

# SMARTPLY<sup>®</sup> MAX FR/FR BUILD

This product is available from:

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SMARTPLY MAX FR/FR BUILD is a flame retardant panel developed in response to the STA's (Structural Timber Association) "Design guide to separating distances during construction" for timber frame buildings.

Flame retardant treatment of the wood strands during panel manufacture ensuring fire performance whilst maintaining structural integrity.

Manufactured in accordance to EN 300, it is the perfect choice for roofing, flooring and wall sheathing where strength, moisture resistance and flame retardance are paramount.

# SMARTPLY<sup>®</sup> MAX FR/FR BUILD

## FEATURES AND BENEFITS

- Approved for 'FR Build' applications under the STA (Structural Timber Association) "Design guide to separating distances during construction for timber frame buildings".
- Flame retardant treatment of wood strands during manufacture.
- CPR Compliant – CE Marked in accordance with EN13986 at point of manufacture unlike post-treated alternatives.
- Reduces fire spread and improves fire protection during construction.
- High racking strength – suitable for structural use OSB/3 (EN 300).
- Light weight and easy to cut and fix compared to mineral-based panels which can crack and shatter
- Manufactured using FSC<sup>®</sup> certified timber from our own forests.
- No Added Formaldehyde (NAF) or any harmful substances – contributing to healthier environments.
- Climate Positive – more carbon is stored in the product than was emitted during manufacturing processes (A1-A3). Independently verified Environmental Product Declaration (EPD) available on request.

## QUALITY AND ENVIRONMENTAL CERTIFICATION

For Properties, Quality and Environmental Certification, see SMARTPLY MAX Datasheet. All SMARTPLY MAX FR/FR BUILD products are manufactured using formaldehyde free resin.

SMARTPLY MAX FR/FR BUILD is suitable for use in structural or non-structural applications. Depending on the requirement SMARTPLY MAX FR/FR BUILD is suitable for use either entirely or supplementarily in Category A, B or C builds as outlined in Structural Timber Association's (STA) "Design guide to separation distances during construction". Categorisation level depends on wall and floor/ceiling construction details.

## CATEGORISATION DETAIL

STA fire performance categorisations are based on both a points system and a combined system evaluation.

## COMBINED SYSTEM

It is possible also to achieve categorisation level which is unique to a combined system build.

SMARTPLY MAX Combination, as listed in 'Product Paper 4' is such a combined system. The elements of an F3 floor and a W6 wall by the points system achieve only 5 points (B2) categorisation. Given the advanced performance level of SMARTPLY MAX FR/FR BUILD when tested as a complete system SMARTPLY MAX Floor Wall Combination achieved a B3 categorisation, which is equivalent to 6 points.

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## POINTS SYSTEM

STA points system allocates a minimum number of points a build must achieve in order to reach a specific classification. To achieve a specific categorisation for an assembly simply add the points indicated for Flooring and Wall assemblies.

A matrix for all combinations is available from the download section at [www.structuraltimber.co.uk](http://www.structuraltimber.co.uk) (Info Centre/Technical Library/Design Documents/Product Paper 4).

For more information on the guidance see [www.structuraltimber.co.uk](http://www.structuraltimber.co.uk)

| Category | Minimum total points for wall + floor assembly | Minimum points for the floor assembly alone <sup>1</sup> |
|----------|--|--|
| A        | <3   |  |
| B1       | 3  | 1  |
| B2       | 5  | 1  |
| B3       | 6  | 1  |
| C1/2     | 7  | 2  |


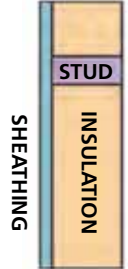
Looking at the Points system, SMARTPLY MAX panels can be used in the following constructions, with the panel type and points gained outlined below;

| FLOOR ASSEMBLIES |                              |        |
|------------------|------------------------------|--------|
| STA Reference    | SMARTPLY Deck Product to Use | Points |
| F1               | SMARTPLY MAX                 | 0      |
| F2               | SMARTPLY MAX FR BUILD        | 1      |
| F3               | SMARTPLY MAX FR BUILD        | 2      |
| F4               | SMARTPLY MAX                 | 2      |
| F6               | SMARTPLY MAX                 | 2      |
| F7               | SMARTPLY MAX                 | 2      |

**Note:** Panel thickness depends on floor design but 15mm is min panel thickness.

| WALL ASSEMBLIES |                                   |        |
|-----------------|-----------------------------------|--------|
| STA Reference   | SMARTPLY Sheathing Product to Use | Points |
| W1              | SMARTPLY MAX                      | 0      |
| W5              | SMARTPLY MAX FR                   | 2      |
| W6              | SMARTPLY MAX FR                   | 3      |
| W7              | SMARTPLY MAX FR                   | 4      |
| W8              | SMARTPLY MAX FR                   | 5      |

**Note:** Panel thickness depends on design specification but 11mm is min panel thickness W5,W6,W7 & W8.

| SMARTPLY FLOOR WALL SYSTEM  |  |                          |
|---|--|--------------------------|
| Construction  | Detail   | Category of construction |
| <p><b>FLOOR</b><br/>F3</p>  <p><b>WALLS</b><br/>W6</p>  | <p><b>FLOOR</b><br/> <b>Deck</b> - SMARTPLY MAX FR BUILD in 15mm<br/> <b>Joist</b> - F3.1 FR MAX BUILD solid rectangular<br/> <b>Note</b> - all F3 joist solutions are acceptable</p> <p><b>WALLS</b><br/> <b>Sheathing</b> - SMARTPLY FR min 11mm<br/> <b>Stud</b> - FR MAX BUILD treated<br/> <b>Insulation</b> - Type 3 insulation - Stone wool full fill</p> | B3                       |

## SPECIFICATION AND DESIGN

As design and performance values can vary between manufacturers, it is important that the SMARTPLY MAX FR/FR BUILD panels specified by the designer are those used on site. All SMARTPLY MAX FR/FR BUILD panels are clearly marked with the following:

- a** Major axis (length of panel, direction of laying arrows).
- b** Product name “SMARTPLY MAX FR B”
- c** Production identification number.
- d** Production Certification mark (e.g. IAB).
- e** CE Marking
  - (i) Manufacturer’s name/Logo (SMARTPLY)
  - (ii) Notified body identification number
  - (iii) Harmonised Standard (EN13986).
  - (iv) Panel Grade (e.g. OSB/3)
  - (v) Product Standard (EN 300)
  - (vi) Thickness (e.g.15mm)
  - (vii) Formaldehyde class (e.g. E1)
  - (viii) Reaction to Fire EN13501-1
  - (ix) DOP Reference No.
- f** FSC certification.
- g** FR classification STA / WPA.

## SUITABILITY

EN 300 classifies OSB panels by their properties which relate to their intended use. SMARTPLY MAX FR/FR BUILD is classified as a load-bearing panel for use in humid conditions.

Structures comprising SMARTPLY MAX FR/FR BUILD should be assigned to service class 1 or 2 as defined in EN 1995-1-1 (Eurocode 5). According to this standard, SMARTPLY MAX FR/FR BUILD is suitable for use in both these service classes. According to EN 300, SMARTPLY MAX FR/FR BUILD is suitable for use in Use classes 1 and 2 of EN 335.

For Mechanical and physical properties of SMARTPLY MAX FR/FR BUILD and Structural design of SMARTPLY MAX FR/FR BUILD please refer to SMARTPLY MAX datasheet Table 1 and Table 2 respectively.

Zero added formaldehyde: SMARTPLY MAX FR/FR BUILD is manufactured using advanced resin technology that results in a higher performance, zero added formaldehyde panel that scores highly in ‘The Green Guide to Specification’. See SMARTPLY MAX Datasheet for more detail.

This specialist resin formulation provides a supreme bond with the wood strands as it has a reaction with the wood itself, when put under intense heat, creating a chemical weld. This is a different and superior type of bond to the mechanical welds that formaldehyde-based products exhibit. Depth of penetration is well beyond the minimum 0.3mm needed for a wood resin to provide adequate adhesive strength. This extra penetration also greatly improves the woods resistance to thickness swell.

# SMARTPLY® MAX FR/FR BUILD

## FIRE PERFORMANCE

SMARTPLY FR MAX/FR MAX BUILD is manufactured by treating the wood strands with a flame retardant before pressing into an OSB/3 panel. Any post processing, edge cutting, nailing etc. will not affect the fire performance of SMARTPLY MAX FR/FR BUILD.

Addition of the flame retardant during the manufacturing process ensures that panel quality is maintained to EN 300 unlike post treatment FR technologies which can tend to have a destructive effect on the mechanical or physical properties of a panel. The Wood Protection Association Benchmark MAX FR BUILD symbol confirms that the process of applying a retardant has been quality assessed and certified by the WPA in line with the STA FR MAX BUILD requirements.

## SIZE AND THICKNESS

11 X 2397 X 1197 MAX FR SE

15 X 2397 X 1197 MAX FR BUILD SE

15 X 2397 X 1200 MAX FR BUILD T&G2

18 X 2397 X 1197 MAX FR BUILD SE

18 X 2397 X 1200 MAX FR BUILD T&G2

Other thicknesses and panels sizes on request subject to minimum quantities. Please refer to SMARTPLY MAX FR/FR BUILD Euroclass technical datasheet for additional FR product availability.

## SERVICE

For further information and/or technical advice please contact your local MEDITE SMARTPLY Sales Representative or SMARTPLY Technical Support Personnel through any of our European offices.

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As we continually update our technical datasheets, please check on [www.mdfofb.com](http://www.mdfofb.com) that you have the latest version.

## Important Notes:

The recommendations provided in this technical data sheet for the correct use of SMARTPLY MAX FR/FR BUILD are specifically designed to ensure longevity and quality of performance of this quality product in service. It is therefore essential that these recommendations are strictly followed.

The product is designed to be installed by a competent general builder or contractor, experienced with this type of product, in strict accordance with the technical guidance provided in the relevant SMARTPLY MAX product technical datasheets.

It is important that wall and floor/roof fire performance levels, represented in this technical datasheet, and the categorisations that each of these builds achieve must be checked at all times with the most current information which is available from the downloads section at <http://www.structuraltimber.co.uk> Fire Mitigation documents, Product Paper 4.

SMARTPLY EUROPE DAC cannot be held responsible for damages arising from non-adherence to these recommendations, or product failures resulting from inadequate structural design or misuse of this product.

In order to provide comprehensive guidance for the correct use of SMARTPLY MAX FR/FR BUILD OSB/3, this technical datasheet makes reference to relevant BS and EN standards and also the Structural Timber Associations own documentation. SMARTPLY EUROPE DAC cannot be held responsible for claims arising from the use of any information that has been extracted from such sources.



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Disclaimer: The information contained in this document is provided as guidance by SMARTPLY EUROPE DAC. It is the responsibility of the customer and/or end-user of SMARTPLY MAX FR/FR BUILD to ensure that the final use of the panel is checked by the proper authorities on conformity with STA guidance, local circumstances, building codes, regulations and standards and checked by a licensed engineer. SMARTPLY EUROPE DAC reserves the right to alteration of its products, information and range without notice.

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**SMARTPLY®**  
DEFINING THE STANDARD OF OSB