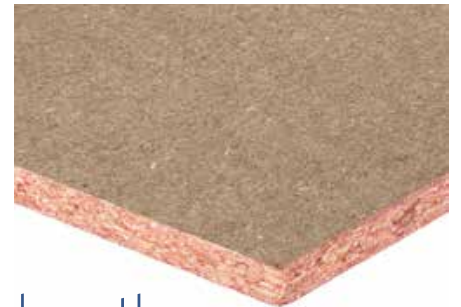




HydroFlam



The best performing wood-based panel on the
FR build product list

According to STA Design guide to separating distances during construction for timber frame
buildings above 600m²

STA Design guide to separating distances during construction for timber frame buildings above 600m²

The Structural Timber Association has published a set of guidelines in order to protect buildings surrounding timber frame construction sites in the UK from the risk of fire. In these is a list of FR build materials that can be used according to the guidelines.

Unilin has developed and tested HydroFlam, a fire retardant, moisture resistant and structural chipboard (P5-EN312) in such a way, that it is now compliant with the STA guidelines.

Unilin

Unilin Panels is part of the Unilin Group, which in turn is a full subsidiary of the American listed company MOHAWK Industries Inc., the world's largest floor covering group with 32,500 employees. As a group, Unilin has a leading position in the creation and production of high-quality products for construction and home furnishings that are both aesthetically pleasing and easy to use.

Unilin Panels focuses on technical building solutions, furniture and interior products, sustainable building and industrial packaging. Besides the PANELS division, the Unilin Group has two other divisions: FLOORING, known for Quick-Step floors, and INSULATION, which makes ready-to-use, load-bearing and insulated roofing products and other insulation products.

Unilin started as a chipboard producer for furniture panels. In 2013, Unilin Panels merged with Spano, an equal chipboard producer with a long tradition of production of P5 chipboards for construction purposes and a 40 year tradition of producing fire retardant chipboards. With the development of HydroFlam as an STA FR build product, Unilin combined all of its strengths in one unique board, suitable for both racking and decking purposes

HydroFlam

HydroFlam is a load bearing structural chipboard for use in humid conditions, with strong flame retardant properties.

FR properties

Treated in the core and surface with a safe, eco-friendly fire retardant product, HydroFlam is the best performing wood-based panel on the FR build product list. It is CE marked and B-s2,d0 certified (according to EN 13501-1). In a fire, HydroFlam will retain its integrity longer and emit less heat than any other wood based panel on the FR build list with similar technical properties. The fire retardant products are free of halogens, bromides or boron. In case of fire, fumes of HydroFlam are no more toxic than fumes of natural wood.

Racking capabilities

HydroFlam 12mm is considered a category 1 racking board (BS-6268-6.2) It has strong racking capacity in both length as width direction.

Decking

HydroFlam is also available for decking purposes (TG) in both 18mm as 22mm.

Weight

Opposed to non-combustible boards, HydroFlam has a similar density to natural wood and only weighs around 750kg/m³ (+/- 7%).

Moisture resistance

Besides fire retardant and load bearing HydroFlam is also highly moisture resistant. Due to its TopFinish surface HydroFlam has a very closed, heat-treated surface which is unique due to the production process. Compared to OSB/3 I HydroFlam can present a reduced swelling up to 30% less than OSB/3 (comparing EN 312 vs. EN 300 Standard values).

Airtightness

Case studies confirm the use of OSB in passive house construction is questionable since the airtightness values of the board are unpredictable. The TopFinish surface enables HydroFlam to present a much more reliable airtightness result, contributing to the Building Regulations - part L.

STA guidelines compliancy

The STA design guide to separating distances during construction for timber frame buildings above 600m² total floor area, discerns a number of different risk categories. The higher the building and the closer the distance to the neighbouring buildings, the more critical the risk category and the more the construction site will need to be protected from fire risk. Lowest category is A, categories go up to B1, B2, B3 and C1/2. For more details concerning building categories, see *Design guide to separating distances during construction - The Structural Timber Association*.

One can comply with the categories by making use of both a floor and wall assembly and combine points according to following table.

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

Floor assembly

HydroFlam 18mm or 22mm can be used in an F2 or F3 floor assembly and gain either **1 or 2 points**.

<p>F2 1 point</p>		<p>DECK - HydroFlam 18 mm JOIST - Untreated Note: Structural check on wall stability if floor diaphragm is absent under a fire condition</p>
<p>F3 2 points</p>	<p>F3.1 F3.2 F3.3</p>	<p>DECK - HydroFlam 18 mm JOIST - option as:</p> <p>F3.1 - FR Build solid rectangular F3.2 - I joist Rockwool web fill min 58mm flange F3.3 - I joist moisture resistant A1 or A2 board</p> <p>Not shown: F3.4, F3.5, F3.6 and F3.7</p>

Wall assembly

<p>Open timber panel 2 points</p>	<p>SHEATHING STUD</p>	<p>STUD - Not FR Build treated SHEATHING - 12 mm HydroFlam</p>
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HydroFlam 12 mm can be used in combination with non FR Build treated studs to acquire **2 points**.

System classification B1

With the use of HydroFlam 18mm for decking and 12mm for sheathing, a B1 classification (**3 points**) can be reached without the use of FR treated studs.

<p>B1 3 points</p>		<p>DECK - HydroFlam 18 mm JOIST - Untreated Note: Structural check on wall stability if floor diaphragm is absent under a fire condition</p>
		<p>Open timber frame panel STUD - Not FR Build treated SHEATHING - 12 mm HydroFlam</p>

System classification B3

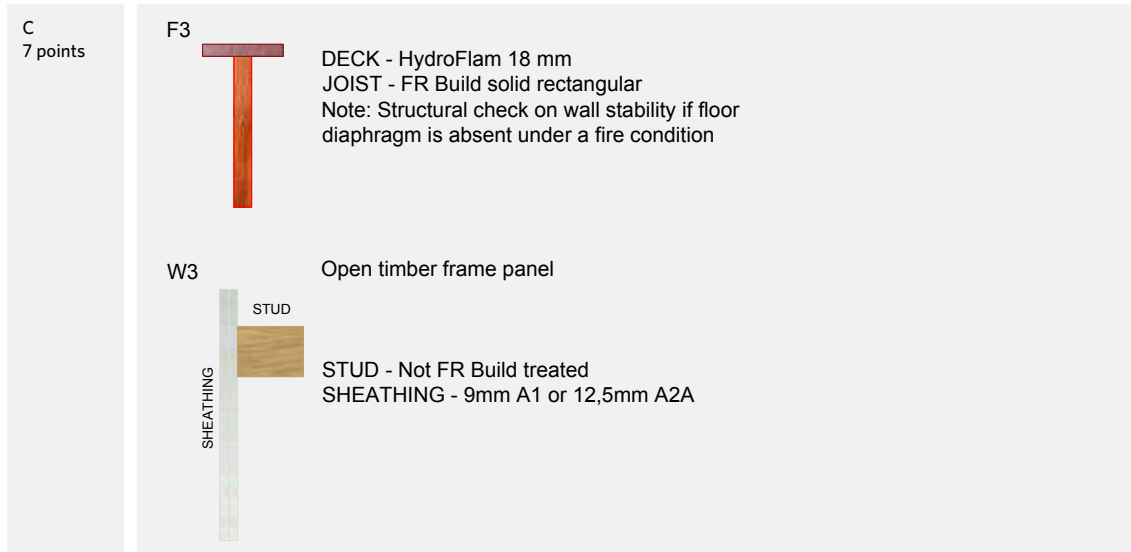
Adding to the point system, the STA also allows certain systems that are tested as a whole, to be in a certain category. With HydroFlam, we can be in the B3 category using the following system.

<p>B3 6 points</p>		<p>FLOOR DECK - Not FR Build treated JOIST - Not FR Build treated CEILING - 12,5 mm plaster board</p>
		<p>WALLS STUD - FR Build treated SHEATHING - 12 mm HydroFlam</p>

C-classification

With the use of HydroFlam 18mm for decking and a W3 or other solutions, a C-classification can be reached.

Example:



Other combinations that can be reached with HydroFlam 18mm as a decking to reach C-classification are F3 + W4, F3 + W8, F3 + S1, F3 + S2, F3 + S3, F3 + S4, F3 + S5

Size and thickness / lead times

As a stock article, we offer

12mm, 1196x2800mm

80 boards per pack, approximate weight of pack = 2,5 tonnes

22mm TG4, 600x2400mm

80 boards/pack, approximate weight of pack = 1,9 tonnes

On demand, other dimensions of boards are available.

We are capable of producing boards in sizes up to 2630x6350mm

All boards are produced in Belgium, lead time for Uk for HydroFlam stock range is 2-3 weeks.

UNILIN, division panels

UNILIN Division Panels is part of the UNILIN group. Since the business was founded in 1960, we have grown into an international business offering solutions to the construction industry, and the furniture and interiors sectors.

UNILIN's name is synonymous with evolution and revolution. Ongoing investments in design, technology, research and development have enabled our divisions to grow to the top of their fields.

With our strong vertical integration, from the tree to the finished product, with creativity as our engine and innovation as our driving force, we develop custom solutions tailored to your needs.