

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

Sponsor: **Tampereen korkeakoulusäätiö sr**
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Notified Body No: 0809

Product: Clay-wood shaving thermal insulation

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This classification report consists of five pages and may be used or reproduced in its entirety.

1 Introduction

This classification report defines the classification assigned to the product **clay-wood shaving thermal insulation** in accordance with the procedures given in EN 13501-1:2018.

2 Details of classified product

2.1 General

The product **Clay-wood shaving thermal insulation** is defined as In-situ formed loose fill cellulose (LFCI) product, thermal insulation products for buildings.

2.2 Product description

The product **Clay-wood shaving thermal insulation** is described below.

Manufacturer: ECOSAFE 2 –project

Product description: Clay-wood shaving, Wood shaving with water and clay powder.

Product recipe:

- Wood shaving (EHTA Eriste paali, 20 kg) 2 parts,
- Water 1 part,
- Clay powder (clay content of a loam 40-60%) Tiileri,
- mixed and dried.

Thickness of insulation: 180 mm

Nominal density of insulation: 100...150 kg/m³

More detailed information about product: "Tuotetiedot ECOSAFE JA ECOSAFE2 hankkeissa tutkituista materiaaleista", Tampereen yliopisto 2022

3 Test reports and test results in support of classification

3.1 Test reports

Name of laboratory	Name of sponsor	Test report	Test method and date
Eurofins Expert Services Oy	Tampereen korkeakoulusäätiö sr	EUFI29-21005584-T1	EN 13823 9 June 2023
Eurofins Expert Services Oy	Tampereen korkeakoulusäätiö sr	EUFI29-21005584-T2	EN ISO 11925-2 9 June 2023

3.2 Test results

Test method	Parameter	Number of tests	Continuous parameter mean (m)	Compliance parameters
EN 13823	FIGRA _{0,2 MJ} (W/s)	3 ¹ +1 ² +1 ³	471,7 ¹ , 501,9 ² , 482,4 ³	Compliant
	FIGRA _{0,4 MJ} (W/s)	3 ¹ +1 ² +1 ³	471,7 ¹ , 501,9 ² , 482,4 ³	Compliant
	THR _{600s} (MJ)	3 ¹ +1 ² +1 ³	12,8 ¹ , 11,8 ² , 10,6 ³	Compliant
	LFS edge	3 ¹ +1 ² +1 ³	-	Compliant
	SMOGRA (m ² /s ²)	3 ¹ +1 ² +1 ³	15,6 ¹ , 10,1 ² , 10,8 ³	Compliant
	TSP _{600s} (m ²)	3 ¹ +1 ² +1 ³	163,2 ¹ , 108,0 ² , 106,5 ³	Compliant
	Flaming droplets / particles	3 ¹ +1 ² +1 ³	-	Compliant
EN ISO 11925-2				
Surface and edge exposure	Flame spread ≤ 150 mm	6 ¹ +6 ² +6 ³ +6 ⁴	-	Compliant
Exposure time 30 s		6 ¹ +6 ² +6 ³ +6 ⁴		
Flaming droplets/particles	Ignition of the filter paper		-	Compliant

- 1) Clay-wood shaving thermal insulation with 100 kg/m³ density
- 2) Clay-wood shaving thermal insulation with 125 kg/m³ density
- 3) Clay-wood shaving thermal insulation with 150 kg/m³ density
- 4) Clay-wood shaving thermal insulation with 175 kg/m³ density

4 Classification and field of application

4.1 Reference of classification

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

4.2 Classification

Tests were performed on clay treated wood chips. The material is identical in all cases but they have been filled to different densities.

The clay treated wood chips in relation to 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 is:

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

i.e.: D-s2, d0

4.3 Field of application

EN 15101-1:2014+A1:2019 *Thermal insulation products for buildings. In-situ formed loose fill cellulose (LFCI) products. Part 1: Specification for the products before installation* has been used to define the field of application.

This classification is valid for the following product parameters:

- all thicknesses of the product
- densities of 100...150 kg/m³

This classification is valid for the following end use application:

- substrates is Euroclass E or better
- with or without air gaps
- valid for all product sizes

5 Limitations

This classification report does not represent type approval or certification of the products.

Espoo, 9 June 2023

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DISTRIBUTION

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