

# SmartPly<sup>®</sup> Roof

The Smart Answer ✓ for Roofing

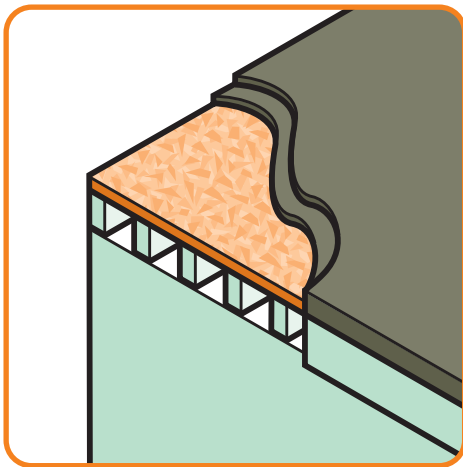


designed for use as part of a recognised flat roof system including load-bearing, decks and pitched roofs, and the perfect solution for building dormer windows



# smart roofing

**SmartPly Roof is an engineered wood product made from oriented wood flakes coated with an exterior grade glue and compressed under high temperature. The result is a load-bearing panel suitable for structural use in humid environments, with a reliable distribution of strength, stiffness and spanning capacity both along and across the board.**



## **defect-free and easy-to-use**

SmartPly Roof has no structural defects, such as knotholes and core voids, and is easy to work with. It cuts easily, will not delaminate and can be machined with consistent results. With a unique textured finish to one face of our square-edged panels, it provides a slip-resistant surface for working and is a good key for overlays. Panels can be nailed 10mm from the edge without splitting or breaking – critical to structural applications.

SmartPly Roof panels are available in thicknesses of 9, 11, 15 and 18mm in a range of sizes.

## **smarter roofing – higher standards**

SmartPly Roof is manufactured to EN 300 from a structural panel that satisfies standards BS 5268 Part 2 and is approved by the British Board of Agrément (BBA) and the Irish Agrément Board (IAB). Its suitability for structural use is also recognised by Homebond, Local Authority Building Inspectors and the NHBC.

All SmartPly OSB products are compliant with the Construction Products Directive (CPD) for structural use. Every board of SmartPly 3 is marked CE 2+ structural. SmartPly has achieved I.S. EN SO9001: 2000, the internationally recognised quality management system. When tested in accordance with BS 476-7:1997 SmartPly OSB achieved a class 3 surface spread of flame. The external fire rating of any roof incorporating SmartPly will depend on the specification of the roof covering system overlay.

## **environmentally approved**

At least 90% of the timber used in the manufacture of SmartPly Roof comes from well-managed forests independently certified according to the rules of the Forest Stewardship Council (FSC). All SmartPly 3 products are made with formaldehyde-free resins.

## storage and handling

Careful storage and handling is important to maintain panels in their correct condition for use. Boards should be stacked flat, off the ground and on a level surface with all four edges flush. Stacking on the edge should be avoided. Wherever possible, panels should be stored in an enclosed dry building, protected from rain and accidental wetting.

Stack on battens of equal thickness at centres not exceeding 600mm as per recommendations (400mm is recommended for 9mm panels). Prior to fixing, boards should be conditioned to the moisture content corresponding to the moisture conditions of end use.

Conditioning can normally be achieved by loose stacked storage under the atmospheric conditions in which they will be used for a minimum of 48 hours prior to fixing.

**Exposure to wetting must be kept to the shortest period possible and boards must be allowed to dry out before applying a weather-proof membrane or exposing the boards to the full design load.**

Special care should be taken during all wet site operations. After laying the boards, joints and edges should be protected from dirt, moisture and debris. Care should be taken to avoid damage from banding. Bands should be cut as soon as practical to avoid permanently deforming the boards.

During transport it is particularly important to protect edges and corners with suitable coverings.

## structural properties

SmartPly Roof is suitable as a roof deck having a minimum finished fall in excess of 1:80 (depending on the final waterproofing specification) and where access is limited to temporary access, such as for cleaning or maintenance.

For conventional roof decks, a vapour control layer must be provided in cold roof designs to prevent damage to the structure as a result of the passage of moisture in the form of vapour from the interior of the building.

SmartPly Roof is suitable as a roof sarking layer subject to the same structural/environmental considerations as for roof decking. For conventional sarking systems, a counter batten and waterproof run-off membrane must be included to provide suitable run-off to gutters.

Permissible thickness of the board is dependent upon application and support centres but should not be less than 9mm for a pitched roof, 11mm for a flat roof (without access except for maintenance) or 15mm for a flat roof (with access).

Roof voids must be ventilated in accordance with BS 5250.

## expansion gaps

It is necessary to allow a 3mm gap between adjacent SmartPly Roof square edge roof sheathing boards and a 10mm gap where the panels (square edge or T&G) abut any rigid upstand.

Long roofs (square edge or T&G) may require additional expansion gaps to allow for a possible overall expansion of 2mm per metre length of roof. This is in addition to the 3mm expansion gap required between each square edge roof sheathing panel. These additional recommendations generally do not apply for typical small domestic houses.

## thermal insulation

The thermal conductivity of SmartPly Roof is such that it will not have an effect on the u-value of the structure in which it is incorporated. A value of 0.13wm/k may be assumed.

### smartply roof specification for flat/pitched roof construction

roof type (mm)	flat roofing <sup>1</sup>	pitched roofing (tile/slate)
board thickness	11 <sup>2</sup> , 15, 18	9 <sup>3</sup> , 11, 15, 18
maximum span (joist/rafter centres)	450, 450, 610	610, 450, 610, 610
nail centres (edges)	150	150
nail centres (intermediate)	300	300
minimum nailing edge distance	10	10
max bearing support	18	18

<sup>1</sup> Suitable for flat roof construction where the insulation occurs above the supporting deck and the thermal design eliminates the possibility of condensation.

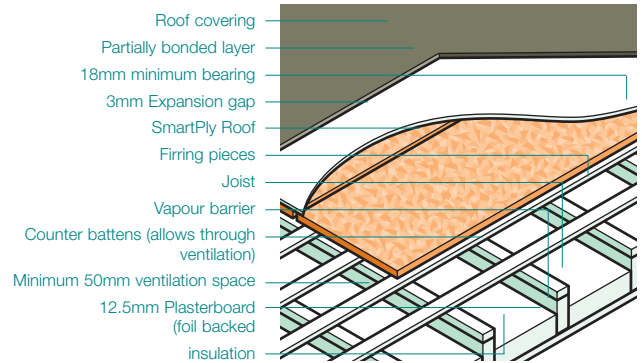
<sup>2</sup> Suitable for small buildings (e.g. garages) without access except for maintenance.

<sup>3</sup> Suitable only where roof coverings are independently supported on battens and secured to counter battens. In all other pitched roof cases, roof coverings may be attached to the board. Use 18mm under slates.

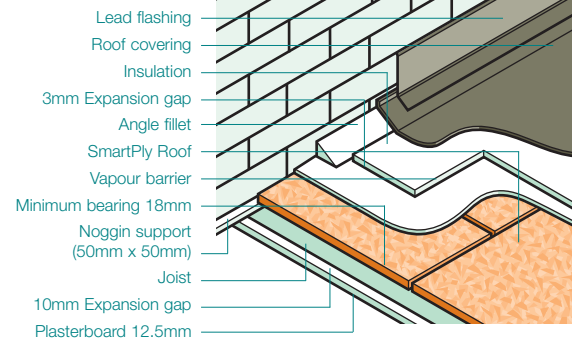
## laying and fixing

- ✓ ensure all joists or rafters are level and free from mortar droppings and debris before laying.
- ✓ check that all supporting joists or rafters are straight and level.
- ✓ ensure joists or rafters treated with water borne preservatives have thoroughly dried out prior to laying of the boards.
- ✓ Smartply Roof boards should be laid with their long edges across the supporting joists or rafters and in a straight line. Direction arrows are provided indicating the major axis laying direction. Short edges should be centred on the support joist or rafter. Boards should have a minimum bearing of 18mm on joists or noggings. Bridging and nogging supports should be used.
- ✓ SmartPly Europe recommends SmartPly Roof decking and sarking panels be fixed to all supports using 50mm screws or 65mm ring shank nails at maximum 150mm centres on all joists, rafters and battens.
- ✓ stagger boards in adjacent rows (to ensure cross-joints on the boards are staggered).
- ✓ all boards can be nailed or screwed up to 10mm from the edges.

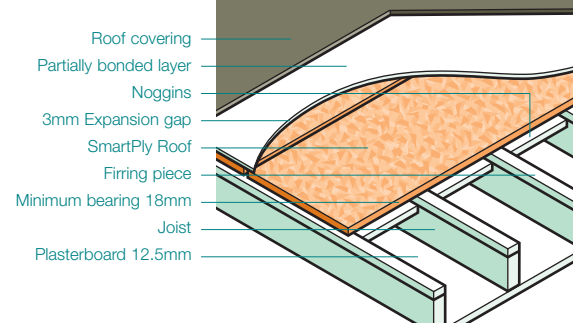
## cold deck (insulated)



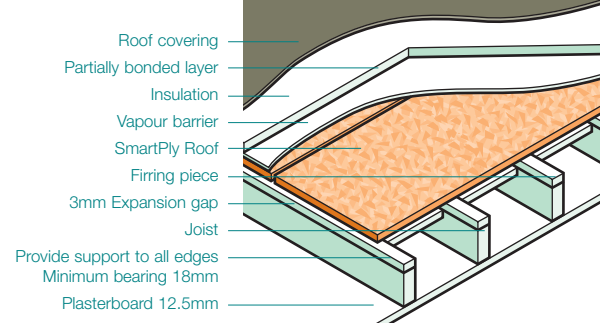
## wall abutment



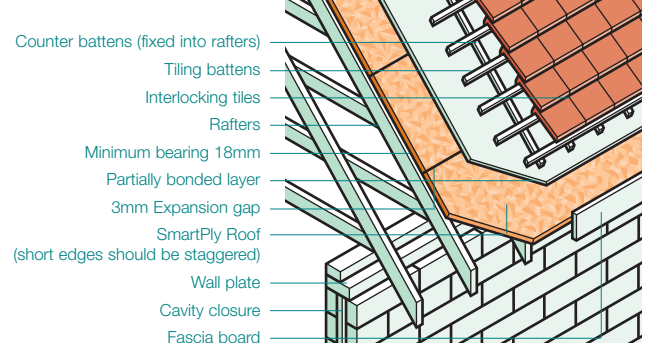
## cold deck (uninsulated)



## warm deck roofs



## tilled roof







## roof panel solutions

SmartPly Roof is suitable for use in structural flat or pitched roof decking, and as a pitched roof lining for tiles or slates (sarking). SmartPly Roof boards meet the structural performance required for pitched or flat roof applications and are ideal for new buildings, renovations and loft conversions.

SmartPly Roof engineered boards have superior strength and stiffness to sustain and transmit the design load, without excessive deflection to the primary structure. The boards can be incorporated into a roof structure suitably designed to prevent excessive interstitial condensation. Subject to structural design, the thicker panels are particularly suited to resisting wind uplift.

## dimensions and thickness

SmartPly Roof is available in 9, 11, 15 and 18mm thickness with dimensions as shown (subject to availability).

Other thicknesses may be available as required, subject to structural design requirements.

## how do I recognise the product?

All SmartPly 3 structural panels, including SmartPly Roof, have a distinctive, unique textured finish to one face and each board is clearly marked by SmartPly with the following information:\*

- ✓ **manufacturer's name**  
(SmartPly Europe)
- ✓ **european norm** (EN 300 standard)
- ✓ **type/grade of board**
- ✓ **nominal thickness**
- ✓ **major axis**  
(direction of laying arrows)
- ✓ **batch number or production**  
week and year, day/shift
- ✓ **certification mark** (e.g. BBA, IAB)
- ✓ **CE 2+ structural certification**
- ✓ **FSC certification**

\* Markings may vary depending on product type

## dimensions and thickness (mm)

thickness	length x width			type
9	2440 x 1220	2397 x 1197	2697 x 1197	square edge
11	2440 x 1220	2400 x 1200		square edge
15	2440 x 1220	2400 x 1200		square edge
18	2440 x 1220	2400 x 1200		square edge
15	2440 x 1205	2400 x 1205		T&G (2LE)
18	2440 x 1205	2400 x 1205		T&G (2LE)
15	2400 x 600	2440 x 590		T&G (4E)
18	2400 x 600	2440 x 590		T&G (4E)

**Note:** Select the relevant size depending on your individual roofing application  
support structure centres and roof type  
T&G (2LE) – tongue & grooved on two long edges only  
T&G (4E) – tongue & grooved on all four edges

# smart quality

## certification

SmartPly Roof is a structural panel manufactured to EN 300 that is certified by the Irish Agrément Board (IAB Cert. No. 02/0093) and the British Board of Agrément (BBA Cert. No. 98/3488) for use in roof decking and sarking applications in humid conditions (as defined in terms of Service Class 2 of ENV 1995-1-1 for load bearing boards).

All SmartPly OSB products are compliant with the Construction Products Directive (CPD) for structural use. Every board of SmartPly 3 is marked CE 2+ structural. SmartPly has achieved I.S. EN ISO9001:2000, the internationally recognised quality management system.

This product is suitable for residential and commercial construction, including manufactured and modular home applications.

Additional Certification (KOMO/ETA/VTT/Byggforsk) available on request.



SmartPly has full certification from the Forestry Stewardship Council, one of the largest and most credible certifiers of wood producers and has the support of major environmental groups (such as World Wildlife Fund, Greenpeace, and the Rainforest Action Network) as well as key inter-governmental forestry bodies. The FSC certification is the leading internationally-recognised standard that assures buyers of wood-based products that the timber used results from environmentally and socially responsible forestry management.



By buying products with the FSC label you are supporting the growth of responsible forest management worldwide

FSC Supplier Cert no. TT-COC-1572  
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**For more information about any SmartPly product, contact your local merchant.**

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