



TEST REPORT

English translation prepared by ECOLABOR

Report No: **ECO-P19003-18022-en** Date: 15.01.2019

Company: Termex-Fiber Sp. z o.o.
Ul. Królowej Jadwigi 15
78-200 Białogard
Poland

Order date: 07.12.2018

Test material: In-situ formed loose fill cellulose insulation

Product name: „Termex“

Manufacturer: Termex-Fiber Sp. z o.o.
78-200 Białogard
Poland

Date / Sampling: 22.11.2018

Content of the report: Thermal conductivity, loose fill insulation, 30 – 46 kg/m³



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1 Order

According to the order from 07.12.2018, ECOLABOR e.U. was charged with the realisation of tests for loose insulating materials which are necessary for the issue of a European Technical Assessment (ETA).

2 Samples

The sample material was taken by the customer out of the store at 78-200 Białogard in Poland and sent to the laboratory.

Table 1 summarizes the production and sampling dates of the sample material

Table 1 Overview

Material Ident No	Production date	Sampling
18022-M01	22.11.2018	Manufacturer

3 Applications

The product is used as a not loadable thermal and/or acoustic insulation material in ceilings, walls and roofs.

The thermal insulation material is used for different applications:

1. Termex loose fill insulation.
2. Termex low density cavity insulation.
3. Termex high density cavity insulation.
4. Termex Sidox cavity insulation with glue.

4 Experimental procedure

All the tests were performed according to European standards for thermal insulation valid at the time of the test or in accordance to EAD 040138-00-1201 „In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres“ Version November 2015. In this test report the short name „EAD“ is used.

5 Test program

According to the test order the following characteristics were to examine. In Table 2 there is an overview of the characteristics and standards.

Table 2 Overview of test program

Parameter (Characteristic)	Standard
Thermal conductivity	EN 12667

6 Product description

The insulation material consists of selected waste paper, which is fiberized into fine flakes. The additives act as mould protection as well as flame protection.

The test report refers to an in-situ formed loose fill cellulose product, which is blown into building components or horizontally open free or mixed with glue for cavity insulation using special insulation blowing machines.

Product name:	„Termex”
Density range:	30 – 46 kg/m ³ , loose fill insulation
Additives:	5 % boric acid and 6,5 % magnesium sulphate

7 Test results

7.1.1 Thermal conductivity, measured values

The measurement of thermal conductivity was carried out in accordance with EN 12667. For the measurement a single-specimen guarded hot plate apparatus to ISO 8302 and EN 1946-2 is used with the hot side down and actively heated side walls. The maximum sample size is 500 mm x 500 mm.

Sample preparation

The drying of the specimens was performed at 70° C according to EAD, Annex A. During the measurement of thermal conductivity, the specimens were coated with a 0,01 mm thick polyethylene foil.

Data of production and sampling

The data of production and sampling for the determination of thermal conductivity are summarised in Table 3.

Table 3 Sample material overview

Sample Ident No	Material Ident No	Production date	Sampling
18022-P0105	18022-M01	22.11.2018	Manufacturer

Table 4 Summary of measurement results

No.	Test No.	Sample Ident.No	Thickness	Density	Drying /Cond.	Refer.-moisture	Moisture content a. measurement.	Mean-temp.	Mean-temp. diff.	Measurement. thermal-conduct.	Thermal-conduct.
	-	-	d mm	$\rho_{a(23,50)}$ kg/m ³	-	u_m %	u_g %	t_m °C	Δt_m K	$\lambda_{10,g}$ W/mK	$\lambda_{10,dry}$ W/mK
01	18022008	18022-P0105	93,2	42,0	70°C	0,0	0,654	10,0	10,0	0,03708	0,0370
Special conditions for the recalculation to the dry condition, from $\lambda_{10,g}$ to $\lambda_{10,dry}$ (see Test Report ECO-18017-18002-en):											
mass-related moisture content				$u_{23,50} = 0,0822$ kg/kg							
moisture conversion coefficient				$f_{u,1} = 0,177$ kg/kg							

8 Reproduction, publication

This test report, called ECO-P19003-18022-en contains 4 pages with 4 tables.

This test report may only be reproduced in full.

Note:

The above results are valid for the specimens at the time of the test.

Stainz, 15.01.2019



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Authorised to sign leader of the test laboratory
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