Forest and Wood Products Research and Development Institute

EN ISO/IEC 17025
T-316

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

Issue number: K4/2026

Date of issue: 17.02.2026.

Sponsor: Teknos A/S.
Address: Industrivej 19, DK 6580 Vamdrup, Denmark.
Reg. No. DK85551612.

Manufacturer and owner of the classification report: Teknos A/S.

Classification done by: Meža un koksnes produktu pētniecības un attīstības institūts SIA *(Forest and Wood Products Research and Development Institute)*, Testing laboratory "Pienavas katlu māja", Pienava, Džūkstes pagasts, Tukuma novads, LV-3147, Latvia *("Pienava heat plant", Pienava, Džūkste parish, Tukums region, LV-3147, Latvia*).

Product name: Solid wood cladding and glulam panels.

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.

1. Introduction

This classification report defines the reaction to fire classification assigned to solid wood cladding and glulam panels in accordance with the procedures given in EN 13501-1:2018.

2. Details of classified product

2.1. General

Solid wood cladding and glulam panels is defined as solid wood cladding according to standard EN 14915:2013.

2.2. Product description

- Product name: Solid wood cladding and glulam panels.
- Manufacturer of coatings: Teknos A/S.
- Materials used for manufacturing:
  - spruce solid wood with dimensions 19 x 148 mm;
  - solid spruce wood glulam panels with dimensions 25 x 322 mm;
  - larch solid wood with dimensions 19 x 140 mm;
  - Superwood treated spruce wood with dimensions 19 x 145 mm with core impregnation (superwood) using SC200 ~120 g/m^3 dissolved in CO_2 under 74-150 bar pressure. Organic fungicide SC200 consist of propiconazole, tebuconazole and IPBC.*
  - with or without preservative treatment variables:
    - TEKNOL 1410-01 with consumption 100-120 g/m^2;
    - TEKNOL 1411-01 with consumption 100-120 g/m^2;
    - TEKNOL 1415-01 colourless with consumption 100-120 g/m^2;
- **Tested coating variables on non-weather-exposed surfaces (rear side of cladding):**
  - primed with TEKNOSAFE 2407-00 with consumption 350 g/m^2 (white and purple violet colour);
- **Tested coating variables on exterior weather-exposed surfaces:**
  - primer TEKNOSAFE 2407-00 with consumption 350 g/m^2 and top coating Nordica Eko 3330-03 with consumption 150 g/m^2 (white colour);
  - primer TEKNOSAFE 2407-00 with consumption 350 g/m^2 and top coating TEKNOCLAD 3371-72 with consumption 100 g/m^2 (colour RAL 4007 Purple Violet);
  - primer TEKNOSAFE 2407-00 with consumption 350 g/m^2 (colour white and RAL 4007 purple violet) and top coating TEKNOSAFE FLAME PROTECT 2408 with consumption 150 g/m^2 (colour white and RAL 4007 purple violet);
  - primer TEKNOSAFE 2407-00 with consumption 350 g/m^2 (colour white RAL 4007) and top coat TEKNOSAFE FLAME PROTECT 2408-00 with consumption 150 g/m^2 (colour RAL 4007 purple).
  - primer TEKNOSAFE 2407-00 with consumption 300 g/m^2 (colour RAL 4007 purple violet) and top coating TEKNOSAFE FLAME PROTECT 2408-00 with consumption 150 g/m^2 (colour RAL 4007 purple violet) when applied on larch wood cladding;
- Profile type: rectangular and shiplap or tongue-groove.
- Coating application method: spraying.
- Density: 500 kg/m^3 ± 100 kg/m^3.
- Nominal thickness tested: 19 mm, 25 mm, 38 mm and 57 mm.

*Note: *Based on agreement between Teknos AS and Superwood AS dated 11.10.2022 about joint ownership of Superwood AS classification report No K27/2021 to be used to extend scope of validity of Teknos AS classification report No K26/2022 were proofed that Superwood fungicide treatment did not influence reaction to fire performance compared to normal untread spruce wood, reference test reports 5487-1/2021 and 5487-2/2021 issued at 17.05.2021.*

3. Test reports and test results in support of classification

3.1. Specific conditions (*applicable only if performed using facilities outside the testing laboratory)*

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 A/S	5611-1/2021	EN 13823:2020
BM TRADA	Teknos A/S	BMT/RFP/F14056/02 (issued September 2014)	EN 13823:2010
BM TRADA	Teknos A/S	BMT/RFP/F14056/01 (issued September 2014)	EN ISO 11925-2:2010
BM TRADA	Teknos A/S	BMT/RFP/F14055/01 (issued August 2014)	EN ISO 11925-2:2010
BM TRADA	Teknos A/S	BMT/RFP/F14055/02 (issued August 2014)	EN 13823:2010
BM TRADA	Teknos A/S	BMT/RFP/F14055/03 (issued August 2014)	EN 13823:2010
BM TRADA	Teknos A/S	BMT/RFP/F14022/01 (issued June 2014)	EN 13823:2010
BM TRADA	Teknos AB	BMT/RFP/F15069/02 (issued August 2015)	EN 13823:2010
BM TRADA	Teknos AB	BMT/RFP/F15069/01 (issued August 2015)	EN ISO 11925-2:2010
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts” Testing Laboratory	Superwood A/S	5487-1/2021	EN 13823:2020
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts” Testing Laboratory	Superwood A/S	5487-2/2021	EN ISO 11925-2:2020
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts” Testing Laboratory	Teknos A/S	7399-1/2022	EN 13823:2020
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts” Testing Laboratory	Teknos A/S	7413-1/2022	EN 13823:2020
SIA „ Meža un koksnes produktu pētniecības un attīstības institūts” Testing Laboratory	Teknos A/S	E1355-1/2025 (EXAP report)	EN 13823:2020 EN 13823:2020+A1:2022

Sampling was done according to AVCP 1 by Norwegian Institute of Wood Technology at TEKNOS A/S, Vandrup, Denmark.

3.3. Test results

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean	Compliance parameters
EN 13823:2020	*FIGRA*$_{0,2MJ}$(W/s)	5[a]	96.7[a] 119.0[b]	(-)
		3[b]	88.1[e] 95.2[f]	
		3[e]	100.3[g] 103.7[h]	
		4[f]	95.8[j] 65.0[k]	
		3[g]	72.2[l]	
		3[h]		
	FIGRA$_{0,4MJ}$(W/s)	5[j]	96.6[a] 84.6[b]	(-)
		3[k]	78.6[e] 56.5[f]	
		3[l]	87.3[g] 56.8[h]	
			95.8[j] 64.9[k]	
			71.7[l]	
	THR$_{600s}$(MJ)		5.7[a] 5.5[b]	(-)
			5.5[e] 5.2[f]	
			5.94[g] 5.10[h]	
			6.3[j] 5.5[k]	
			5.7[l]	
	LFS < edge of specimen		yes	Compliant
	SMOGRA(m^2/s^2)		6.3[a] 1.4[b]	(-)
			0.9[e] 1.1[f]	
			2.7[g] 0[h]	
			6.6[j] 5.0[k]	
			7.3[l]	
	TSP$_{600s}$(m^2)		48.2[a] 43.8[b]	(-)
			39.3[e] 35.2[f]	
			36.2[g] 40.8[h]	
			52.9[j] 52.2[k]	
			51.4[l]	
	Flaming droplets <10s		no	Compliant
	Flaming droplets >10s		no	Compliant
EN ISO 11925-2:2020	Flame spread (Fs) ≤ 150 mm	6[c] 18[d]	yes	Compliant
Exposure time 30 s. Test duration 60 s.	Ignition of filter paper	6[i]	no	Compliant
	Flaming droplets/particles		no	Compliant

(-) not applicable
[a] Results from test report 5611-1/2021.
[b] Results from test report No. BMT/RFP/F14056/02.
[c] Results from test report No. BMT/RFP/F14056/01.
[d] Results from test report No. BMT/RFP/F14055/01.
[e] Results from test report No. BMT/RFP/F14055/02.
[f] Results from test report No. BMT/RFP/F14055/03.
[g] Results from test report No. BMT/RFP/F14022/01.
[h] Results from test report No. BMT/RFP/F15069/02.
[i] Results from test report No. BMT/RFP/F15069/01.
[j] Results from test report No. 7399-1/2022 primed with TEKNOSAFE 2407.
[k] Results from test report No. 7413-1/2022 with TEKNOL 1411-01.
[l] Results from test report No. 7413-1/2022 with TEKNOL 1415-01.

Test results according to REACTION TO FIRE EXTENDED APPLICATION REPORT No. E1355-1/2025 for surface coating or facing, composition of the product, density, wood species, FR quantity and thickness and additional surface coating:

Specimen No.	6253-1-2	6540-1-1	6540-1-2	6540-1-3	1355-1-1
$FIGRA_{0,2MJ}$, W/s	107.8	41.2	57.0	100.0	86.6
$FIGRA_{0,4MJ}$, W/s	74.6	41.2	46.6	92.9	85.0
THR_{600s}, MJ	4.6	3.7	4.0	5.2	5.9
SMOGRA, m^2/s^2	1.3	Threshold not reached			1.2
TSP_{600s}, m^2	42.4	24.5	27.0	29.4	38.0
LFS< edge of specimen	yes	yes	yes	yes	yes
Flaming droplets <10s	no	no	no	no	no
Flaming droplets >10s	no	no	no	no	no

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.

4.2.1. Solid spruce wood cladding and glulam panels with coating systems for exterior weather-exposed surfaces in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

(excluding coating variables with preservative treatment TEKNOL 1411-01 or TEKNOL 1415-01)

s2

(only for coating variables with preservative treatment TEKNOL 1411-01 or TEKNOL 1415-01)

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

d0

The format of the reaction to fire classification for construction product except floorings is:

Fire behaviour		**Smoke production**			**Flaming droplets**	
(excluding coating variables with preservative treatment TEKNOL 1411-01 or TEKNOL 1415-01)						
B	-	s	1	,	d	0
(only for coating variables with preservative treatment TEKNOL 1411-01 or TEKNOL 1415-01)						
B	-	s	2	,	d	0

Reaction to fire classification: B-s1,d0
(excluding coating variables with preservative treatment TEKNOL 1411-01 or TEKNOL 1415-01)
Reaction to fire classification: B-s2,d0
(only for coating variables with preservative treatment TEKNOL 1411-01 or TEKNOL 1415-01)

4.2.2. Solid spruce wood claddings and glulam panels primed only with TEKNOSAFE 2407-00 without additional top coating applied for non-weather-exposed surfaces in relation to its reaction to fire behaviour is classified:

B

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 except floorings is:

Fire behaviour		**Smoke production**			**Flaming droplets**	
B	-	s	2	,	d	0

Reaction to fire classification: B-s2,d0

4.2.3. Solid larch wood cladding and glulam panels with any coating system described in paragraph 2.2. 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 except floorings is:

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

Reaction to fire classification: B-s1,d0

4.3. Field of application

4.3.1. Classification valid for the following product variations:
Product primary is intended to be used as solid wood cladding in buildings.

4.3.2. Classification valid for the following product end-use applications:

- valid for spruce, larch wood claddings and spruce wood glulam panels with a thickness range from 19 mm to 57 mm as tested;
- valid for profiled cladding boards and panels with minimal profile thickness of at least 9.5 mm and with essentially flat closed cladding system;
- valid for product composition as tested;
- valid with or without preservative treatment with TEKNOL 1411-01, TEKNOL 1415-01, TEKNOL 1410-01 or Superwood with consumption as tested;
- valid for deviations of density within natural limits of spruce and larch wood;
- valid only with coating systems as tested and applied by spraying, brushing or roller;
- mounted with a ventilated or non-ventilated air gap to the substrate of any A1 or A2-s1,d0 with a minimum density of 525 kg/m^3 with a thickness of at least 12 mm, and with the air gap constructed by wooden battens or a frame of class D-s2,d0 or better or any A1 or A2-s1,d0 product;
- valid for product mounting with an air gap between product and substrate. Valid also for product mounting on substrates without an air gap;
- valid for product mounting with standard vertical and horizontal closed joints;
- valid for vertical and horizontal arrangements in buildings;
- valid for all colour tones primed with TEKNOSAFE 2407-00;
- valid only for white colour for system primed with TEKNOSAFE 2407-00 and top coated with NORDICA EKO 3330-03;
- valid for all colour tones for system primed with TEKNOSAFE 2407-00 and top coated with TEKNOSAFE FLAME PROTECT 2408 or TEKNOCLAD 3370/3371.

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.

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