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## Extended application classification of reaction to fire in accordance with EN 13501-1:2018

This report is revision of that issued as No. K98/2022, dated 21.09.2022. Revised report supersedes original report and original report No. K98/2022 is no longer valid.

Issue number: K98/2022 version 2

Date of issue: 07.02.2023.

**Sponsor:** Teknos AB.

Address: Limmaredsvägen 2, 51424 Tranemo, Sweden.

Reg. No. 556047-6714.

**Manufacturer and owner of classification report:** Teknos AB.

**Statement:** there were typing error in product description at paragraph 4.2, the product described in this report has not been retested and revised report does not involve technical change or technical review of the original report.

### Validity of corrected reports and of revised reports

The owner of the classification report No. K98/2022, dated 21.09.2022. should ensure that the revised report, in its entirety, is attached to each and every copy of the original report.

Reports are statements of fact and are of unlimited validity.

**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*), “Pienavas katlu māja”, Pienava, Džūkstes pagasts, Tukuma novads, LV-3147, Latvia (“*Pienava heat plant*”, Pienava, Džūkste parish, Tukums region, LV-3147, Latvia).

**Product name:** Surface treated panelling.

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*

## 1. Introduction

This classification report defines the reaction to fire classification assigned to surface treated panelling in accordance with the procedures given in EN 13501-1:2018.

## 2. Details of classified product

### 2.1. General

Surface treated panelling is defined as solid wood cladding. Product is described by product standard EN 14915:2013.

### 2.2. Product description

- Product name: Surface treated panelling.
- Manufacturer: Teknos AB.
- Materials used for manufacturing:
  - pine wood with dimensions 15x120 mm;
- Density:  $\geq 390 \text{ kg/m}^3$ .
- Nominal thickness tested: 15 mm.
- Coating systems tested for extended application:
  - Primed and topcoated pine panels, achieved with Teknocoat Aqua 1867  $\leq 140 \text{ g/m}^2$  and Teknocoat Aqua 2590  $\leq 110 \text{ g/m}^2$ ;
  - Transparent pine panels, achieved with Teknocoat Aqua Sealer 2700  $\leq 60 \text{ g/m}^2$  and Teknocoat Aqua 1336  $\leq 90 \text{ g/m}^2$ ;
  - Whiteglazing pine panels, achieved with Teknocoat Aqua 1336  $\leq 65 \text{ g/m}^2$ ;
  - Stain pine panels, achieved with Teknostain Aqua 1996  $\leq 50 \text{ g/m}^2$  and Teknostain Aqua 1996  $\leq 85 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Teknostain Aqua 1996  $\leq 45 \text{ g/m}^2$  and Teknocoat Aqua 1332  $\leq 65 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Teknocoat Aqua 1867  $\leq 140 \text{ g/m}^2$  and Teknocoat Aqua 2575  $\leq 120 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Teknocoat Aqua 1867  $\leq 140 \text{ g/m}^2$  and Teknocoat Aqua 2580  $\leq 120 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Teknocoat Aqua Primer 1875  $\leq 110 \text{ g/m}^2$  and Teknocoat Aqua 2575  $\leq 120 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Teknostain Aqua 1993  $\leq 65 \text{ g/m}^2$  and Teknocoat Aqua 1330  $\leq 110 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Teknocoat Aqua 1330  $\leq 100 \text{ g/m}^2$  and Teknocoat Aqua 1330  $\leq 100 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Paneelisenämälli  $\leq 140 \text{ g/m}^2$  and Paneelisenämälli  $\leq 140 \text{ g/m}^2$ ;
  - Primed and topcoated pine panels, achieved with Futura Aqua Primer  $\leq 150 \text{ g/m}^2$ , Futura Aqua 40  $\leq 150 \text{ g/m}^2$  and Futura Aqua 40  $\leq 150 \text{ g/m}^2$ .

### 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	Teknos AB	7120-1/2022	EN 13823:2020
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts” Testing Laboratory	Teknos AB	7120-2/2022	EN ISO 11925-2:2020

#### 3.3. Test results

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean	Compliance parameters
EN 13823:2020	$FIGRA_{0,2MJ}(W/s)$	15	689.0	(-)
	$FIGRA_{0,4MJ}(W/s)$		689.0	(-)
	$THR_{600s}(MJ)$		22.3	(-)
	LFS		yes	Compliant
	$SMOGRA(m^2/s^2)$		3.7 4.8 <sup>a</sup>	(-)
	$TSP_{600s}(m^2)$		30.9 65.2 <sup>a</sup>	(-)
	Flaming droplets <10s Flaming droplets >10s		(-) (-)	Compliant Compliant
EN ISO 11925-2:2020  Exposure time 30 s. Test duration 60 s.	Flame spread (Fs)	12	(-)	Compliant
	Ignition of filter paper		(-)	Compliant
	Flaming droplets/particles		(-)	Compliant
(-) not applicable				
<sup>a</sup> Test results from product variation No.7120-1-10 with worst case scenario for smoke index classification.				

#### Test results for specimens with additional coatings

Specimen No.	7120-1-1	7120-1-2	7120-1-4	7120-1-5	7120-1-6	7120-1-7	7120-1-8	7120-1-9	7120-1-10
$FIGRA_{0,2MJ}, W/s$	579.5	643.6	547.5	692.7	615.3	540.8	654.2	537.8	413.3
$FIGRA_{0,4MJ}, W/s$	579.5	643.6	547.5	692.7	615.3	540.8	654.2	537.8	413.3
$THR_{600s}, MJ$	18.4	18.3	20.0	22.5	18.2	21.8	22.3	21.8	27.4
$SMOGRA, m^2/s^2$	10.3	3.4	2.3	3.6	3.3	3.2	2.6	3.2	4.8
$TSP_{600s}, m^2$	38.9	44.9	28.1	22.2	26.7	47.2	25.9	37.8	65.2
Specimen No.	7120-1-11	7120-1-12	7120-1-13						
$FIGRA_{0,2MJ}, W/s$	577.6	368.5	551.8						
$FIGRA_{0,4MJ}, W/s$	577.6	368.5	551.8						
$THR_{600s}, MJ$	22.0	14.9	21.8						
$SMOGRA, m^2/s^2$	3.0	3.7	4.2						
$TSP_{600s}, m^2$	26.4	48.8	42.4						

**Specimens identification**

Identification number	Wood species and area of use	Primer name and consumption	Intermediate coating name and consumption	Top coating name and consumption	Colour
7120-1-1	Primed and topcoated pine panels	Futura Aqua Primer, 150 g/m <sup>2</sup>	Futura Aqua 40, 150 g/m <sup>2</sup>	Futura Aqua 40, 150 g/m <sup>2</sup>	purple
7120-1-2	Primed and topcoated pine panels	Paneelisenämalli, 140 g/m <sup>2</sup>	-	Paneelisenämalli, 140 g/m <sup>2</sup>	purple
7120-1-3, 7120-1-16, 7120-1-17	Primed and topcoated pine panels	Teknocoat Aqua 1330, 100 g/m <sup>2</sup>	-	Teknocoat Aqua 1330, 100 g/m <sup>2</sup>	purple
7120-1-4	Primed and topcoated pine panels	Teknostain Aqua 1993, 65 g/m <sup>2</sup>	-	Teknocoat Aqua 1330, 110 g/m <sup>2</sup>	tinted with 4% pasta purple
7120-1-5	Primed and topcoated pine panels	Teknocoat Aqua Primer 1875, 110 g/m <sup>2</sup>	-	Teknocoat Aqua 2575, 120 g/m <sup>2</sup>	purple
7120-1-6	Primed and topcoated pine panels	Teknocoat Aqua 1867, 140 g/m <sup>2</sup>	-	Teknocoat Aqua 2580, 120 g/m <sup>2</sup>	purple
7120-1-7	Primed and topcoated pine panels	Teknocoat Aqua 1867, 140 g/m <sup>2</sup>	-	Teknocoat Aqua 2575, 120 g/m <sup>2</sup>	purple
7120-1-8	Primed and topcoated pine panels	Teknostain Aqua 1996, 45 g/m <sup>2</sup>	-	Teknocoat Aqua 1332, 65 g/m <sup>2</sup>	Brown stain tinted with 4% pasta purple
7120-1-9	Stain pine panel	Teknostain Aqua 1996, 50 g/m <sup>2</sup>	-	Teknostain Aqua 1996, 85 g/m <sup>2</sup>	stonegrey
7120-1-10	Whiteglazing pine panel	Teknocoat Aqua 1336, 65 g/m <sup>2</sup>	-	-	Whiteglazing tinted with 2% pasta purple
7120-1-11	Transparent pine panel	Teknocoat Aqua Sealer 2700, 60 g/m <sup>2</sup>	-	Teknocoat Aqua 1336, 90 g/m <sup>2</sup>	whiteglazing
7120-1-12	Primed and topcoated pine panels	Teknocoat Aqua 1867, 140 g/m <sup>2</sup>	-	Teknocoat Aqua 2590, 110 g/m <sup>2</sup>	purple
7120-1-13	Untreated pine panel	-	-	-	opaque

**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**

Surface treated panelling in relation to its reaction to fire behaviour is classified:

D

The additional classification in relation to smoke production is:

s2

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	
D	-	s	2	,	d	0

**Reaction to fire classification: D-s2, d0**

### 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 solid wood cladding.

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

- valid for thickness range 15 mm and larger thicknesses;
- valid only for pine wood;
- valid for deviations of density within natural limits of pine wood;
- valid for tongue-groove profile with minimal profile thickness 8 mm and larger;
- valid for 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 and with the air gap constructed by wooden battens of class D-s2,d0 or better or any A1 or A2-s1,d0 product with a minimum density of 525 kg/m<sup>3</sup>;
- valid for product mounting with air gap between product and substrate. Valid also for product mounting on substrates without air gap;
- valid for product application with standard vertical and horizontal joints;
- valid for vertical and horizontal arrangements;
- valid for all colour tones\*

\* According to customer's provided information from extended application report No. PHB10114A about different colour tone influence on reaction to fire performance of paints issued by Danish Institute of Fire and Security Technology (DBI) at Jernholmen 12, DK-2650 Hvidovre, Denmark on 04.12.2020.

### 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



E. Bukšāns

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Reviewed by



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