

CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN 13501-1:2018

Classification no.	2022-Efectis-R001150
Sponsor	Nederlandse Branchevereniging voor de Timmerindustrie NBVT Westeinde 10 1334 BK ALMERE THE NETHERLANDS
Product name	Impregnated Spruce, Oak, Beech and Sapeli (Mahogany) wood with white primer
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1. INTRODUCTION

This classification report defines the classification assigned to **Impregnated Spruce, Oak, Beech and Sapeli (Mahogany) wood with white primer** in accordance with the procedures given in EN 13501-1:2018.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The product, **Impregnated Spruce, Oak, Beech and Sapeli (Mahogany) wood with white primer**, will be used as a horizontal staircase element.

2.2 MANUFACTURER

Nederlandse Branchevereniging voor de Timmerindustrie
NBVT
Westende 10
1334 BK ALMERE
THE NETHERLANDS

2.3 PRODUCT DESCRIPTION

According to the sponsor the product is composed of spruce wood (*Picea abies*).

The tested panels are:

- 37.6 ± 0.4 mm and have a density from 400 kg/m³ to 500 kg/m³;
- impregnated with Holzprof Fire Retardant Wood protection by 2 immersing it two times during 30 seconds; the impregnating agent yield is within the range of 112 - 146 g/m²;
- coated with Magma Industries, Fire Sheen 101 with a usage of 306 – 356 g/m².

Impregnation was carried out with control from certification body SKH. The treatment report, Ref. 22/2851 BH/sg is kept on file by Efectis.

Impregnated Oak, Beech and Sapeli (Mahogany) wood have also been tested once and added to the field of applications with the parameters described in §4.3.

3. STANDARDS, TEST REPORTS & TEST RESULTS IN SUPPORT OF CLASSIFICATION

3.1 APPLICABLE (PRODUCT) STANDARDS

EN ISO 11925-2:2020	Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test
EN ISO 9239-1:2010	Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source
EN 13238:2010	Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates
EN 13501-1:2018	Fire classification of construction products and building elements Part 1: Classification using data from reaction to fire tests

3.2 TEST REPORTS

Name of Laboratories	Name of sponsor	Test reports	Test method
Efectis Nederland BV THE NETHERLANDS	Nederlandse Branchevereniging voor de Timmerindustrie NBVT THE NETHERLANDS	2022-Efectis-R000654 2022-Efectis-R001131	EN ISO 11925-2:2020 EN ISO 9239-1:2010

3.3 TEST RESULTS

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter – maximum	Compliance Parameters
EN ISO 11925-2				
surface flame impingement	Fs ≤150 mm	6	40	-
	Ignition of filter paper		-	Compliant

Test method & test number	Parameter		No. tests	Results	
				Continuous parameter – mean (m)	Compliance Parameters
EN ISO 9239-1					
Impregnated Spruce wood	Critical Heat Flux	[kW/m2]	3	>=11	-
	Smoke density	[%..min]		15	-
Impregnated Oak wood	Critical Heat Flux	[kW/m2]	1	>=11	-
	Smoke density	[%..min]		60	-
Impregnated Beech wood	Critical Heat Flux	[kW/m2]	1	>=11	-
	Smoke density	[%..min]		27	-
Impregnated Sapeli (Mahogany) wood	Critical Heat Flux	[kW/m2]	1	>=11	-
	Smoke density	[%..min]		35	-

3.4 CLASSIFICATION CRITERIA

Classification criteria of the Flooring Radiant Panel (FRP) test			
Classification criteria			
Class Test method(s)	B_{fl}	C_{fl}	D_{fl}
EN ISO 11925-2 Exposure = 15 s	$F_s \leq 150 \text{ mm within } 20 \text{ s}$		
EN ISO 9239-1 Critical flux [kW/m ²]	≥ 8.0	≥ 4.5	≥ 3.0
Additional classification			
Smoke production	s1 = $\leq 750\%$ min s2 = $> 750\%$ min		

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 12 of EN 13501-1:2018.

4.2 CLASSIFICATION

The product, **Impregnated Spruce, Oak, Beech and Sapeli (Mahogany) wood with white primer**, in relation to its reaction to fire behaviour is classified:

B_{fl}

The additional classification in relation to smoke production is:

s1

Reaction to fire classification: B_{fl} - s1

4.3 FIELD OF APPLICATION

This classification is valid for the following product parameters:

General

Thickness	37.6 ± 0.4 mm and greater thicknesses
Impregnation reference	Holzprof Fire Retardant Wood protection
Impregnation method	Two 30 seconds immersions
Coating reference	Magma Industries, Fire Sheen 101
Coating usage	306 – 356 g/m ²

Wood species:

Spruce wood (*Picea abies*)

Surface density (as stated by the sponsor)	From 15.04 kg/m ² to 18.8 kg/m ²
Impregnation usage	From 112 g/m ² to 146 g/m ²

Oak wood (*Quercus robur*)

Surface density (average)	26.5 kg/m ²
Impregnation usage	From 98 g/m ² to 131 g/m ²

Beech wood (*Fagus sylvatica*)

Surface density (as stated by the sponsor)	From 25.9 kg/m ² to 28.2 kg/m ²
Impregnation usage	From 340 g/m ² to 416 g/m ²

Sapeli (Mahogany) wood (*Entandrophragma cylindricum*)

Surface density (average)	25.2 kg/m ²
Impregnation usage	From 85 g/m ² to 111 g/m ²

This classification is valid for the following end use applications:

Substrate	Not applicable
Application	as the horizontal part of a staircase construction
Joints	None
Other aspects of end use conditions	Used in combination with vertical element (riser) to form a staircase

4.4 DURATION OF THE VALIDITY OF THIS CLASSIFICATION REPORT

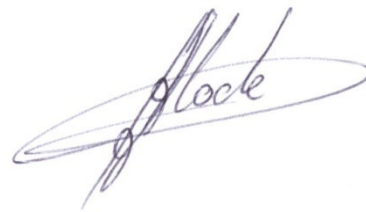
Consult classification standard and national laws and regulations for limitations on the period of validity of the classification.

5. LIMITATIONS

This classification document does not represent type approval or certification of the product.



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