**FOREST AND WOOD PRODUCTS
RESEARCH AND DEVELOPMENT INSTITUTE**

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**EN ISO/IEC 17025
T-316**

Classification of reaction to fire
in accordance with EN 13501-1:2018

Issue number: K37/2022

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Sponsor: Retaflame LLC.

Address: Laki 11E, Tallinn 12915, Estonia.
Reg. No. 14407952.

Manufacturer and owner of the classification report: Retaflame LLC.

Prepared by: SIA "Meža un koksnes produktu pētniecības un attīstības institūts" *(Forest and Wood Products Research and Development Institute Ltd).*

Test performed at: SIA "Meža un koksnes produktu pētniecības un attīstības institūts" (*Forest and Wood Products Research and Development Institute Ltd),* Dobeles street 41, Jelgava, LV-3001, Latvia and "Pienavas katlu māja", Pienava, Džūkstes pagasts, Tukuma novads, LV-3147, Latvia *("Pienava heat plant", Pienava, Džūkste parish, Tukums region, LV-3147, Latvia*).

Product name: Flame retardant treated spruce wood.

Laboratory involved in testing is accredited by the Latvian National Accreditation Bureau (LATAK) according to the standard LVS EN ISO/IEC 17025 under the terms of Latvian legislation with reg. No. T-316. Laboratory is a notified body with reg. No. NB 2040 under construction product regulation No. 305/2011.

Classification report refers only to these test objects. This classification report may not be reproduced otherwise than in full text, excepted with the prior written approval of the Forest and Wood Products Research and Development Institute

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1. Introduction

This classification report defines the reaction to fire classification assigned to flame retardant treated spruce wood in accordance with the procedures given in EN 13501-1:2018.

2. Details of classified product

2.1. General

Flame retardant treated spruce wood is defined as flame retardant solid wood construction product.

2.2. Product description

- Product name: Flame retardant treated spruce wood.
- Manufacturer: Retaflame LLC.
- Materials used for manufacturing:
  - flame retardant wood impregnation WP 110/Bauteq Leegipidur, applied in 3-4 layers with total amount 400-450 g/m^2 wet to all sides;
  - spruce wood with 22 mm thickness.
- Coating colour: colourless.

3. Test reports and test results in support of classification

3.1. Specific conditions

Not applicable

3.2. Test reports

Name of laboratory	Name of sponsor	Test reports	Test method
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts" Testing Laboratory	Retaflame LLC	6638-1/2021	EN 13823:2020
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts" Testing Laboratory	Retaflame LLC	6638-2/2021	EN ISO 11925-2:2020

Sampling for fire tests was done according samplicng act No. PVA-183-22-0001 by Margus Matsal (Retaflame LLC) and Merilin Aasma (Inspecta Estonia OÜ, notified body No. 1336) at Tallinn 12915, Estonia on 11.02.2022.

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3.3. Test results

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean	Compliance parameters
EN 13823:2010+A1:2014	$FIGRA_{0,2MJ}$(W/s)	4	100.1	Compliant
	$FIGRA_{0,4MJ}$(W/s)		90.1	(-)
	THR_{600s}(MJ)		5.7	Compliant
	LFS		<1000 mm	Compliant
	$SMOGRA$(m^2/s^2)		5.5	Compliant
	TSP_{600s}(m^2)		34.3	Compliant
	Flaming droplets <10s		no	Compliant
	Flaming droplets >10s		no	Compliant
EN ISO 11925-2:2020	Flame spread (Fs)	12	Less than 150 mm	Compliant
Exposure time 30 s. Test duration 60 s.	Ignition of filter paper		no	(-)
	Flaming droplets/particles		no	(-)
(-) not applicable				

4. Classification and field of application

4.1. Reference of classification

This classification has been carried out in accordance with clause 11 of EN 13501-1:2018.

4.2. Classification

Flame retardant treated spruce wood in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets/particles is:

d0

The format of the reaction to fire classification for construction product excluding floorings and linings is:

Fire behaviour		Smoke production			Flaming droplets	
B	-	s	1	,	d	0

Reaction to fire classification: B-s1, d0

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4.3. Field of application

4.3.1 This classification is valid for the following product end use applications:

Product primary is intended to use as flame retardant coating system for wood construction products.

4.3.2. This classification is also valid for following product parameters:

- valid only for product composition as tested;
- valid for spruce wood species;
- valid for product thickness as tested;
- valid for flame retardant wood impregnation WP 110/Bauteq Leegipidur with consumption 400-450 g/m^2 or larger;
- valid with coating systems as tested applied by spraying, brushing or roller only;
- mounted with ventilated or non-ventilated air gap to substrate of any A1 or A2-s1,d0 with a minimum density of 525 kg/m^3 and with the air gap constructed by wooden battens of class D-s2,d0 or better or any A1 or A2-s1,d0 product;
- valid for product mounting with air gap between product and substrate. Valid also for product mounting on substrates without air gap;
- product tested with standard vertical and horizontal joints.
- valid for vertical and horizontal boards arrangements.

5. Limitations.

5.1. No restrictions on the duration of validity of this classification report as long as the product specifications remain unchanged.
5.2. This document does not represent type approval or certification of the product.

Prepared by   Reviewed by

E.Bukšāns   K.Būmanis

_____   _____
(signature and name)   (signature and name)

THIS DOCUMENT IS SIGNED BY SECURE ELECTRONIC SIGNATURE AND CONTAINS A TIME STAMP
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