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TECHNICAL APPROVAL ITB

AT-15-9805/2016

Pursuant to the Ordinance of the Minister of Infrastructure of 8th November 2004
on technical approvals and bodies authorised to grant them (Dz. U. No. 249 of
2004, item 2497), in a result of approval procedure carried out in the Building
Research Institute in Warsaw upon application of the company:-----
IZOTECHNIKA Sp. z o.o., ul. Limanowskiego 53, 47-300 Krapkowice-----
fitness for use in the construction industry of the products named:-----
Set of products for preparing building external wall thermal insulation with a use of
IZOFLEX WM system -----
is confirmed here-----

** All Translator remarks in italics.*

I, Paweł Bujak, as a Sworn Translator for English language, included in a Minister of Justice Registry with a number TP/2506/06, hereby testify that the translation above agrees with the submitted document issued in Polish.

Bytom, 16 April 2018

Reg. No. 0616/2018

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in a scope and pursuant to the rules specified in the Annex, which is an integral part of this Technical Approval ITB.-----

Valid till: 30 December 2021 -----

Annex: General and technical terms. -----

Director of the Building Research Institute – dr inż. Marcin M. Kruk, (-) *illegible signature* -----

Round seal with the state emblem of Poland and the following circumscription:

Building Research Institute -----

Warsaw, 30 December 2016 -----

The Document of Technical Approval ITB AT-15-9805/2016 contains 10 pages.

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2/10; AT-15-9805/2016, ITB ® -----

ANNEX -----

General and technical provisions-----

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1. Subject of the approval -----

The subject of this ITB Technical Approval is a set of products for preparing building external wall thermal insulation with a use of IZOFLEX WM system of IZOTECHNIKA Sp. z o.o., 47-300 Krapkowice, ul. Limanowskiego 53.-----

Preparation of thermal insulation with a use of IZOFLEX WM system is based on mounting to the existing walls, from the outside, a layered system consisting of mineral wool as thermal insulation material, a reinforced layer made of adhesive mortar and reinforcing mesh and a surface layer (facade) made of tiles, attached to the reinforced layer and grouted using adhesive. The mineral wool slabs should be mounted to the wall using adhesive mortar and mechanical fasteners, in the manner specified in the technical design.-----

Approval shall comprise a set of products consisting of:-----

- a) flexible IZOFLEX tiles under AT-15-3544/2013, -----
- b) IZOFLEX-SK glue under AT-15-3544/2013, intended to mount IZOFLEX tiles,
- c) IZOFLEX-GRUNT primer under AT-15-3544/2013, intended for priming reinforced layer, -----
- d) ATLAS ROKER W-20 mortar adhesive under ITB AT-15-2927/2014, intended for mounting mineral wool slabs to the mineral substrate and for preparing a reinforced layer. -----

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e) AKE 145 fiberglass mesh under ITB AT-15-7373/2013. -----

IZOFLEX tiles are manufactured from water dispersion of modified vinyl and acrylic polymer and fillers, pigments and modifying chemicals. IZOFLEX tiles are flexible. They are of rectangular shape and nominal dimensions 240 x 52 x 3 mm, 240 x 65 x 3 mm and 240 x 71 x 3 mm for basic tiles and 360 x 52 x 3 mm, 360 x 65 x 3 mm and 360 x 71 x 3 mm for corner tiles. The tiles may be produced in other surface dimensions, agreed by the manufacturer with the customer. The sides of the tiles can be straight or wavy. The surface of the tiles can be smooth or textured. IZOFLEX tiles are manufactured in colours and textures in accordance with the Manufacturer's catalogue. -----

IZOFLEX-SK glue is in the form of homogeneous compound. It is manufactured from n-butyl acrylate and styrene co-polymer and fillers, pigments and modifying chemicals. It is produced in colours according to the Manufacturer's catalogue. Glue consumption is 2.2 * 2.5 kg/sq. m. -----

IZOFLEX-GRUNT primer has a form of milky white homogeneous solution, without fillers. It is a mixture of acrylic and styrene water dispersion (50%), modified polysiloxanes and polyglycols. It can be coloured as agreed by the manufacturer with the recipient. Consumption of the filler is 0.10* 0.15 l/m2. -----

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Lining made of IZOFLEX tiles mounted and grouted with a use of IZOFLEX-SK glue looks like a brick wall.-----

IZOFLEX flexible tiles, IZOFLEX-SK glue and IZOFLEX-GRUNT primer are produced by IZOTECHNIKA Sp. z o. o., 47-300 Krapkowice, ul. Limanowskiego 54. -----

4/10; AT-15-9805/2016, ITB ® -----

Required characteristics of the products covered by this Technical Approval ITB are given in p. 3.-----

2. Purpose, scope and conditions of application-----

A set of products for preparing building external wall thermal insulation with a use of IZOFLEX WM system is designed to prepare thermal insulations of exterior walls of buildings, on mineral substrates. -----

In the IZOFLEX WM system lamellar mineral wool slabs should be used at least of the properties shown by the code according to the PN-EN 13162+A1:2015: MW-EN 13162-T5-DS(70,-) -DS(70,90)-TR80-WS-WL(P)-MU1, class A1 reaction to fire performance according to the PN-EN 13501-1+A1:2010, glued to the substrate using marketed adhesive mortar and mechanical fasteners, in the manner specified in the technical design. Mechanical fasteners should go through the mesh and the

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insulating material reaching the substrate and should be anchored in the wall as deep as specified in the insulation design, depending on the type of fastener and the type of substrate. -----

IZOFLEX WM insulation systems with mineral wool slabs of thickness of 50 + 300 mm, mounted on non-combustible substrates (at least class A2 - s3, d0 of reaction to fire performance according to PN-EN 13501-1+A1:2010 standard), have been classified as fire retardant (NRO) through walls with the fire from the side of the facade. -----

Before making the lining with IZOFLEX tiles and IZOFLEX-SK glue, the reinforced layer of the insulation system should be primed with IZOFLEX-GRUNT preparation. Placing tiles must start from the top edge of the lining laid. -----

IZOFLEX-SK glue should be evenly distributed on the ground with the help of a toothed spatula with 4 mm high teeth. IZOFLEX tiles should be arranged in such a manner that the width of the vertical and horizontal grout between the tiles is 10+12 mm. After laying the tiles on the layer of IZOFLEX-SK glue and pressing them on the whole surface to the substrate, the glue in the grouts should be smoothed using a brush. -----

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The procedures for laying the facade lining, covered by this ITB Technical Approval should be specify the manual prepared by the Manufacturer of the products.-----

Application of IZOFLEX WM products should be compatible with the technical design prepared for a specific object and corporate guidelines of the Applicant to this ITB Technical Approval (instructions prepared by the Manufacturer). The design should take into account: -----

- the standards in force (including PN-EN ISO 13788:2013) and the technical construction laws and in particular the regulation of the Minister of Infrastructure of 12 April 2002 on the technical conditions to be met by the buildings and their location (consolidated text: Dz. U. [Journal of Laws] of 2015 item 1422),-----
- provisions of this Technical Approval -----
- ITB manual No. 447/2009. -----

The applicant for Technical Approval should ensure the provision of completed sets of products, including IZOFLEX tiles, IZOFLEX-SK glue and IZOFLEX-GRUNT primer to the recipients. -----

ITB ®; AT-15-9805/2016, 5/12 -----

. Construction works related to the use of the products covered by the Approval must be carried out by specialised companies. -----

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The ambient temperature at the time of application and glue and adhesive mortar bonding should be from +5°C to +25°C.-----

When carrying out the insulation works you must observe the time intervals between placing of each layer, in accordance with the instructions of the manufacturer of the system.-----

3. Technical characteristics. Requirements -----

3.1. Products included in the set-----

IZOFLEX tiles, IZOFLEX-SK glue and IZOFLEX GRUNT primer shall comply with the requirements of Technical Approval ITB AT-15-3544/2013.-----

ATLAS ROKER-20 adhesive mortar should meet the requirements of Technical Approval ITB AT-15-2927/2014.-----

AKE 145 fiberglass mesh should meet the requirements of Technical Approval ITB AT-15-7373/2013. -----

3.2. Thermal insulation systems-----

Required technical characteristics of thermal insulation systems IZOFLEX WM are given in table 1.-----

Table 1-----

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Item	Characteristics	Requirements	Test methods
1	2	3	4
1	Water absorption (capillary rise) after 1 h, kg/m ² : - reinforced layer - surface layer	<0.10 <0.06	ETAG 004
2	Water absorption (capillary rise) after 24 h, kg/m ² : - reinforced layer - surface layer	<0.5 <0.5	
3	Relative diffusion resistance, m	<1	
4	Impact resistance, in tests on the samples after aging cycles, category	II	
5	Frost resistance of surface layer	no damage: cracks, damages, debonding and blistering	
6	Grip of the surface layer to mineral wool, MPa, after the test on samples: - in laboratory conditions - after frost resistance cycles - after aging	>0.08 >0.08 >0.08	

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