

MULTIPOR

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Approval body for construction products
and types of construction

Bautechnisches Prüfamt

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General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Multipor Minerale Dämmplatte 042
Multipor Minerale Dämmplatte 045
Multipor Minerale Dämmplatte 047

Product family
to which the construction product belongs

Thermal insulating board made of mineral material

Manufacturer

Xella Deutschland GmbH
Werksweg 2
92551 Stulln
DEUTSCHLAND

Manufacturing plant

WERK 1, Deutschland
WERK 2, Deutschland
WERK 3, Deutschland
WERK 4, Bulgarien
WERK 5, Österreich

This European Technical Assessment
contains

7 pages which form an integral part of this assessment

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

EAD 040012-00-1201

This version replaces

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Specific Part

1 Technical description of the product

This European Technical Assessment applies to the thermal insulating boards made of mineral material with the designations "Multipor Mineraldämmplatte 042", "Multipor Mineraldämmplatte 045" and "Multipor Mineraldämmplatte 047".

The thermal insulating boards are manufactured of quartz powder, calcium hydrate, cement and aggregates by adding of aluminium as a pore forming agent and are high-pressure steam cured (autoclaved).

The thermal insulating boards are produced of different compositions and densities. Depending on composition and density the boards have a compressive strength of at least 200 kPa in conjunction with a declared value of thermal conductivity of $\lambda_{D23/50} = 0.040 \text{ W/(m}\cdot\text{K)}$, a compressive strength of at least 300 kPa in conjunction with a declared value of thermal conductivity of $\lambda_{D23/50} = 0.043 \text{ W/(m}\cdot\text{K)}$ or a compressive strength of at least 350 kPa in conjunction with a declared value of thermal conductivity of $\lambda_{D23/50} = 0.045 \text{ W/(m}\cdot\text{K)}$.

The surface of the thermal insulating boards can also be provided in the factory with a priming coat ("XELLA Grundierung") on both sides.

The boards are made with the following dimensions:

Nominal thicknesses:	20 mm to 300 mm
Nominal lengths:	350 mm to 1000 mm
Nominal widths:	200 mm to 750 mm

The thermal insulating boards can show a gradient of up to 9° in longitudinal direction.

The European Technical Assessment has been issued for the products on the basis of agreed data/ information, deposited with Deutsches Institut für Bautechnik, which identifies the products that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

2 Specification of the intended use in accordance with the applicable European assessment Document

The thermal insulating boards can be used for the following intended uses:

Area of application for walls

- External insulation of walls
- Internal insulation of walls (including added facing shells without substructure)
- Insulation of cavity walls (two-leaf walls), core insulation
- Cavity insulation in walls, insulation of timber frame and wood panel construction

Area of application for pitched roofs/flat roofs

- External insulation of the roof below the roofing and below waterproofing
- Insulation between rafters

Area of application for floors/ceilings

- Internal insulation of ceilings (e.g. ceiling insulation in cellars and underground parking garages)
- Internal insulation of floors or bedplates (on the top) below screeds

The performance according to section 3 only applies if the insulation materials are installed according to the manufacture's installation instructions and if they are protected from precipitation, wetting or weathering in built-in state and during transport, storage and installation.

This European technical assessment does not cover the use of the thermal insulating boards in thermal insulation systems. In this regard separate European technical assessments are necessary for certain intended uses (e.g. in the case of a use in external thermal insulation composite systems).

Where the thermal insulation boards are fixed by using adhesives and/or anchors, only such adhesions or anchors shall be used, which are suitable for this purpose. The assessment of these fixings is not subject of this European Technical Assessment.

As to the application of the insulation product, the respective national regulations shall be additionally observed.

The design value of the thermal conductivity shall be laid down according to relevant national provisions.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the thermal insulating boards 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

For sampling, conditioning and testing the provisions of the EAD No 040012-00-1201, "Thermal insulation board made of mineral material" apply.

3.1 Mechanical resistance and stability (BWR 1)

Not applicable

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire: Test acc. to EN ISO 1182:2010 und EN ISO 1716:2010	Class A1 accordance to EN 13501-1: 2007+A1:2009

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content and/or release of dangerous substances:	The construction product does not contain or release dangerous substances according to EOTA TR 034 (version October 2014).
Water vapour diffusion resistance coefficient: Test acc. to EN 12086:2013, climate condition A, Conditioning: 23 °C / 50 % rel. humidity to constant mass	
Multipor Mineraldämmplatten 042	$\mu = 2$
Multipor Mineraldämmplatten 045, Multipor Mineraldämmplatten 047	$\mu = 3$

3.4 Safety and accessibility (BWR 4)

Not applicable

3.5 Protection against noise (BWR 5)

Essential characteristic	Performance
Sound absorption:	No performance assessed

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal conductivity: at a reference temperature of 10 °C Test acc. EN 12667:2001	Declared values for a moisture content of the insulating boards at 23 °C/50 % relative humidity
Multipor Mineraldämmplatte 042	$\lambda_{D23/50} = 0.040 \text{ W/(m} \cdot \text{K)}^*$
Multipor Mineraldämmplatte 045	$\lambda_{D23/50} = 0.043 \text{ W/(m} \cdot \text{K)}^*$
Multipor Mineraldämmplatte 047	$\lambda_{D23/50} = 0.045 \text{ W/(m} \cdot \text{K)}^*$
Conversion of humidity accordance to EN ISO 10456: 2007 + AC:2009	
mass-related moisture content at 23 °C/50 % rel. humidity	$u_{23/50} = 0.028 \text{ kg/kg}$
mass-related moisture content at 23 °C/80 % rel. humidity	$u_{23/80} = 0.032 \text{ kg/kg}$
mass-related moisture conversion coefficient: (dry to 23 °C/50 % rel. humidity)	$f_{u1} = 0.42$
mass-related moisture conversion coefficient: (23 °C/50 % to 23 °C/80 % rel. humidity)	$f_{u2} = 1.98$
Moisture conversion factor (dry to 23 °C/50 % rel. humidity)	$F_{m1} = 1.012$
Moisture conversion factor (23 °C/50 % to 23 °C/80 % rel. humidity)	$F_{m2} = 1.01$
Dimensional deviations (individual values):	maximum deviation:
Length and width: Test acc. EN 822:2013	$\pm 2 \text{ mm}$ Class L(2) and W(2) acc. EN 13163:2012+A2:2016
Thickness: Test acc. EN 823:2013 (with a load of 250 Pa)	$\pm 2 \text{ mm}$
Squareness in direction of length and width: Test acc. EN 824:2013	$S_b \leq 4 \text{ mm/m}$
Flatness: Test acc. EN 825:2013	$S_{\max} \leq 2 \text{ mm}$

* The declared value is representative for at least 90 % of the production with a confidence level of 90 % and applies to the above-named density range. For the admissible deviation of an individual value of the thermal conductivity from the declared value the method described in EN 13172:2012, Annex F, applies.

Water absorbtion (individual values): Test acc. EN 1609:2013, Method B Conditioning: 40 °C to constant mass	$\leq 2 \text{ kg/m}^2$
Test acc. EN 12087:2013, Method 1B Conditioning: 40 °C to constant mass	$\leq 3 \text{ kg/m}^2$
Density: Test acc. to EN 1602:2013 Conditioning: 105 °C to constant mass	Density range (each individual value):
Multipor Mineraldämmplatte 042	$85 \text{ kg/m}^3 - 95 \text{ kg/m}^3$
Multipor Mineraldämmplatte 045, Multipor Mineraldämmplatte 047	$100 \text{ kg/m}^3 - 115 \text{ kg/m}^3$
Bending strength (individual value): Test acc. to EN 12089:2013, Method B Conditioning: 40 °C to constant mass	
Multipor Mineraldämmplatte 042	No performance assessed
Multipor Mineraldämmplatte 045, Multipor Mineraldämmplatte 047	$\geq 80 \text{ kPa}$
Compressive strength : Test acc. to EN 826:2013 Conditioning: 40 °C to constant mass	Mean value of the compressive strength Individual values may fall below these values up to 10 %.
Multipor Mineraldämmplatte 042	$\geq 200 \text{ kPa}$
Multipor Mineraldämmplatte 045	$\geq 300 \text{ kPa}$
Multipor Mineraldämmplatte 047	$\geq 350 \text{ kPa}$
Dimensional stability at specified temperature Test acc. to EN 1604:2013 Conditioning: 48 h, bei $(70 \pm 2) ^\circ\text{C}$	Relative changes in length, width and thickness: $\text{max } \pm 0.5 \%$
Dimensional stability at specified temperature and humidity Test acc. to EN 1604:2013 Conditioning: 48 h, $(23 \pm 2) ^\circ\text{C}$, $(90 \pm 5) \%$ relative humidity	Relative changes in length, width and thickness: $\text{max } \pm 0.5 \%$
Tensile strength perpendicular to faces (individual value): Test acc. to EN 1607:2013 Conditioning: 40 °C to constant mass	
Multipor Mineraldämmplatte 042	No performance assessed
Multipor Mineraldämmplatte 045, Multipor Mineraldämmplatte 047	$\geq 80 \text{ kPa}$
Point load: Test acc. to EN 12430:2013 Conditioning: 40 °C to constant mass	Deformation under a point load of 1000 N
Multipor Mineraldämmplatte 042	No performance assessed
Multipor Mineraldämmplatte 045, Multipor Mineraldämmplatte 047	$\leq 1.0 \text{ mm}$ PL(P)1 acc. EN 13167:2012+A1:2015

3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

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

According to Decision of the Commission 1999/91/EC as amended by Decision of the Commission 2001/596/EC, the systems 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 according to the following table:

Product	Intended use	System
Multipor Minerale Dämmplatte 042 Multipor Minerale Dämmplatte 045 Multipor Minerale Dämmplatte 047	All	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 at Deutsches Institut für Bautechnik.

Issued in Berlin on 7 June 2018 by Deutsches Institut für Bautechnik

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Head of Department

beglaubigt:
Stopp