

[Large, illegible blue ink scribble]

Building Research Institute
1 Filtrowa St., 00-611 Warsaw
Tel. 22 825 04 71; NIP [Tax ID No.] 525 000 93 58; KRS [National Court Register] 0000158785

[Handwritten signature]


1. TECHNICAL DESCRIPTION OF THE PRODUCT

This Technical Approval covers PERFEKT MATA [*PERFECT MAT*] mats, made from XPS - extruded polystyrene, manufactured by the company F.P.H.U. PLASTECHNOBUD Ewa Kuczmierczyk, Stara Wieś, 7 Działkowa St., 43-330 Wilamowice in the production plant in Wilamowice.

This National Technical Assessment covers PERFEKT MATA mats of the thickness:

- 2, 3, or 5 mm sheets 500 mm wide and 1.0 m long
- 2 mm, offered in rolls 1100 mm wide and 100 m long.

Mats may be offered in different width and lengths, subject to a prior arrangement to be made between the manufacturer and the customer.

Mats come in green or other colours in accordance with the manufacturer's colour palette. One surface is smooth, while the other is grooved. Mats 2 mm thick may be evenly perforated on the whole surface.

The technical properties of PERFEKT MATA products are shown in Annex A.

2. INTENDED APPLICATION OF THE PRODUCT

PERFEKT MATA mats are intended as underlayment to be laid directly under wood or wood-based flooring inside rooms, to the exclusion of wet rooms, in order to compensate for and level any minor unevenness of underlay surface.

PERFEKT MATA mats that are perforated over the whole surface may be applied in rooms with underfloor heating system, providing, however, that the temperature of the heating system does not exceed +40 °C.

Before laying mats any wet works in a room should be finished. The base surface should be clean, even, levelled (deviation from flatness should not exceed 3 mm/2 m) and cured until resistance parameters specified in a project are achieved. Mats 2 mm thick may be applied if local unevenness does not exceed 1 mm. Mats 3 mm and 5 mm thick may be applied in the case of local unevenness of up to 1.5 mm.

Before laying direct underlayment, the cement underlay should be isolated with vapour barrier 0.2 mm thick. Mats should be laid with grooved side facing downwards. They should be placed with a shift of 50 cm between adjacent rows and stabilised pointwise with self-adhesive paper tape. The direction of laying the mats should be perpendicular to the direction of installation of floor panels.

While installing flooring any mechanical mat damaging must be avoided. The flooring should be installed in such a way as to limit walking directly on the mats to the minimum (e.g. mats should be laid gradually, in line with advancement of flooring works. Mats supplied in rolls should be unwound a few hours before installation of flooring.



The stamp is circular and contains the text: "IZBA ARCHYTEKTÓW RZECZYPOSPOLITEJ POLSKIEJ" around the perimeter, "TUMIŃSKA 12/141/105" in the center, and "1270/05" below it. A blue ink signature is written over the stamp.

Mats covered by this National Technical Assessment should be applied in accordance with:

- technical documentation, prepared for a particular application, Polish standards as well as technical and building regulations, including in particular the regulation of the Minister of Infrastructure of 12 April 2002 on technical conditions to be met by buildings and their location (consolidated text: Official Journal of Laws of 2015 item 1422, as amended),
- provisions of this National Technical Assessment
- guidelines specified in the instructions for use, prepared by the Manufacturer and delivered to customers.

3. PRODUCT PERFORMANCE AND TEST METHODS USED IN ITS ASSESSMENT

Performance of PERFEKTA MATA mats and assessment method are shown in Table 1.

Table 1

No.	Essential characteristics	Performance	Assessment methods
1	2	3	4
1	Thickness, mm	2 ± 0.25 3 ± 0.25 5 ± 0.30	PN-EN 823:2013
2	Mass per unit area, g/sqm		PN-EN ISO 23997:2012
	- mat 2 mm thick	78 ± 5%	
	- mat 3 mm thick	79 ± 5%	
	- mat 5 mm thick	132 ± 5%	
3	Short-term water absorption after 24 hours, %	≤ 1.0	PN-EN 12087:2000 A1:2006 method A
4	Ability to compensate for pointwise unevenness (PC), mm	≥ 0.5	PN-EN ISO 868:2005 CEN/TS 16354:2013
5	Compressive stress, with strain 0.5 mm (CS), kPa	≥ 10	PN-EN 826:2013 CEN/TS 16354:2013
6*	Changes of linear dimensions, %, after 24 hrs, temperature +40°C in the direction of:	± 1.0≥	PN-EN 1604:2013
	- length		
	- width	± 1.0	
	- thickness	± 1.5	
7	Water vapour permeability – thickness of air layer equivalent to water vapour diffusion, S _D , m	0.65 ÷ 0.75	PN-EN 12086:2013

* relates to mats perforated on the whole surface, 2 mm thick

4. PACKAGING, TRANSPORT, STORAGE AND PRODUCT MARKING

PERFECT MATA products should be delivered in original packaging of the manufacturer, in a manner ensuring stability of technical parameters



PERFECT MATA products can be transported by any means of transport in a manner protecting packaging against mechanical damage, in accordance with the manufacturer's instructions.

PERFECT MATA products should be stored in dry, ventilated rooms, away from heating devices, in a manner ensuring safety of storage and stability of technical properties.

The method of labelling a construction product with construction product marking should be compliant with the Regulation of the Minister of Infrastructure and Construction of 17 November 2016 on the method of declaring conformity of performance of construction products and the method of labelling them with construction product marking (Official Journal of Laws of 2016, item 1966).

Construction product marking should be accompanied by the following information:

- the two last digits of the year in which the marking was affixed on the construction product for the first time,
- name and address of the manufacturer or its identification symbol allowing unambiguous determination of the manufacturer's name and address,
- name and designation of the construction product,
- number of the year of issue of the national technical assessment, on the basis of which product performance was declared (ITB-KOT-2018/0408, issue 1),
- number of the national declaration of performance,
- the level or class of declared performance,
- the website address of the manufacturer, providing that the national declaration of performance is made available thereon.

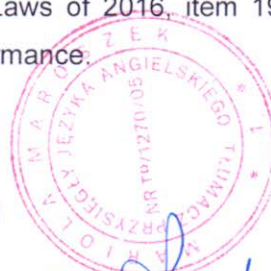
Along with the national declaration of performance, a safety data sheet and /or information on hazardous substances included in a construction product should be supplied or made available, as applicable, referred to in Article 31 or 33 of the Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency.

Furthermore, marking of a construction product, which is a hazardous mixture according to the REACH regulation, should be conformant with the requirements of the Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (CLP), amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006.

5. ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE

5.1. National system of assessment and verification of constancy of performance

Pursuant to the Regulation of the Minister of Infrastructure and Construction of 17 November 2016 on the method of declaring conformity of performance of construction products and the method of labelling them with construction product marking (Official Journal of Laws of 2016, item 1966), system 4 is applicable to assessment and verification of constancy of performance.



Janina Janot

5.2 Type testing

Performance assessed in point 3 constitutes type testing of the product, as long as no changes in raw materials, components, production line or production plant are implemented.

5.3. Factory production control

The manufacturer should have the factory production system implemented in its production plant. All the elements of that system, requirements and decisions adopted by the manufacturer should be documented on a regular basis in a form of written principles and procedures, including records of conducted tests. The factory production control should be adapted to the technology of production and ensure maintenance of declared performance of serial production products.

The factory production control includes specification and inspection of raw materials and components, control and testing in the production process and control testing of products (as per point 5.4), carried out by the manufacturer in accordance with the established test schedule and according to the principles and procedures set forth in the documentation of the factory production control.

The results of the control should be systematically recorded. The records should confirm that the products meet the criteria laid down for the assessment and verification of constancy of product performance. Particular products or batches of products and production details related thereto should be easily identifiable and reproducible.

5.4. Control tests

5.4.1 Test programme. The test programme includes:

- a) current testing,
- b) periodic testing.

5.4.2. Current Testing. Current testing includes checking:

- a) physical appearance,
- b) surface dimensions and thickness,
- c) straightness
- d) mass per unit area

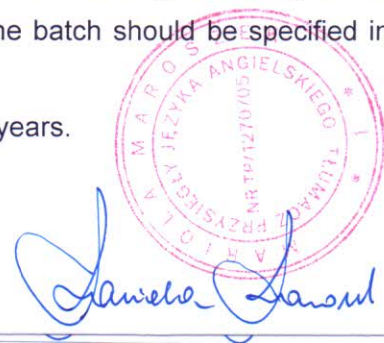
5.4.3. Periodic Testing. Periodic testing includes checking:

- a) water absorption
- b) ability to fill pointwise any unevenness (PC)
- c) compressive stress with strain 0.5 mm (CS)

5.5. Frequency of Testing

Current testing should be conducted in accordance with the arranged testing schedule, however, at least once for each batch of products. The size of the batch should be specified in the documentation of the factory production control.

Periodic testing should be performed at least once every 3 years.



6. INSTRUCTIONS

6.1. The National Technical Assessment ITB-KOT-2018/0408 issue 1 constitutes positive assessment of performance in respect of such essential characteristics of PERFEKT MATA mats from extruded polystyrene XPS, which, in accordance with their intended application resulting from the provisions hereof, affect compliance with essential requirements imposed on building objects, in which the product will be applied.

6.2. The National Technical Assessment ITB-KOT-2018/0408 issue 1 is not a document authorising labelling a construction product with construction product marking.

Pursuant to the Construction Products Act of 16 April 2004, as amended (consolidated text: Official Journal of Laws of 2016 item 1570), the products which this National Technical Assessment refers to, may be marketed or made available on the national market, provided that the manufacturer has conducted assessment and verification of performance, has issued a national declaration of performance in conformity with the National Technical Assessment ITB-KOT-2018/0408 issue 1 and has marked the products with a construction product marking, in compliance with the applicable regulations.

6.3. This National Technical Assessment ITB-KOT-2018/0408 issue 1 does not infringe any rights resulting from the provisions related to the protection of industrial property, and in particular, the Industrial Property Law Act of 30 June 2000 (consolidated text: Official Journal of Laws of 2013 item 1410 as amended). Ensuring that these rights are respected is a responsibility of the users of this National Technical Assessment issued by the ITB.

6.4. Issuance of this National Technical Assessment by the ITB shall not be deemed that the Building Research Institute takes any liability for any possible infringements of exclusive or acquired rights.

6.5. The National Technical Assessment does not exempt the manufacturer from liability for proper quality of products, neither does it exempt contractors of building works from liability for proper application of such products.

6.6. The validity of the National Technical Assessment may be extended for further periods of time, however, not longer than 5 years.

7. A LIST OF DOCUMENTS USED IN PROCEEDINGS

7.1. Reports, test reports, assessments, classifications

- 1) Test Report No. LZM01—00633/17/Z00NZM on PERFEKT MATA products from XPS polystyrene, Department of Building Materials Engineering at the Building Research Institute.
- 2) Test Report No. LZM02-00633/17/Z00NZM/B on PERFEKT MATA products from XPS polystyrene, Department of Building Materials Engineering at the Building Research Institute.



Janisław Jankowski

7.2. Reference to standards and documents

PN-EN 822:2013	<i>Thermal insulating products for building applications. Determination of length and width</i>
PN-EN 823:2013	<i>Thermal insulating products for building applications. Determination of thickness</i>
PN-EN 824:2013	<i>Thermal insulating products for building applications. Determination of squareness</i>
PN-EN 1604:2013	<i>Thermal insulating products for building applications. Determination of dimensional stability under specified temperature and humidity conditions</i>
PN-EN 12087:2000 +A1:2006	<i>Thermal insulating products for building applications. Determination of long-term water absorption by immersion</i>
PN-EN 14499:2006 Annex A	<i>Textile floor coverings. Minimum requirements for carpet underlays</i>
PN –EN ISO 23997:2012	<i>Resilient floor coverings. Determination of mass per unit area</i>
PN-EN 12086:2013	<i>Thermal insulating products for building applications. Determination of water vapour transmission properties</i>
CEN/TS 16354:2013	<i>Laminate floor coverings – Underlays – Specification, requirements and test methods</i>
AT-15-8968/2012	<i>PERFEKT MATA products from extruded polystyrene (XPS)</i>



ANNEX A

Table A1. Identification features of PERFEKT MATA mats

No.	Identification features	Requirements	Test methods
1	2	3	4
1	Physical appearance	Grooved bottom surface, smooth upper surface, free of mechanical damage, swellings and foreign matter inclusions, colour as per the manufacturer's colour palette	visual assessment
2	Dimensional deviations, mm: - width - length (relates only to mats in sheets)	± 2.0 ± 2.0	PN-EN 823:2013
3	Straightness – allowable straightness deviation, mm/m	≤ 2	PN-EN 824:2013

I, the undersigned Mariola Maroszek, Duly Sworn Translator of the English Language, appointed by the Minister of Justice by virtue of the letter No DO-V-0191-1236/05 of 14 July 2005 and entered in the Register of Sworn Translators under the No. TP/1270/05, hereby certify that the above text is a true and complete translation of the original document submitted to me in the Polish language.

Witness my hand this eighteenth day of May
two thousand and eighteen /18.05.2018/.

Bielsko-Biała, Reg. No. 484 / 2018

Fee collected pursuant to the Regulation of the Minister of Justice of 24 January 2005. (Official Journal of Laws No. 15 of 2005, entry 131, § 2 item 2 point 1a).

SWORN TRANSLATOR
OF THE ENGLISH LANGUAGE
Mariola Maroszek, MA
12/14 Matusiaka St.
43-316 Bielsko-Biała
Tel. +48 33 8186119
TIN: 547-004-56-81;
Regon: 070053335

