REPORT

issued by an Accredited Testing Laboratory

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Classification report: Durability of reaction to fire performance – Classes of fire-retardant treated wood products in interior and exterior end use applications according to EN 16755

Product

Façade system called "Teknos FR Façade" consisting of solid wood panelling of spruce painted with primer with fire retarding agent and overlaid by a waterborne acrylic industrial system. The painted product has a nominal thickness of 21 mm.

Product specification

According to the client:

- "Teknos FR Façade" consisting of solid wood panelling of spruce painted with 350 g/m^2 (wet) primer with fire retarding agent (Teknosafe 2407) and overlaid by a 150 g/m^2 (wet) waterborne acrylic industrial system (Nordica Eko 3330-3).

Requirements

The following requirement criteria given in EN 16755 have to be fulfilled:

Reaction to fire class, initial	**Hygroscopic properties**	**Reaction to fire performance after weather exposure**
Relevant and recognised reaction to fire class	- moisture content < 28 % (INT2 and EXT) - no exudation of liquid - minimum visible salt with no increase at surface	Maintained reaction to fire performance

Evaluation documents

- Reaction to fire class, initial: SP/RISE Report PX05884-01 and PX05884-01A.
- Hygroscopic properties: SP/RISE Report PX05884A.
- Reaction to fire performance, after weather exposure: SP/RISE Report PX05884B (and weather exposure SP/RISE Report PX05884C) and RISE Assessment according to EN 16755 9P08403.

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Product performance*

	Spruce panel, untreated	**Teknos FR Facade**
Reaction to fire performance, initial	-	European fire class: B-s1, d0
Hygroscopic properties according to NT Build 504 (humid applications)*	Moisture content: 19 %	Moisture content: 18 % Salt at surface: No Exudation of liquid: No
Reaction to fire performance after weather exposure according to NT Fire 053 Method B*	-	Reaction to fire performance maintained after accelerated weathering: Yes Maintenance included: Yes

* The Nordtest Methods NT Fire 054, NT Build 504 and NT Fire 053, has been replaced by technical specification CEN/TS 15912 which also has been replaced by standard EN 16755. In all standards are the methods for hygroscopicity properties (NT Build 504 or Annex A) and accelerated weathering (NT Fire 053 or Annex B) the same. The criteria for DRF Class INT2 and DRF Class EXT are not the same.

Durability of Reaction to Fire performance (DRF) Class

The "Teknos FR Façade" according to the product specification above fulfils the requirements for **DRF Class INT1** and **INT2** – for interior dry and humid applications.

The "Teknos FR Façade" according to the product specification above fulfils the requirements for **DRF Class EXT** – for exterior applications.

Figure 1. Label for DRF Class.

Applicability of DRF Class

The following applicability rules apply:

a) Application amounts tested must not be exceeded.
b) End use product should be retested if the composition of the fire retardant product is changed.
c) The painted spruce shall be ocular inspected every year to decide when it should be recoated (with the same coatings as tested) for first time.

Service life

DRF INT1and INT2 classifications apply for the life time of the wood product provided the product is only used in the intended service class.

DRF Class EXT is complex with a number of factors to be considered. The manufacturers should be consulted regarding service life.

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