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Designated according to Article 29 of Regulation (EU) No 305/2011

Member of EOTA
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European Technical Assessment

ETA 18/0656
of 20/11/2018

English version prepared by ITeCons

General Part

Technical Assessment Body issuing the ETA: ITeCons - Instituto de Investigação e Desenvolvimento Tecnológico para a Construção, Energia, Ambiente e Sustentabilidade	
Trade name of the construction product	CDM-MTX-25/7
Product family to which the construction product belongs	Polyurethane foam mat to be used for impact sound insulation Product area code: 4
Manufacturer	CDM NV Reutenbeek 9- 11 BE-3090 Overijse Belgium www.cdm.eu
Manufacturing plant(s)	Reutenbeek 9- 11 BE-3090 Overijse Belgium
This European Technical Assessment contains	6 pages
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	The European Assessment Document (EAD) 040049-00-0502 “Polyurethane (PU) foam mat to be used for impact sound insulation".

Corrigendum

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.

Specific parts

1. Technical description of the product

This European Technical Assessment applies to polyurethane foam mats to be installed under floating screeds on solid slabs without contact to soil, ground- and surface water. The assessed product, CDM-MTX-25/7, is a mixture of yellow PU foam and black cellular rubber bonded with PU binder. The mats have one profiled surface and one flat surface.

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

2.1 Intended use

The polyurethane foam mats CDM-MTX-25/7 are used for the improvement of impact sound insulation of floors and are installed under floating screeds on solid slabs.

The assessment of the product only applies when the product is used only inside buildings in structures where it is protected from wetting and weathering.

The mats are loose-laid on the sufficiently flat solid floor slab. If necessary, unevenness are even out. The mats are protected by a suitable foil or the joints between the mats are covered with a suitable adhesive tape before the screed will be built in. The screed above the insulation have at least the mass per unit area given in this ETA.

The mat joints are closely installed. Cross joints are avoided. The mats are fixed using a suitable adhesive tape to ensure that no gaps occur. Appropriate insulating edge strips are used on rising walls in order to avoid sonic bridges.

As to the application of the PU-foam-mat, the respective national regulations shall be observed in addition.

2.2 Working life/Durability

The provisions made in this European Technical Assessment (ETA) are based on an assumed intended working life of at least 25 years when installed in the works, provided that the PU-foam-mat is subject to appropriate installation. These provisions are based upon the current state of the art and the available knowledge and experience. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer or the Technical Assessment Body, but should only be regarded only as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the product.

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

The assessment for the intended use of polyurethane foam mat to be used for impact sound insulation was performed according with the EAD 040049-00-0502 “Polyurethane (PU) foam mat to be used for impact sound insulation”.

3.1. Mechanical resistance and stability (BW1)

Not relevant.

3.2 Safety in case of fire (BW2)

3.2.1 Reaction to fire

The reaction to fire was tested according to ISO 11925-2:2010, ISO 11925-2:2010/Cor1:2011 and classified according to EN 13501-1:2007+A1:2009. The CDM-MTX-25/7 polyurethane foam mats meet the requirements of class E.

3.3 Hygiene, health and environment (BW3)

3.3.1 Content, emission and/or release of dangerous substances

NPD.

3.4 Safety in use (BW4)

Not relevant.

3.5 Protection against noise (BWR 5)

3.5.1 Dynamic stiffness

The dynamic stiffness was tested according to ISO 9052-1:1989 and ISO 7626-5:1994. The mean value of the apparent dynamic stiffness S'_t is 8 MN/m^3.

3.5.2 Impact sound reduction

The impact sound reduction ΔL by floor coverings was tested according to ISO 10140-1:2016, ISO 10140-3:2010, ISO 10140-3:2010/Amd.1:2015, ISO 10140-4:2010 and ISO 717-2:2013. The assessed build up consisted in a floor covering composed by a concrete floating paving flag, with 70mm thickness and about 190kg/m^2 of mass per unit area, and a resilient layer (CDM-MTX-25/7), over a reinforced concrete slab of thickness 140mm.

Table 1: Impact sound reduction

Assessed build up	Impact sound reduction
Screed: concrete floating paving flag with 70mm thickness Resilient layer: CDM-MTX-25/7 Base: reinforced concrete slab of thickness 140mm	$\Delta L_w \geq 32$ dB

3.5.3 Geometry

3.5.3.1 Length and width of thermal insulating products

The length and width of the polyurethane foam mat were tested according to EN 822:2013.

Table 2: Length and width

Product	Geometry	
	Length (mm)	With (mm)
CDM-MTX-25/7	5000	1250
Dimensional deviation *(acc. to EN 16069:2012+A1:2015)*:	L2	W4

3.5.3.2 Squareness

The test results presented were determined using the test procedure according to the standard EN 824:2013.

Table 3: Squareness

Product	Geometry
	Squareness, S_b (mm/m)
CDM-MTX-25/7	≤ 5

3.5.4 Thickness and compressibility

The tests were performed according to the standard EN 12431:2013.

Table 4: Thickness and compressibility

Product	Thickness (mm)	Compressibility, c
CDM-MTX-25/7	25.0	2.0

3.5.5 Mass per unit area or density

The mass per unit area was determined according to EN 1602:2013.

Table 5: Mass per unit area

Product	Mass per unit area (kg/m^2)
CDM-MTX-25/7	6.73

3.5.6 Compressive creep

The compressive creep was tested according to the procedure described in the standard EN 1606: 2013.

Table 6: Compressive creep

Product	Test load (kPa)	Relative deformation, ε (%)	Thickness reduction, X_t (mm)
CDM-MTX-25/7	5	7.3	1.87
	8	10.6	2.68
	10	13.6	3.37

3.5.7 Compressive strength

The compressive strength was determined according to EN 826:2013.

Table 7: Compressive strength

Product	Compressive stress at 10 % deformation, $\sigma_{10\%}$ (kPa)
CDM-MTX-25/7	≥ 6

3.5.8 Deformation under specified load and temperature

NPD.

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

According to the Decision of the Commission 2000/273/EC as amended by Decision of the Commission 2001/596/EC, the system 3 of assessment and verification of constancy of performance (see Annex V and Article 65 Paragraph 2 to Regulation (EU) No 305/2011) shall be applied.

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

The ETA is issued on the basis of agreed data/information, deposited at ITeCons, which identifies the product that has been assessed and judged. It is the manufacturer's responsibility to make sure that all those who use the product are appropriately informed of specific conditions laid down in this ETA.

Changes to the assessed product or its production process should be notified to the ITeCons before the changes are introduced. ITeCons will decide whether or not such changes affect the ETA and if so whether further assessment or alterations to the ETA shall be necessary.

Issued in Coimbra, Portugal on 20.11.2018

By

Technical Assessment Unit of

ITeCons – Instituto de Investigação e Desenvolvimento Tecnológico para a Construção, Energia, Ambiente e Sustentabilidade

(António Tadeu, President of the Board)