# Fire class of Plato®WOOD

Fire safety regulations of construction elements are specified in the Construction Products Directive (CPD). In this directive the technical requirements (qualitative and quantitative) on the field of fire safety are described with references to (European) standards and/or directives such as EN 13501 “Fire classification of construction products and building elements”.

The contribution of a material to the fire propagation is based on a classification. The European standard EN 13501 includes 7 different Euroclasses (A1, A2, B, C, D, E en F). A1 is the highest class and products within this class do not add any contribution to a fire. The EN 13501 also includes a smoke classification: s1 (limited smoke production), s2 (mean smoke production) and s3 (high smoke production).

The general requirement of all external construction elements of a building (the façade) is Euroclass D. In several situations the requirements of the contribution to fire propagation of construction elements are higher. For example, construction elements which are located at the side of a fire escape must have Eurofireclass B (closed location) or C (non-closed location). Euroclass B is also required for the part of a cladding above a height of 13 m (too high for a fire-brigade to extinguish fires) and for the lower part of the cladding near the ground level (due to possible ‘flint firing’). If a building contains a residence area with a floor higher than 5 m above ground level, then the lower 2.5 m of the facade construction must also meet Eurofireclass B.

Products which are labelled with CE-marking (e.g. wooden floors, parquet, and solid wood panelling and cladding) must comply the Euroclasses according the EN 13501.

Based on the EN 13501 most (Plato) timber species belong to Euroclass D-s2[1]. Fire retardant treatment could be necessary if the requirements of the Constructive Products Directive are higher than the Euroclass of the construction elements. Plato®WOOD can be treated with existing fire retardants and methods meeting the (current) requirements of the CPD. SBI tests showed that 15 mm thick Plato®WOOD Fraké and Norway spruce treated with a fire retardant from Magma Industries BV did meet the requirement of the Eurofireclass B-S2,d0.

*Fire class of Plato®WOOD Norway spruce and Fraké, treated with fire retardants*

| Plato®WOOD | Standard | Fire class |
|---|---|---|
| Norway spruce | EN 13501 | B-S2, d0 |
| Fraké | EN 13501 | B-S2, d0 |

In order to prevent leaching of fire retardants in Use Class 3 applications the surface must be painted with a coating system, e.g. Timberstain HT or Sansin SDF[2].

Please follow the instructions of the fire retardant producer when Plato®WOOD is treated. For an expert advice about the treatment of Plato®WOOD with a fire retardant please contact your fire retardant producer, e.g. Magma Industries BV.

[1] According the European document CONSLEG 2003D0043 - 08/08/2003 untreated wood boards, including Plato®WOOD, can be classified in Euro class D-s2,d0 if these boards meet the European standard EN 13353, have a minimal density of 400 kg/m3 and a minimal thickness of 12 mm. It is important that these boards are not painted with a lack, stain and such if this result in a significant different classification.

[2] A fine-sawn surface is advised if fire retardant treated Plato®WOOD is painted with a semi-transparant paint system.