

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

Fire-retardant treated (FRT) wood of spruce (panelling) with thickness 21,7 mm, surface treated by Akzo Nobel Industrial Coatings AB with treatment Rubbol WP 112 FR (primer) and Rubbol WF 3xxx (top coat).

Product specification

According to the client:

- Spruce (panelling) with treatment Rubbol WP 112 FR (primer: 250 g/m²) and Rubbol WF 3xxx (top coat: 150 g/m²).

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	<ul style="list-style-type: none"> - 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: RISE Report 7P03508-12.
- Hygroscopic properties: RISE Report 6P07425B.
- Reaction to fire performance, after weather exposure: RISE Report 6P07425A (and weather exposure RISE Report 6P07425B).

RISE Research Institutes of Sweden AB

Postal address

Box 5604
SE-114 86
STOCKHOLM
Sweden

Office location

Drottning Kristinas
väg 61
SE-114 28
STOCKHOLM

Phone / Fax / E-mail

+46 10 516 50 00
+46 33 13 55 02
info@ri.se

This report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.



Product performance*

	Spruce panel, untreated	FRT spruce panel
Reaction to fire performance, initial	-	European fire class: B-s2, d0
Hygroscopic properties according to CEN/Ts 15912 (humid applications)*	Moisture content: 23,4 %	Moisture content: 21,8 % Salt at surface: No Exudation of liquid: No
Reaction to fire performance after weather exposure according to CEN/TS 15912 Method B*	-	Reaction to fire performance maintained after accelerated weathering: Yes Maintenance included: Yes

* The technical specification CEN/TS 15912 has been replaced by standard EN 16755. In both standards the methods for hygroscopicity properties (Annex A) and accelerated weathering (Annex B) are the same. Also, the criteria for DRF Class INT2 and DRF Class EXT are the same.

Durability of Reaction to Fire performance (DRF) Class

The fire retardant treated wood product of Spruce (panelling) with Rubbol WP 112FR/Rubbol WF 3xxx according to the product specification above fulfils the requirements for **DRF Class INT1** and **INT2** – for interior dry and humid applications.

The fire retardant treated wood product of Spruce (panelling) with Rubbol WP 112FR/Rubbol WF 3xxx 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.

Service life

DRF INT1 and 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.

**RISE Research Institutes of Sweden AB
Building Technology - Wood Building Technology**

Performed by

Examined by

Lazaros Tsantaridis

Rickard Falkman