



European Technical Assessment

ETA 18/0151
of 04/03/2021

General Part

Technical Assessment Body issuing the ETA	Eurofins Expert Services Oy
Trade name of the construction product	Termex, StopCO2, Isonem, Professional Cellulose Insulation
Product family to which the construction product belongs	In-situ formed loose fill thermal insulation product made of cellulose fibres
Manufacturer	Termex-Fiber Sp. z o.o. ul. Królowej Jadwigi 15 78-200 Białogard Poland
Manufacturing plant	Termex-Fiber Sp. z o.o. ul. Królowej Jadwigi 15 78-200 Białogard Poland
This European Technical Assessment contains	5 pages
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document (EAD) 040138-01-1201, In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres
This ETA replaces	ETA 18/0151 issued on 5/3/2019

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Specific Part

1 Technical description of the product

This European Technical Assessment applies to thermal insulation material with the designation: Termex, StopCO2, Isonem and Professional Cellulose Insulation.

The product is in-situ formed loose fill thermal insulation material made of mechanically crushed recycled paper. During the manufacturing process, boric acid and magnesium sulphate are added to perform as flame retardants.

The product is installed by means of machine processing as dry or with PVA binding agent. Density of the installed product is 33 - 60 kg/m³ depending on the area of application.

2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

The product is intended to be used as thermal insulation in roof cavities, walls and floors, between rafters and timber works.

The product can be used in structures where it will not be exposed to compression loads, precipitation, wetting or weathering and in construction elements with no contact to water or soil and in constructions with no risk of heavy moisture exposure.

The test and assessments methods on which this European Technical Assessment is based on, are based on an assumed intended working life of Termex, StopCO2, Isonem and Professional Cellulose Insulation of 50 years provided that the thermal insulation product is subject to appropriate installation.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor by the Technical Assessment Body issuing this ETA, but is regarded only as a means for expressing the expected economically reasonable working life of the product.

3 Performance of the product and references to the methods used for its assessment

Table 1. Basic requirements for construction works and essential characteristics

Basic requirement and essential characteristics	Performance
BWR 2. Safety in case of fire	
Reaction to fire	Clause 3.1
BWR 3. Hygiene, health and the environment	
Biological resistance	Clause 3.2
BWR 5. Protection against noise	
Sound absorption	Clause 3.3
BWR 6. Energy economy and heat retention	
Thermal conductivity	Clause 3.4
Water vapour diffusion resistance	No performance assessed
Water absorption	No performance assessed
Corrosion developing capacity	Clause 3.5
Settlement / density	Clause 3.6
Critical moisture content	No performance assessed
Specific airflow resistivity	Clause 3.7
Hygroscopic sorption properties	No performance assessed

3.1 Reaction to fire

Reaction to fire of the product is classified according to Commission Delegated Regulation (EU) 2016/364 in connection with EN 13501-1.

End use application	Reaction to fire class
<ul style="list-style-type: none"> - Density 33 - 60 kg/m³ - Insulation layer thickness ≥ 200 mm - End use application without air gap - Substrates with minimum reaction to fire class A2-s3, d0 and gypsum board 	B-s2, d0

3.2 Biological resistance

Resistance to mould fungus of the product has been determined according to Annex B of EAD 040138-01-1201.

Characteristics	Performance
Biological resistance	Intensity of growth: 0

3.4 Sound absorption

Sound absorption of the product has been determined according to standards EN ISO 354 and EN ISO 11654.

Product density and thickness	Characteristics		
	Hz	α_p	α_w
- Density 34 kg/m ³ - Thickness 100 mm	125	0,30	1,00
	250	0,85	
	500	1,00	
	1000	1,00	
	2000	1,00	
	4000	1,00	

3.5 Thermal conductivity

Thermal conductivity of the product has been determined according to Annex A of EAD 040138-01-1201. Results apply to Termex, StopCO2 Isonem and Professional Cellulose Insulation in density range 33 - 60 kg/m³.

Characteristics		Performance	
		Density 33 – 46 kg/m ³	Density 46 – 60 kg/m ³
Lambda fractile value at 10 °C, at dry conditions	$\lambda_{10,dry,90/90}$	0,0374 W/(m K)	0,0379 W/(m K)
Lambda declared at 23 °C and 50 % RH	$\lambda_{D(23,50)}$	0,038 W/(m K)	0,039 W/(m K)
Moisture content at 23 °C and 50 % RH	$u_{23,50}$	0,082 kg/kg	0,055 kg/kg
Moisture content at 23 °C and 80 % RH	$u_{23,80}$	0,141 kg/kg	0,103 kg/kg
Mass-related moisture conversion coefficient	f_{u1}	0,177 kg/kg	0,305 kg/kg
Mass-related moisture conversion coefficient to high moisture content	f_{u2}	0,213 kg/kg	0,465 kg/kg
Moisture conversion factor dry-23/50	F_{m1}	1,015	1,017
Moisture conversion factor 23/50-23/80	F_{m2}	1,013	1,022

3.6 Corrosion developing capacity

Corrosion developing capacity of the product has been tested according to EN 15101-1, Annex E.

Product	Performance
Dry installed insulation	Class CR

3.7 Settlement / density

Settlement / density of the product has been determined according to EAD 040138-01-1201 clause 2.2.8.

End use application	Performance	Minimum density	Maximum thickness
Dry installed insulation:			
Settling of loose fill insulation applied in ceilings, s_v	8 %	33 kg/m ³	325 mm
Settling of loose fill insulation applied in cavities of walls and between rafters, s_d	SC 0	49 kg/m ³ 46 kg/m ³	100 mm 240 mm
Insulation installed with PVA binding agent:			
Settling of loose fill insulation applied in cavities of walls and between rafters, s_d	SC 0	33 kg/m ³ 41 kg/m ³	100 mm 240 mm

3.8 Specific airflow resistivity

Specific airflow resistivity of the product has been tested according to EN 29053, method A.

Product density	Performance
Dry installed insulation:	
33 kg/m ³	3 kPa s/m ²
55 kg/m ³	26 kPa s/m ²
Insulation installed with PVA binding agent:	
39 kg/m ³	10 kPa s/m ²

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the Decision 1999/91/EC of the European Commission, the system of assessment and verification of constancy of performance is: System 3.

In addition, according to Decision 1999/454/EC, amended by Decision 2001/596/EC of the European Commission the system of assessment and verification of constancy of performance, with regard to reaction to fire class B, is: System 1.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Eurofins Expert Services Oy.

Issued in Espoo on 04/03/2021
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