Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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European Technical Assessment ETA-25/0094 of 6 March 2025

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Pura Core
Product family to which the construction product belongs	Thermal insulating board made of mineral material
Manufacturer	redstone GmbH & Co. KG Haferwende 1 28357 Bremen GERMANY
Manufacturing plant	Plant 6, plant 7
This European Technical Assessment contains	6 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	040012-00-1201

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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 designation "Pura Core".

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 have a compressive strength of at least 300 kPa in conjunction with a declared value of thermal conductivity of $\lambda_{D23/50}$ = 0.043 W/(m·K).

The surface of the thermal insulating boards can also be provided in the factory with a priming coat 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

- Internal insulation of walls (including added facing shells without substructure)

Area of application for floors/ceilings

- Insulation of ceilings (e. g. ceiling insulation in cellars and underground parking garages as well as insulation at the bottom of ceilings in external area)
- Internal insulation of floors or bedplates (on the top) below screeds

The thermal insulating boards are intended for the use below waterproofing in case of high compressive loads.

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 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire: Test acc. to EN ISO 1182:2020 and EN ISO 1716:2018	Class A1 accordance to EN 13501-1:2018

3.2 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	$\mu = 3$

3.3 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 [1]
	$\lambda_{D23/50}$ = 0.043 W/(m ·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 kg/kg
mass-related moisture content at 23 °C/80 % rel. humidity	$u_{23/80}$ = 0.032 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 % relativ humidity)	f_{u2} = 1.98

[1] 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.

Essential characteristic	Performance
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 ISO 29465:2022	± 2 mm Class L(2) and W(2) acc. EN 13163:2012+A2:2016
Thickness: Test acc. EN ISO 29466:2022 (with a load of 250 Pa)	± 2 mm
Squareness in direction of length and width: Test acc. EN 824:2013	S_b ≤ 4 mm/m
Flatness: Test acc. EN ISO 29468:2022	S_{max} ≤ 2 mm
Water absorption (individual values): Test acc. EN ISO 29767:2019, Method B Conditioning: 40 °C to constant mass	≤ 2 kg/m²
Test acc. EN ISO 16535:2019, Method 1B Conditioning: 40 °C to constant mass	≤ 3 kg/m²
Density: Test acc. to EN ISO 29470:2020 Conditioning: 105 °C to constant mass	Density range (each individual value): 100 kg/m³ - 115 kg/m³
Bending strength (individual value): Test acc. to EN 12089:2013, Method B Conditioning: 40 °C to constant mass	≥ 80 kPa
Compressive strength : Test acc. to EN ISO 29469:2022 Conditioning: 40 °C to constant mass	Mean value of the compressive strength Individual values may fall below these values up to 10 %. ≥ 300 kPa
Dimensional stability at specified temperature Test acc. to EN 1604:2013 Conditioning: 48 h, bei (70 ± 2) °C	Relative changes in length, width and thickness: max ± 0.5 %
Dimensional stability at specified temperature and humidity Test acc. to EN 1604:2013 Conditioning: 48 h, (23 ± 2) °C, (90 ± 5) % relative humidity	Relative changes in length, width and thickness: max ± 0.5 %
Tensile strength perpendicular to faces (individual value): Test acc. to EN 1607:2013 Conditioning: 40 °C to constant mass	≥ 80 kPa

Essential characteristic	Performance
Point load: Test acc. to EN 12430:2013 Conditioning: 40 °C to constant mass	Deformation under a point load of 1000 N ≤ 1.0 mm PL(P)1 acc. EN 13167:2012+A1:2015

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

In accordance with EAD No. 040012-00-1201, the applicable European legal act is: 1999/91/EC.

The system to be applied is: System 3

In addition, with regard to reaction to fire, the system to be applied 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 with Deutsches Institut für Bautechnik.

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