SMARTPLY®
FR/FR BUILD OSB3

SMARTPLY FR/FR BUILD OSB3 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 above 600m2 total floor area.

Zeroignition® Solution, a water based, eco-friendly, flame retardant is added during panel processing 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®
DEFINING THE STANDARD OF OSB

SMARTPLY®
FR/FR BUILD OSB3

FEATURES AND BENEFITS

- Flame retardant added within the panel – ensuring dependable performance

- No structural degradation in panel - unlike many post treated alternatives. Does not crack or shatter.

- 100% wood-based product - easy to cut and fix using normal OSB3 methods.

- More lightweight than mineral based alternatives.

- Zero added formaldehyde – contributing to healthier environments .

- CE Compliant – marked at the source of manufacture.

- Suitable for EC5 design.

- Category 1 racking.

- Made from FSC® timber from our own forests.

- Zeroignition® Solution, a water based flame retardant - completely safe with no borons or other carcinogens.

QUALITY AND ENVIRONMENTAL CERTIFICATION

For Quality and Environmental Certification, see SMARTPLY OSB3 Datasheet. All SMARTPLY FR/FR BUILD OSB3 products are manufactured using formaldehyde free resin.

SMARTPLY FR/FR BUILD OSB3 fire performance is achieved using Zeroignition® Solution, a water-based, environmentally friendly and completely non-toxic flame retardant.

SMARTPLY FR/FR BUILD OSB3 is suitable for use in domestic or industrial, structural or non-structural applications. Depending on the requirement SMARTPLY FR/FR BUILD OSB3 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 detail.

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 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 FR/FR BUILD OSB3 when tested as a complete system SMARTPLY Floor Wall Combination achieved a B3 categorisation, which is equivalent to 6 points.

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 (Info Centre/Technical Library/Design Documents/Product Paper 4).

Category	Minimum total points for wall + floor assembly	Minimum points for the floor assembly alone1
A	<3	
B1	3	1
B2	5	1
B3	6	1
C1/2	7	2

Looking at the Points system, SMARTPLY panels can be used in the following constructions, with the panel type and points gained outlined below;
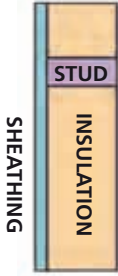
FLOOR ASSEMBLIES		
STA Reference	SMARTPLY Deck Product to Use	Points
F1	SMARTPLY OSB3	0
F2	SMARTPLY FR BUILD OSB3	1
F3	SMARTPLY FR BUILD OSB3	2
F4	SMARTPLY OSB3	2
F6	SMARTPLY OSB3	2
F7	SMARTPLY OSB3	2

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 OSB3	0
W5	SMARTPLY FR OSB3	2
W6	SMARTPLY FR OSB3	3
W7	SMARTPLY FR OSB3	4
W8	SMARTPLY FR OSB3	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
FLOOR F3		**FLOOR** **Deck -** SMARTPLY FR BUILD OSB3 min 15mm **Joist -** F3.1 FR BUILD solid rectangular **Note -** all F3 joist solutions are acceptable	B3
WALLS W6	STUD / SHEATHING / INSULATION	**WALLS** **Sheathing -** SMARTPLY FR OSB3 min 11mm **Stud -** FR BUILD treated **Insulation -** Type 3 insulation - Stone wool full fill	

SPECIFICATION AND DESIGN

As design and performance values can vary between manufacturers, it is important that the SMARTPLY FR/FR BUILD OSB3 panels specified by the designer are those used on site. All SMARTPLY FR/FR BUILD OSB3 panels are clearly marked with the following:

a Major axis (length of panel, direction of laying arrows).

b Production identification number.

c Production Certification mark (e.g. IAB).

d CE Marking.

   (i) Manufacturer's name/Logo (SMARTPLY)

   (ii) Notified body identification number

   (iii) Harmonised Standard (EN13986).

   (iv) Panel type (e.g. OSB3)

   (v) Thickness (e.g.15mm)

   (vi) Formaldehyde class (e.g. E1)

   (vil) DOP Reference No.

e Additional marking for ease of reference (e.g. 2+ Structural).

f FSC certification.

g FR classification (e.g. FR BUILD).

h "Powered by ZI" for assurance of retardant inclusion.

SUITABILITY

EN 300 classifies OSB panels by their properties which relate to their intended use. SMARTPLY FR/FR BUILD OSB3 is classified as a load-bearing panel for use in humid conditions.

Structures comprising SMARTPLY FR/FR BUILD OSB3 should be assigned to service class 1 or 2 as defined in EN 1995-1-1 (Eurocode 5). According to this standard, SMARTPLY FR/FR BUILD OSB3 is suitable for use in both these service classes. According to EN 300, SMARTPLY FR/FR BUILD OSB3 is suitable for use in Use classes 1 and 2 of EN 335.

For Mechanical and physical properties of SMARTPLY FR/FR BUILD OSB3 and Structural design of SMARTPLY FR BUILD OSB3 please refer to SMARTPLY OSB3 datasheet Table 1 and Table 2 respectively.

Zero added formaldehyde: SMARTPLY FR/FR BUILD OSB3 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 OSB3 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®
FR/FR BUILD OSB3

FIRE PERFORMANCE

SMARTPLY FR/FR BUILD OSB3 is manufactured using Zeroignition® Solution, a water based, eco-friendly, non toxic, flame retardant solution that has been uniquely developed to penetrate deeply into the wood strands. The Zi flame retardant is added during the panel manufacturing process. Any post processing, edge cutting, nailing etc will not affect the fire performance of SMARTPLY FR/FR BUILD OSB3. Addition of the Zi flame retardant solution during the manufacturing process ensures that panel quality is maintained to EN300 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 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 BUILD requirements.

SIZE AND THICKNESS

11 X 2397 X 1197 FR OSB3 SE
15 X 2397 X 1197 FR BUILD OSB3 SE
15 X 2440 X 1220 FR BUILD OSB3 SE
15 X 2397 X 1220 FR BUILD OSB3 T&G2
18 X 2397 X 1197 FR BUILD OSB3 SE
18 X 2440 X 1220 FR BUILD OSB3 SE
18 X 2397 X 1220 FR BUILD OSB3 T&G2

Other thicknesses and panels sizes by special request. Please refer to SMARTPLY FR OSB3 Euroclass technical datasheet for additional FR product availability.

SERVICE

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

UK: +44 (0) 1322 424900

Ireland: +353 5 181 0205

Germany: +49 32221097221

France: +33 975189830

Netherlands: +31 858886230

Belgium: +32 28086256

As we continually update our technical datasheets, please check on **www.mdfosb.com** that you have the latest version.

Important Notes:

The recommendations provided in this technical data sheet for the correct use of SMARTPLY FR/FR BUILD OSB3 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 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 acheive 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 FR/FR BUILD OSB3, 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.

V 05/17

MEDITE® SMARTPLY®
INNOVATIVE TIMBER PRODUCTS

SMARTPLY®
DEFINING THE STANDARD OF OSB