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Validity

Users of any Agrément certificate should check its status: all currently valid certificates are listed on the website. In addition, check whether the certificate is [Active](#) or [Inactive](#).

The certificate holder is in possession of a confirmation certificate attesting to its status.

SANS 10400: *The application of the National Building Regulations*

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Subject:

Spunsulation 4 Contractors Choice

Certificate holder:

Spunbond Holdings (Pty) Ltd t/a Spunchem International

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Description and use

The Spunsulation 4 Contractors Choice is manufactured from pigmented ultraviolet (UV) light resistant and non-toxic flame retarded non-woven spunbond polypropylene and aluminium foil laminated on both side with polyolefin laminating layer. The membrane has a weight of 127 g/m² with a thickness of between 0, 20 mm to 0, 24 mm. It is supplied in rolls of 30 m long and 750 mm or 1, 5 m wide.

Spunsulation 4 Contractors Choice is suitable for installation in all tiled-roof buildings with timber, lightweight steel and aluminium or Agrément approved roof construction. It can be used in all regions of South Africa for all types of occupancy classification (**SANS 10400: Table 1 of regulation A (20) (1)**). When used in the conventional manner it can:

- reduce air movement between tiles, since the membrane can contribute to maintaining a balanced air pressure on both sides of the roof tiles
- reduce ingress to the roof space of wind-driven rain and dust.

This certificate and Agrément South Africa's assessment apply only to the Spunsulation 4 Contractors Choice that is manufactured by Spunbond Holding (Pty) Ltd t/a Spunchem International. It is installed in accordance with the certificate holder's installation brochure and as described and illustrated in this certificate, and where the terms and conditions of certification are complied with.

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PREAMBLE

This certificate is issued by Agrément South Africa in terms of the powers granted to it by the Minister of Public Works. This certificate:

- has been granted after a technical appraisal of the performance of the Spunsulation Roofing Undertile Membrane for the [uses](#) covered by the certificate,
- is independent of any patent rights that may or may not subsist in the subject of the certificate, and
- does not relieve the user from the obligation to obtain the prior approval of the building authority concerned for the use of the subject.

Agrément South Africa considers that the quality and performance of the Spunsulation 4 Contractors Choice will be satisfactory, provided that the requirements stipulated in this certificate are adhered to. However, Agrément South Africa does not on behalf of itself, or the State, or any of its employees or agents guarantee such quality or performance.

Responsibility for compliance with the requirements of this certificate and the quality of the finished product resides with the certificate holder.

No action for damages, or any other claim whatsoever, lies against Agrément South Africa, its members, the State or any of its employees should the said material fail to comply with the standard set out in this certificate.

Interested parties or users who are in any doubt about any detail or variation should contact [Agrément South Africa](#).

The validity of this certificate is reviewed every three years. The certificate shall remain valid as long as Agrément South Africa is satisfied that:

- the certificate holder complies with the general and specific conditions of certification and the technical requirements stipulated in the certificate
- the performance-in-use of the subject is acceptable
- any changes in building legislation, regulations, relevant standards or Agrément performance criteria have not invalidated the technical assessment which formed the basis of certification.

Agrément South Africa reserves the right to withdraw the certificate at any time, should reasonable cause exist.

Notices affecting the validity of this certificate will be published in the *Government Gazette*.

PART 1: CONDITIONS OF CERTIFICATION

Good building practice as discussed in:

- the supplement to certificates, by [Agrément South Africa](#)
- The *Home building manual parts 1, 2 & 3* issued by the National Home Builders Registration Council (NHBRC)

The Spunsulation 4 Contractors Choice as described in this certificate must be:

- manufactured by the certificate holder
- installed in accordance with:
 - the technical description set out in [Part 3](#)
 - the certificate holder's installation manual
 - good building practice.

Any change to the material formulation, the production process, or the installation techniques set out in the certificate holder's brochure could result in various aspects of the performance of this product no longer complying with Agrément South Africa's performance criteria. Any change not authorised by Agrément South Africa in writing prior to its implementation will invalidate this certificate and the certificate can then not be used to demonstrate compliance with the National Building Regulations.

General conditions

Marking

The layer of Spunsulation 4 Contractors Choice is marked with:

- the trade name printed on the roll
- the batch number
- the date
- Agrément identification logo and certificate number as illustrated in this certificate
- 150 mm side-overlap dotted lines.

The packaged rolls are marked with:

- the works order number
- the roll number
- Agrément identification logo and certificate number as illustrated in this certificate
- storage recommendations.

Validity

The continued validity of this certificate is subject to a satisfactory review by Agrément South Africa every three years.

Quality monitoring

The certificate holder is required to participate in Agrément South Africa's post-certification quality-management scheme, which requires:

- that the certificate holder shall continue to implement and manage the quality management system approved

Spunsulation 4 Contractors Choice

Tested and approved fit for purpose for use as a roofing undertile membrane when used as specified in

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by Agrément South Africa in the assessment of the Spunsulation 4 Contractors Choice

- the co-operation of the certificate holder in facilitating post-certification quality monitoring by Agrément South Africa or its authorised agents.

Reappraisal

- must be requested by the certificate holder prior to implementing changes to the product
- will be required by Agrément South Africa if there are changes to the National Building Regulations or to Agrément criteria.

This certificate may be withdrawn if the certificate holder or a registered licensee fails to comply with these requirements.

On behalf of the Board of Agrément South Africa

Chairperson
01 June 2011

PART 2: ASSESSMENT

Scope of assessment

The conventional aspects of the construction are subject to the rules of good building practice (typically as described and illustrated in Agrément South Africa's [Supplement to certificates](#) and in the *Home building manual Parts 1, 2 & 3* issued by the National Home Builders Registration Council), and must comply with the National Building Regulations.

This assessment applies to the innovative aspects of the Spunsulation 4 Contractors Choice as described in Part 3. These aspects have been assessed as an integral part of a product that comprises both innovative and conventional aspects. The innovative aspects are:

- the use of a pigmented ultraviolet light-resistant and non-toxic flame retarded non-woven polypropylene fibres
- polyolefin laminating film
- the use of the aluminium foil
- the use of the above as a waterproof membrane.

Assessment

In the opinion of Agrément South Africa, the Spunsulation 4 Contractors Choice as described in the certificate is suitable for the use specified (see page 1).

The performance-in-use of the product will be such that the membrane will satisfy:

- the requirements of the National Building Regulations stated in Table 1. Any regulation not specifically referred to is considered to be outside the scope of this certificate and must be applied by the local authority in the normal manner.
- Agrément South Africa's performance criteria.

Republic of South Africa. *National Building Regulations*, Government Notice R. 2378, Government Gazette No 12780, Pretoria, South Africa, 12 October 1990

Agrément South Africa's detailed comments on the assessment are set out in Table 1, 2 and 3 below. Each aspect of performance was assessed by experts in that field.

Table 1: Compliance with National Building Regulations

Aspects of performance	Opinion of Agrément South Africa	National Building Regulations satisfied
Materials	The quality and suitability of the materials are satisfactory.	The materials used in the Spunsulation 4 Contractors Choice are deemed to satisfy the requirements of Regulation A13 (1) (a): Materials.

Table 2: Performance

Aspects of performance	Opinion of Agrément South Africa	Explanatory notes
Membrane thickness	Satisfactory	Specimen tested indicates that the specified film thickness is achieved.
Breaking strength and elongation at break	Satisfactory. EN12311-1: Flexible sheets for waterproofing, Part 1: Bitumen sheets for roof waterproofing – Determination of tensile properties	Tested in accordance with the requirements of EN12311-1 . The performance is affected by heat ageing, however, the effect of heat is not considered to be as detrimental to the performance of the undertile membrane in practice as to negate fitness-for-purpose.
Puncture resistance	Satisfactory. SANS952: Polyolefin film for damp and waterproofing in buildings.	Tested in accordance with the requirement of SANS 952 as amended.
Resistance to tearing	Satisfactory. EN12310-1: Flexible sheets for waterproofing, Part 1: Bitumen sheets for roof waterproofing – Determination of resistance to tearing (nail shank)	Tested in accordance with the requirements of EN12310-1 .
Water permeability and vapour transmission rate	Satisfactory.	Meets the requirements of SANS 952 as amended.
Durability	Satisfactory.	Agrément South Africa’s opinion is based on all the above mentioned test results.

Table 2: Performance (continued)

Performance in fire	Satisfactory.	It is suitable for installation in all tiled-roof buildings with timber, lightweight steel and aluminium or Agrément approved roof construction. Tested in accordance with the requirements of SANS 10177-10 .
<p>SANS 10177-10: <i>Fire testing of materials, components and elements used in buildings-Part 10: Surface burning characteristics of building materials using the inverted channel tunnel test.</i></p>		

Table 3: Quality management system

Aspects of performance	Opinion of Agrément South Africa	Explanatory notes
Quality management system	Satisfactory. The certificate holder's quality management system complies with Agrément South Africa's requirements. Properly applied, the quality management system will ensure that acceptable standards are maintained in the manufacture and installation of the membrane.	Agrément South Africa's requirements, based on SANS 9001 .
<p>SANS 9001: <i>Quality management systems-Requirements</i></p>		

PART 3: TECHNICAL DESCRIPTION

General description

The Spunsulation 4 Contractors Choice is manufactured from pigmented ultraviolet (UV) light resistant and non-toxic flame retarded non-woven spunbond polypropylene and aluminium foil laminated on both side with polyolefin laminating layer. The membrane has a weight of 127 g/m² with a thickness of between 0, 20 mm to 0, 24 mm. It is supplied in rolls of 30 m long and 750 mm or 1, 5 m wide.

Manufacture

Polypropylene homopolymer granules are mixed with the UV masterbatch and extruded into fibres which are then laid onto a porous conveyor belt and transported through a heated calender to form the non-woven spunbond. This fabric is then transferred to the lamination line where it is laminated to the aluminium foil via a polyolefin based extruded film web.

This extruded molten film membrane are then taken to a secondary process where printing and trimming takes place and wound into 30 m rolls. The rolls are marked as follows:

- the trade name printed on the roll
- the batch number
- the date
- Agrément identification logo and certificate number as illustrated in this certificate
- 150 mm side-overlap dotted lines.

Delivery and Handling

The rolls are supplied in a sealed, clear protective sleeve, together with an insert detailing the roll specifications and storage, handling and installation requirements. All rolls are supplied on wooden pallets, stretch-wrapped and labelled.

Installation

The Spunsulation 4 Contractors Choice is installed by contractors and roof erectors in accordance with the certificate, Spunbond Holding (Pty) Ltd t/a Spunchem International's installation brochure and good building practice.

The membrane is installed horizontally across the rafters, starting at the eaves and working towards the ridges of the roof, with each subsequent layer overlapping the lower layer by 150 mm (minimum), with the overlapping line of 150 mm facing upwards. Each horizontal run must be installed with a drape of 10 mm between rafters at 600 mm centres. The membrane is tacked to the trusses with corrosion resistant

staples or clout nails to secure the membrane in position until the battens are installed on top.

The membrane between the trusses must be sufficiently taut, while allowing a shallow trough to facilitate run-off should rainwater penetrate the tiles (see Figure 1). At the eaves it is important that the membrane is taken from under the second-last tiling batten over the tilting batten to prevent ponding of water (see Figure 2a & 2b).

At ridges and hips, a layer of (damp-proof course) DPC should be applied over the apex on top of the roofing undertile membrane (see Figure 3). In valleys, a strip of Spunsulation 4 Contractors Choice at least 600 mm wide must be laid under the main roofing membrane and held down by valley battens, where used (see Figure 6).

After the membrane has been installed, tiling battens should be installed as soon as possible to prevent damage to the membrane by wind, and roof tiles placed to minimise exposure to the sun.

It must be ensured that the roof membrane is turned up to less than 50 mm at all abutments to be overlapped by the flashings, and that it overlaps the lining tray by not less than 100 mm at the back face of any abutment. Good building practice should be followed when installing Spunsulation 4 Contractors Choice at penetrations and abutments.

Any damage to the membrane should be sealed as recommended by the manufacturer.

Protection of the membrane

The rolls must be stored under cover and when removed from the packaging, the membrane must be installed as soon as possible and the tiles packed as soon as practicable.

Protection is also required against traffic on the ground, during storage, during the installation process and once installed.

Storage

On site, the Spunsulation 4 Contractors Choice should be kept out of direct sunlight and stored on a raised, flat surface free of sharp protrusions.

Drawings





