Deutsches Institut für Bautechnik

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Bautechnisches Prüfamt

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European Technical Assessment ETA-19/0192 of 29 November 2019

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General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	illbruck Konstruktionswerkstoff, illbruck PR007 Fenstermontage-Zarge, illbruck PR011 Fenstermontage-Platte, illbruck PR010 Fenstermontage-Winkel, illbruck Unterbauprofile
Product family to which the construction product belongs	thermal insulation board made of pressed rigid polyurethane foam
Manufacturer	tremco illbruck GmbH Werk Bodenwöhr Werner-Haepp-Straße 1 92439 Bodenwöhr DEUTSCHLAND
Manufacturing plant	Plant 1
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	EAD 040419-00-1201
This version replaces	ETA-19/0192 issued on 5 April 2019

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Specific part

1 Technical description of the product

This European Technical Assessment applies to the thermal insulation board made of pressed rigid polyurethane foam with smooth, rigid surfaces and without additional coating, with the following designations, hereinafter referred to as thermal insulation board.

- illbruck Vorwandmontage-System
- illbruck Konstruktionswerkstoff
- illbruck PR007 Fenstermontage-Zarge
- illbruck PR010 Fenstermontage- Winkel
- illbruck PR011 Fenstermontage-Platte
- illbruck Unterbauprofile

The polyurethane (PU) rigid foam is made of ground PU residual materials (milling and cutting waste) generated during production and free from impurities.

Residual materials resulting from the production of PU foam blocks and strips laminated with a mineral fleece or aluminium are used for the thermal insulation boards.

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 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

The thermal insulation board is intended for use in buildings as follows:

- internal insulation of walls
- internal insulation of ceilings
- internal insulation of roofs

The performance according to section 3 only applies if the thermal insulation board is 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.

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 boards of at least 25 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 040419-00-1201 "Thermal insulation board made of pressed rigid polyurethane foam" 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 11925-2:2011	Class E [a)] acc. to EN 13501-1:2007 + A1:2009
a) The given classification is valid on substrates class A1 or A2-s1, d0 acc. to EN 13501-1, density ≥ 600 kg/m³ and thickness ≥ 12 mm, fixed mechanically and with adhesive.	

3.3 Hygiene, health and the environment (BWR 3)

Not applicable

3.4 Safety and accessibility in use (BWR 4)

Not applicable

3.5 Protection against noise (BWR 5)

Not applicable

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal conductivity test acc. to EN 12667:2001 20 mm < d ≤ 40 mm 40 mm < d ≤ 60 mm 60 mm < d ≤ 80 mm Conversion of humidity acc. to EN ISO 10456:2007 + AC:2009 mass-related moisture content at 23 °C/50 % rel. humidity mass-related moisture content at 23 °C/80 % rel. humidity mass-related moisture conversion coefficient moisture conversion factor (23 °C/ 50 % rel. humidity to 23 °C/ 80 % rel. humidity)	Declared value of the thermal conductivity [a)] $\lambda_{D\ (23/50)}$ = 0.083 W/(m·K) $\lambda_{D\ (23/50)}$ = 0.085 W/(m·K) $\lambda_{D\ (23/50)}$ = 0.088 W/(m·K) $u_{23/50}$ = 0.017 $u_{23/80}$ = 0.028 f_u = 2.86 $F_{m\ (23/50-23/80)}$ = 1.03
Compressive strength test acc. to EN 826:2013	≥ 7100 kPa
Water absorption test acc. to EN 1609:2013 (by short term, partial immersion)	W_p ≤ 0.5 kg/m²

Essential characteristic	Performance
Hygroscopic sorption properties test acc. to EN ISO 12571:2013 moisture absorption (desorption) at 23 °C/80 % rel. humidity	u ≤ 3.0 Mass-%
Water vapour diffusion resistance coefficient	μ = 8
Dimensional stability	No performance assessed
Tensile strength perpendicular to faces	No performance assessed
Density test acc. to EN 1602:2013	510 kg/m³ to 590 kg/m³
Nominal thickness test acc. to EN 823:2013 Deviation	20 mm to 80 mm ± 1 mm
Nominal length test acc. to EN 822:2013 Deviation	≤ 6000 mm ± 8 mm
Nominal width test acc. to EN 822:2013 Deviation	≤ 1350 mm ± 5 mm
Squareness test acc. to EN 824:2013 Deviation	 S_b ≤ 2 mm/m
Flatness test acc. to EN 825:2013 Deviation	 ≤ 2 mm
Bending strength	No performance assessed
Shear strength	No performance assessed
Deformation under specified compressive load and temperature conditions	No performance assessed
Compressive creep	No performance assessed
Flatness after one-sided wetting	No performance assessed
Water absorption (by long term immersion)	No performance assessed
a) Declared value of the thermal conductivity for a moisture content of the insulation material at 23 °C and 50 % relative humidity, representative for at least 90 % of the production with a confidence level of 90 %.	

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

In accordance with the European Assessment Document EAD No. 040419-00-1201 "Thermal insulation board made of pressed rigid polyurethane foam" the applicable European legal act is: 1999/91/EC.

The system to be applied is: 3

In addition, with regard to reaction to fire the applicable European legal act is: 2001/596/EC for products covered by this European Assessment Document.

The system to be applied is: System 1, 3 or 4

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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