (gm^{-2})	138	
weight (kg)	6.2	
colour	black ⁽¹⁾	

(1) Available in other colours on request.

5.3 Quality control checks are carried out on the materials, during production and on the finished product include:

- weight per unit area
- hydrostatic head
- tensile strength/elongation
- nail tear strength.

6 Delivery and site handling

6.1 Rolls are delivered to site shrink-wrapped in UV-stabilised polyethylene film. The rolls are packed on pallets, horizontally. Each roll has a label bearing the weight per unit area, roll length, roll width, batch number, roll number, Certificate holder's name, product grade, and BBA identification mark incorporating the number of this Certificate.

6.2 The rolls must be stored on their side on a clean, level surface, kept under cover and away from heat sources. Pallets should not be stacked.

Design Data

7 General

WEB 56 Roof Tile Underlay is satisfactory for use as an unsupported underlay for cold ventilated roofs and warm roofs with ventilation above the insulation in tiled and slated pitched roofs constructed in accordance with the relevant clauses of BS 5534 : 2003.

8 Strength

The product will resist the loads associated with the installation of the roof.

9 Wind loading

9.1 Project design wind speeds should be determined and wind uplift forces calculated, in accordance with BS 6399-2 : 1997.

9.2 When used in unsupported applications, draped, wind loading on the underlay should be

calculated in accordance with BS 5534 : 2003, Section 5.5.2.7 (see *Tests* section of this Certificate for acceptable wind loads with specific batten spacings for the draped product, using a 25 mm deep tiling batten).

9.3 When fully supported on timber sarking with counter battens, the product has adequate resistance to wind uplift forces.

10 Weathertightness



10.1 Tests indicate that the product will resist the passage of water and wind-blown snow and dust into the interior of a building, under all conditions to be found in a roof constructed in accordance with the relevant clauses of BS 5534 : 2003.

10.2 The product resists penetration of liquid water and consequently may be used as temporary waterproofing prior to the installation of slates or tiles. However, the period of such use should be kept to a minimum.

11 Risk of condensation

11.1 The product should be treated as an impermeable underlay when considering ventilation of the roof space.

11.2 For design purposes, the resistance to water vapour transmission of the underlay can be taken as 53 MNsg^{-1} and it should therefore be regarded as Type 'HR' underlay as defined in BS 5534 : 2003.

11.3 Care should be taken to minimise the risk of water vapour coming into contact with cold parts of the roof construction. Factors to be considered and minimised include moisture diffusion through the ceiling, infiltration through unsealed openings/penetrations in the ceiling and services evaporating or venting moisture into cold spaces. Further guidance can be found in BS 5250 : 2002, Section 8.4, BS 5534 : 2003, Annex B, and BRE report (BR 262 : 2002) *Thermal insulation : avoiding risks*.

12 Properties in relation to fire

12.1 The product has similar properties in relation to fire as those of traditional roof tile underlays, which are acceptable under BS 5534 : 2003.

12.2 When the product is used in a fully supported situation, the reaction to fire will be determined by the support.

12.3 When used unsupported, there is a risk fire can spread if the material is accidentally ignited during maintenance works (eg roofer's or plumber's torch). As with all types of sarking material, care should be taken during building and maintenance to avoid the material becoming ignited.

13 Maintenance

Damage to the underlay can be repaired easily prior to the installation of slates or tiles by replacement of the damaged sheet, or for limited areas, by patching and sealing correctly. Care should be taken to ensure that the weathertightness of the roof is maintained.

14 Durability



The product will be virtually unaffected by the normal conditions found in a roof space and will have a life comparable with that of traditional roof tile underlays.

Installation

15 Procedure

15.1 WEB 56 Roof Tile Underlay must be installed and fixed in accordance with the Certificate holder's instructions and the relevant recommendations of BS 5534 : 2003 and BS 8000-6 : 1990. Installation can be carried out under all conditions normal to roofing work.

15.2 When installed as a cold ventilated roof system, is fixed in the traditional method for roof tile underlays, ie draped between the rafters, or used in conjunction with counter battens.

15.3 When installed in a warm roof system, there should be an air gap of 50 mm between the underlay and the top of the insulation in line with the recommendations of BS 5250 : 2002.

15.4 Laps should be installed to shed water out and down the slope.

15.5 Overlaps must be provided with the minimum dimensions given in Table 1.

Roof pitch (°)	Horizontal lap (mm)		Vertical lap (mm)
	Partially supported	Fully supported	
12.5 to 14	225	150	100
15 to 34	150	100	100
35+	100	75	100

15.6 Hips and valleys should be covered with a 600 mm wide strip of the product.

15.7 In closed eaves constructions, eaves guards should be used.

Technical Investigations

The following is a summary of the technical investigations carried out on WEB 56 Roof Tile Underlay.

16 Tests

16.1 Samples of the product were obtained from the company for testing. The result of the tests carried out by, or on behalf of, the BBA, which show typical results for the material, are summarised in Tables 2 and 3.

Table 2 Physical properties — directional

Test (units)	Method ⁽¹⁾	Mean result	
		long ⁽²⁾	trans ⁽³⁾
Tensile strength (N per 50 mm)	BS EN 12311-1 ⁽⁴⁾		
unaged		268	231
aged ⁽⁵⁾		251	213
wet strength ⁽⁶⁾		288	232
Elongation at maximum load (%)	BS EN 12311-1 ⁽⁴⁾		
unaged		60	78
aged ⁽⁵⁾		42	52
wet strength ⁽⁶⁾		64	73
Nail tear (N)	BS EN 12310-1 ⁽⁴⁾	207	257
Dimensional stability (%)	BS EN 1107-2	-0.7	0.2

(1) The test documents are detailed in the *Bibliography*.

(2) Longitudinal direction.

(3) Transverse direction.

(4) Modified in accordance with BS EN 13859-1 : 2005.

(5) 14 days UVA at 50°C/heat ageing for 90 days at 70°C.

(6) Water immersion for 24 hours at 23°C, tested wet.

Table 3 Service performance

Test (units)	Method ⁽¹⁾	Mean result
Water vapour permeability (gm ⁻² day ⁻¹)	BS 3177 (25°C/75% RH)	3.90
Vapour resistance (MNsg ⁻¹)	BS 3177 (25°C/75% RH)	53
Resistance to water penetration unaged aged ⁽²⁾	BS EN 1928	pass pass
Streaming water	MOAT 69 : 4.2.2	pass
Burst strength (kNm ⁻²)	BS 3137	554
Coefficient of dynamic friction dry wet	BBA T1/10 ⁽³⁾	0.97 0.61
Wind loading ⁽⁴⁾ (kPa)	MOAT 69 : 4.2.1	
batten spacing 350 mm		0.5
batten spacing 330 mm		0.5
batten spacing 300 mm		1.0
batten spacing 250 mm		2.0
batten spacing 200 mm	2.5	

(1) The test documents are detailed in the *Bibliography*. Numbers following references to MOAT No 69 refer to the sections in that document.

(2) 14 days UVA at 50°C/heat ageing for 90 days at 70°C.

(3) BBA in-house test method.

(4) Tested using 25 mm thick battens.

16.2 Tests were carried out to determine the product's characteristics:

- thickness
- width
- mass per unit area
- straightness.

17 Investigations

The manufacturing process was assessed, including the method adopted for quality control, and details were obtained of the quality and composition of the materials used.

Bibliography

BS 3137 : 1972 *Methods for determining the bursting strength of paper and board*

BS 3177 : 1959 *Method for determining the permeability to water vapour of flexible sheet materials used for packaging*

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

BS 5534 : 2003 *Code of practice for slating and tiling (including shingles)*

BS 6399-2 : 1997 *Loading for buildings — Code of practice for wind loads*

BS 8000-6 : 1990 *Workmanship on building sites — Code of practice for slating and tiling of roofs and claddings*

BS EN 1107-2 : 2001 *Flexible sheets for waterproofing — Determination of dimension stability — Plastic and rubber sheets for roof waterproofing*

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

BS EN 12310-1 : 2000 *Flexible sheets for waterproofing — Determination of resistance to tearing (nail shank) — Part 1 — Bitumen sheets for roof waterproofing*

BS EN 12311-1 : 2000 *Flexible sheets for waterproofing — Determination of tensile properties*

BS EN 13859-1 : 2005 *Flexible sheets for waterproofing — Definitions and characteristics of underlays — Part 1 Underlays for discontinuous roofing*

MOAT No 69 : 2004 *UEAtc Technical Report for the Assessment of Discontinuous Roofing Underlay Systems*

Conditions of Certification

18 Conditions

18.1 This Certificate:

- (a) relates only to the product that is named, described, installed, used and maintained as set out in this Certificate;
- (b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- (c) is valid only within the UK;
- (d) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- (e) is copyright of the BBA;
- (f) is subject to English law.

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

18.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabrication including all related and relevant processes thereof:

- (a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine; and

(c) are reviewed by the BBA as and when it considers appropriate.

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

- (a) the presence or absence of any patent, intellectual property or similar rights subsisting in the product or any other product;
- (b) the right of the Certificate holder to market, supply, install or maintain the product; and
- (c) the actual works in which the product is installed, used and maintained, including the nature, design, methods and workmanship of such works.

18.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.



In the opinion of the British Board of Agrément, WEB 56 Roof Tile Underlay is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 05/4280 is accordingly awarded to Web Dynamics Ltd.

On behalf of the British Board of Agrément

Date of issue: 13th January 2006

Chief Executive

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British Board of Agrément

P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD25 9BA
Fax: 01923 665301

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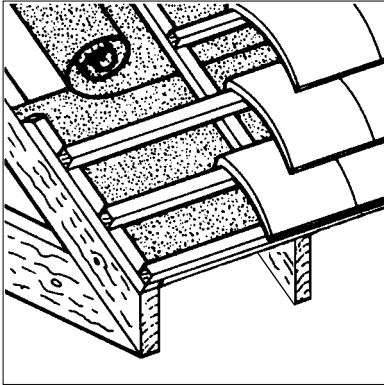
e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk



For technical or additional information, contact the Certificate holder (see front page).
For information about the Agrément Certificate, including validity and scope, tel: Hotline 01923 665400, or check the BBA website.



WEB 56 ROOF TILE UNDERLAY (BBA CERTIFICATE No 05/4280) IRISH BUILDING REGULATIONS STATEMENT



- THIS STATEMENT RELATES TO WEB 56 ROOF TILE UNDERLAY AND SETS OUT THE OPINION OF THE BBA ON THE POSITION OF THE PRODUCT UNDER THE BUILDING REGULATIONS IN THE REPUBLIC OF IRELAND.
- It must be read in conjunction with the Front Sheets of BBA Certificate No 05/4280.
- It will remain valid provided BBA Certificate No 05/4280 is valid.

The Building Regulations 1997–2002 (Ireland)

In the opinion of the BBA, WEB 56 Roof Tile Underlay, if used in accordance with the provisions of Certificate No 05/4280, will satisfy or contribute to satisfying the relevant requirements.

Requirement:	C4	Resistance to weather and ground moisture
Comment:		Tests for weather resistance indicate that the product will contribute towards a tiled or slated roof meeting this Requirement. See sections 10.1 and 10.2 of BBA Certificate No 05/4280.
Requirement:	D1	Materials and workmanship
Comment:		The products are proper materials. See section 14 of BBA Certificate No 05/4280.

On behalf of the British Board of Agrément

Date of issue: 9th February 2006

Chief Executive