



CPC BELGELENDİRME MUAYENE
VE DENEY HİZMETLERİ TİC. LTD.
ŞTİ.
Çamlıca Mah. (Timko Eti) Anadolu Blv.
No:20-R Blok No:4
Yenimahalle/Ankara
www.cpcert.org



Member of
www.eota.eu

European Technical Assessment

ETA-21/0462
of 06.07.2021

General Part

Technical Assessment Body issuing the European Technical Assessment:
CPC BELGELENDİRME MUAYENE VE DENEY HİZMETLERİ TİC. LTD. ŞTİ.

**Trade name of the construction
product**

ECI “ECOLOGICAL CELLULOSE INSULATION”

**Product family to which the
construction product belongs**

Thermal insulation material made of loose, free
cellulose fibres

Manufacturer

MEK İNŞAAT SANAYİ VE TİCARET A.Ş.

Manufacturing plant(s)

Akhisar Organize Sanayi Bölgesi 12. Cad. No:3
Akhisar

**This European Technical
Assessment contains**

4 pages

**This European Technical
Assessment is issued in accordance
with Regulation (EU) No 305/2011,
on the basis of**

EAD 040138-01-1201 “In-situ formed loose fill
thermal and/or acoustic insulation products made of
vegetable fibres”, edition 2018

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es) referred to above). However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.

1. Technical description of the product

The European Technical Assessment applies to thermal insulation products made of loose, free cellulose fibres, with the designations “ECI” or “ECOLOGICAL CELLULOSE INSULATION”.

The cellulose fibres (hereinafter referred to as thermal insulation product) are produced from selected paper by mechanical grinding with the addition of flame-retardant proofing agents. The thermal insulation product serves for the production of thermal insulation layers by means of machine processing at the place of use. The European Technical Assessment does not apply for a manual processing application of the thermal insulation products.

The European Technical Assessment has been issued for the products based on agreed data/information, deposited with the CPC, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

The product “ECI” or “ECOLOGICAL CELLULOSE INSULATION” is made from selected paper by mechanical grinding. During the manufacturing process, aluminium sulphate or boric acid-borax mixture are added as flame retardant. The composition of the adjuvants (nature and content) is the subject of a technical sheet deposited at CPC.

The production unit comprises a receiving belt supplying raw materials to a first fragmentation station where they are grinded. The pieces obtained pass one metal detector and arrive at a second grinding station which transforms them into fibres. The adjuvants are dosed and incorporated continuously on this second station. On leaving the machine, the material is weighed, bagged, marked, palletized, then filmed.

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

The thermal insulation product made of cellulose fibres is used as non-loadable insulating material. For intended uses in vertical, sloped, or horizontal cavities or where horizontal exposed areas are covered.

Depending on the intended application, the product must be installed with a density between 33 and 60 kg/m³.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the thermal insulation products of at least 50 years.

The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

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

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
-Density: 40 kg/m ³ -Insulation Layer Thickness: ≤50 mm -End use application: with or without gap -Substrates with minimum reaction to fire class A2-s1,d0 or more	B-s2,d0

3.2 Sound Absorption

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

Product thickness and density	Performance		
	Hz	α_p	α_w
-Density: 40 kg/m ³ -Insulation Layer Thickness: ≤50 mm	125	0,16	0,70
	250	0,41	
	500	0,88	
	1000	0,99	
	2000	1,01	
	4000	1,11	

3.3 Thermal conductivity

Thermal conductivity of the product has been determined according to Annex A of EAD 040138-01-1201.

Characteristics		Performance
		Density 33-60 kg/m ³
Lambda fractile value at 10°C, at dry conditions	$\lambda_{10,dry,90/90}$	0,0390
Lambda declared at 23°C and 50 % RH	$\lambda_{D(23/50)}$	0,0434
Moisture Conversion Factor dry-23/50	Fm1	1,05
Moisture Conversion Factor 23/50-23/80	Fm2	1,06

3.4 Water vapour diffusion resistance

The water vapour resistance of “ECI “ECOLOGICAL CELLULOSE INSULATION” is assessed according to EN 12086:2013 climate condition C.

The mean water vapour diffusion resistance (μ) factor is 2,6.

3.5 Water absorption

The determination of short term water absorption by partial immersion shall be carried out according to EN 1609 method A.

The water absorption in kg/m² is 13,88.

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

In accordance with the European Technical Assessment (EAD) (040138-01-1201) “In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres”, 2018, the applicable European legal act is: Decision 1999/91/EC.

The system to be applied is: 3.

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 with CPC

Issued in Ankara on 06.07.2021

By
Uğur GEDİK