

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-22/0311
of 6 September 2022

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

"Pureflex"

Product family
to which the construction product belongs

Thermal insulation board made of silica-based aerogel on
a carrier material

Manufacturer

Agitec AG
Langwiesenstraße 6
8108 DÄLLIKON
SCHWEIZ

Manufacturing plant

Nano Tech Co., Ltd.
No.9 Baichuan Road
Binhai New Area in Shaoxing city of Zhejiang Province
China

This European Technical Assessment
contains

5 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 041669-00-1201

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Specific part

1 Technical description of the product

This European Technical Assessment applies to the factory-made thermal insulation boards made of silica-based aerogel on a carrier material with the designation "Pureflex" hereafter referred to as thermal insulation boards.

To produce "Pureflex" the silica-based aerogel (approx. 3% silicate and 97% air pores) is applied to a polyurethane carrier material during the manufacturing process. The finished PU-foam (as the carrier material) is impregnated with the raw materials of the aerogel and then brought into a supercritical state. As the end product a mat with a thickness of approx. 10 mm is obtained.

The thermal insulation boards do not have facings or coatings and are manufactured in nominal thicknesses from 10 mm to 60 mm.

Thermal insulation boards with nominal thicknesses > 10 mm consist of individual layers of 10 mm each bonded with PU-adhesive.

The European Technical Assessment has been issued for the product on the basis of agreed data/ information, deposited with Deutsches Institut für Bautechnik, which identifies the product 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 (EAD)

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

- Internal insulation of ceilings (underside) or roofs and insulation below the rafters/supporting structure, suspended ceilings
- Internal insulation of floors or bedplates (on the top) below floor screed without requirements regarding protection against noise
- Internal insulation of walls
- Insulation of reveals of windows and niches

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

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 insulating dry screed system 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 041669-00-1201 "Thermal insulation board made of silica- or polyurethane-aerogel on a carrier material".

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire test acc. to EN ISO 11925-2:2020	Class E acc. to EN 13501-1:2018
Propensity to undergo continuous smouldering	No performance assessed

3.2 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Compressive stress at 10 % deformation test acc. to EN 823:2013	$\sigma_{10} \geq 50$ kPa
Deformation under a specified compressive load of 20 kPa and a temperature of 80 °C	No performance assessed
Tensile strength perpendicular to faces test acc. to EN 1607:2013	$\sigma_{mt} \geq 60$ kPa
Thermal conductivity at a reference temperature of 10 °C test acc. to EN 12667:2001	Declared value of the thermal insulation after ageing: $\lambda_{10,dry,90/90} = 0,017$ W/(m · K) $\lambda_D = 0,018$ W/(m · K)
Geometrical properties	
length, width	No performance assessed
thickness test acc. to EN 823:2013 (with a load of 50 Pa \pm 1,5 Pa)	$d_N = 10$ mm to 60 mm tolerance: $\pm 1,5$ mm
Squareness in direction of length and width in direction of thickness	No performance assessed
Flatness in direction of length and width	No performance assessed
Density test acc. to EN 1602:2013	120 kg/m ³ to 140 kg/m ³
Dimensional stability at 70 °C and 90% relative humidity	No performance assessed
Water absorption at short term partial immersion test acc. to EN ISO 29767:2019, Verfahren A	$W_p \leq 0,55$ kg/m ²
Water absorption at long term partial immersion	No performance assessed
Water vapour diffusion resistance factor test acc. to EN 12086:2013, climatic condition A	$\mu = 6$

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

In accordance with the European Assessment Document EAD No 041669-00-1201 "Thermal insulation board made of silica- or polyurethane-aerogel on a carrier material" the legal basis is: 1999/91/EC, amended by 2001/596/EC.

The system to be applied is: System 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.

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beglaubigt:
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