INSTYTUT TECHNIKI BUDOWLANEJ

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

Member of EOTA
www.eota.eu

European Technical Assessment

ETA-25/0420 of 30/06/2025

General Part

Technical Assessment Body issuing the European Technical Assessment	Instytut Techniki Budowlanej
Trade name of the construction product	ELEVATEQ
Product family to which the construction product belongs	Ceramic multilayer slabs for wall claddings
Manufacturer	Ceramika Paradyż Sp. z o.o. ul. Piotrkowska 61 26-300 Opoczno Poland
Manufacturing plant	Ceramika Paradyż Sp. z o.o. ul. Ujezdzka 23 97-200 Tomaszów Mazowiecki Poland
This European Technical Assessment contains	9 pages
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document (EAD) 090078-00-0504 “Ceramic multilayer slabs for wall claddings and floorings”

This European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Specific Part

1 Technical description of the product

ELEVATEQ are ceramic multilayer slabs. Each slab consists of one layer of dry-pressed ceramic slab (according to EN 14411), reinforced with one layer of glass fibre mesh on the back, applied on the ceramic slab by means of an adhesive with controlled industrial process.

ELEVATEQ ceramic multilayer slabs are defined as type A according to clause 1.1 of EAD 090078-00-0504.

Nominal thickness of ELEVATEQ ceramic multilayer slabs are 6,5 mm, 8,5 mm, 10,5 mm and 12,5 mm (ceramic slab: 6 mm, 8 mm, 10 mm and 12 mm and glass fiber mesh with adhesive: 0,5 mm).

ELEVATEQ ceramic multilayer slabs are manufactured in dimensions from 295 mm to 3200 mm (length and width). The slabs may be provided either in its original dimensions or cut in smaller size.

2 Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

ELEVATEQ ceramic multilayer slabs, are intended to be used:

- as a cladding elements for internal and external walls in which the product can be applied with common adhesive for ceramic tiles (use 1 according to clause 1.2.1 of EAD 090078-00-0504)

and

- as a cladding elements for external wall cladding systems in ventilated and non-ventilated facades in which the product is fixed on a subframe (mechanically or glued by means of an adhesive system) (use 2 according to clause 1.2.1 of EAD 090078-00-0504).

Installation of the ELEVATEQ ceramic multilayer slabs should be carried out:

- according to the specifications of the manufacturer,
- in accordance with the design and drawings prepared for the specific works; the manufacturer should ensure that the relevant information is given to those concerned,
- by appropriate qualified staff an under supervision of the technical responsible of the specific works.

The performance given in clause 3 is only valid if the product is used in compliance with the conditions given in this clause.

The provisions made in this European Technical Assessment are based on an assumed working life of the ceramic multilayer slabs of 25 years, when installed in the works. The indications given on the working life cannot be interpreted as a guarantee given by the producer or Technical Assessment Body, 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

3.1 Performance of the product

Performance of the ELEVATEQ ceramic multilayer slabs related to the Basic Requirements is given in Table 1.

Table 1

No	Essential characteristic	Assessment method (EAD clause)	Performance
Safety in case of fire (BWR 2)			
1	Reaction to fire: - use 1: as a cladding elements for internal and external walls in which the product can be applied with common adhesive for ceramic tiles	2.2.1	Slab: A2-s1,d0 Substrate: A1 or A2-s1,d0; slab fixed with adhesive with combustion heat ≤ 3,0 MJ/kg
	- use 2: as a cladding elements for external wall cladding systems in ventilated and non-ventilated facades in which the product is fixed on a subframe (mechanically or glued by means of an adhesive system)		no performance assessed
Hygiene, health and the environment (BWR 3)			
2	Water absorption	2.2.2	clause 3.1.1
3	Moisture expansion	2.2.3	clause 3.1.2
4	Content, emission and/or release of dangerous substances: - SVOC and VOC	2.2.4.1	no performance assessed
Safety and accessibility in use (BWR 4)			
5	Breaking strength	2.2.5	clause 3.1.3
6	Flexural tensile strength or modulus of rupture	2.2.6	clause 3.1.4
7	Bond strength between layers – strength perpendicular to the faces	2.2.10	clause 3.1.5
8	Bond strength between layers – shear strength	2.2.11	clause 3.1.6
9	Bond strength between layers after freeze and thaw conditioning	2.2.12	clause 3.1.7
10 [1)]	Bond strength between layers after alkaline ageing	2.2.13	clause 3.1.8
11 [1)]	Bond strength/adhesion: - cementitious adhesives	2.2.14	clause 3.1.9
	- dispersion adhesives		no performance assessed
	- reaction resin adhesives		clause 3.1.9
12	Coefficient of linear thermal expansion	2.2.15	clause 3.1.10
13	Freeze and thaw resistance	2.2.16	clause 3.1.11
14	Thermal shock resistance	2.2.17	clause 3.1.12
15 [1)]	Durability for internal uses	EN 14411 Table ZA 1.2, note G	pass
16	Resistance to chemicals	2.2.18	clause 3.1.13

[1)] for use 1 – slabs intended to be used as a cladding elements for internal and external walls in which the product can be applied with common adhesive for ceramic tiles

3.1.1 Water absorption

The average values of water absorption E_v are stated in Table 2.

Table 2

Water absorption	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
Average value E_v, %	0,10	no performance assessed	no performance assessed	0,04

3.1.2 Moisture expansion

The average values of moisture expansion ΔL/L x 100 are stated in Table 3.

Table 3

Moisture expansion	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
Average value ΔL/L x 100, %	0,00	no performance assessed	no performance assessed	0,00

3.1.3 Breaking strength

The average values of breaking strength S are stated in Table 4.

Table 4

Breaking strength	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
Average value S, N	1550	2605	3513	5438

3.1.4 Flexural tensile strength or modulus of rupture

The average values and the characteristic values of the modulus of rupture R are stated in Table 5.

Table 5

Modulus of rupture	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
Average value R, MPa	54	62	51	52
Characteristic value R, MPa [1)]	51	58	48	48
[1)] determined according to EN 1990, Annex D, Table D1				

3.1.5 Bond strength between layers – strength perpendicular to the faces

The average values σ^T_m and the characteristic values σ^T_c of the tensile stress perpendicular to the faces are stated in Table 6.

Table 6

Tensile stress perpendicular to the faces	Slab thickness					
	6,5 mm			8,5 mm	10,5 mm	12,5 mm
	(23 ± 2)°C, (50 ± 5)% R.H.	(-20 ± 2)°C	(80 ± 2)°C			
Average value σ^T_m, MPa	3,6	1,3	3,8	no performance assessed	no performance assessed	no performance assessed
Characteristic value σ^T_c, MPa [1)]	2,3	0,8	1,2			
[1)] 5%-fractile						

3.1.6 Bond strength between layers – shear strength

The average values τ^{T}_{m} and the characteristic values τ^{T}_{c} of the shear stress are stated in Table 7.

Table 7

Shear stress	Slab thickness					
	6,5 mm			8,5 mm	10,5 mm	12,5 mm
	(23 ± 2)°C, (50 ± 5)% R.H.	(-20 ± 2)°C	(80 ± 2)°C			
Average value τ^{T}_{m}, MPa	1,9	1,6	2,7	no performance assessed	no performance assessed	no performance assessed
Characteristic value τ^{T}_{c}, MPa	1,6	1,5	2,0			
[1)] 5%-fractile						

3.1.7 Bond strength between layers after freeze and thaw conditioning

The residual strength R_{σ}^{ft} and R_{τ}^{ft} are stated in Table 8.

Table 8

Residual strength	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
R_{σ}^{ft}, %	72	no performance assessed	no performance assessed	69
R_{τ}^{ft}, %	79	no performance assessed	no performance assessed	68

3.1.8 Bond strength between layers after alkaline ageing

The residual strength R_{σ}^{a} and R_{τ}^{a} are stated in Table 9.

Table 9

Residual strength	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
R_{σ}^{a}, %	131	no performance assessed	no performance assessed	no performance assessed
R_{τ}^{a}, %	111	no performance assessed	no performance assessed	no performance assessed

3.1.9 Bond strength/adhesion - cementitious adhesives and reaction resin adhesives

The bond strength/adhesion A_s are stated in Table 10.

Table 10

Bond strength/adhesion	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
Cementitious adhesives				
Average value A_s, MPa	0,7 / AF-T	no performance assessed	no performance assessed	no performance assessed
Reaction resin adhesives				
Average value A_s, MPa	12,2 / AF-T	no performance assessed	no performance assessed	no performance assessed
AF-T - adhesive rupture between ceramic multilayer slab and adhesive				

3.1.10 Coefficient of linear thermal expansion

The coefficient of linear thermal expansion α_l for two test specimens are stated in Table 11.

Table 11

Coefficient of linear thermal expansion	Specimen	Slab thickness			
		6,5 mm	8,5 mm	10,5 mm	12,5 mm
α_l, 10^{-6}/°C	1	7,765	no performance assessed	no performance assessed	7,492
	2	7,691	no performance assessed	no performance assessed	7,489

3.1.11 Freeze and thaw resistance

The number n_{FT} of damaged slabs after 100 freeze-thaw cycles, the description of defects on the slab surface, the initial water absorption by mass (E_1), the water absorption by mass after freeze-thaw cycles (E_2) and the freeze and thaw resistance are stated in Table 12.

Table 12

Performance	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
Initial water absorption by mass E_1, %	0,1	no performance assessed	no performance assessed	0,0
Water absorption by mass after freeze-thaw cycles E_2, %	0,3	no performance assessed	no performance assessed	0,1
Number of damaged slabs, n_{FT}	0	no performance assessed	no performance assessed	0
Freeze and thaw resistance	pass	no performance assessed	no performance assessed	pass

3.1.12 Thermal shock resistance

The number n_{sh} of slabs with visible defect after the completion of the test, the total number of tested specimens n_{tot} and thermal shock resistance are stated in Table 13.

Table 13

Performance	Slab thickness			
	6,5 mm	8,5 mm	10,5 mm	12,5 mm
Number of slabs with visible defect, n_{sh}	0	no performance assessed	no performance assessed	0
Number of tested specimens, n_{tot}	5	no performance assessed	no performance assessed	5
Thermal shock resistance	pass	no performance assessed	no performance assessed	pass

3.1.13 Resistance to chemicals

The result of resistance to chemicals are stated in Table 14.

Table 14

Resistance to chemicals		Slab thickness			
		6,5 mm	8,5 mm	10,5 mm	12,5 mm
Household chemicals (NH_4Cl)		no visible effect	no performance assessed	no performance assessed	no visible effect
Swimming pool salts (NaClO)		no visible effect	no performance assessed	no performance assessed	no visible effect
Low concentration	Hydrochloric Acid (HCl)	no visible effect	no performance assessed	no performance assessed	no visible effect
	Citric Acid ($C_6H_8O_7$)	no visible effect			no visible effect
	Potassium Hydroxide (KOH)	discernible change in appearance			no visible effect
High concentration	Hydrochloric Acid (HCl)	no visible effect	no performance assessed	no performance assessed	no visible effect
	Lactic Acid ($C_3H_6O_3$)	no visible effect			no visible effect
	Potassium Hydroxide (KOH)	discernible change in appearance			no visible effect

3.2 Methods used for the assessment

The assessment has been made in accordance with EAD 090078-00-0504.

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

According to Decision 98/437/EC of the European Commission, amended by the Decision 2001/596/EC of the European Commission the systems of assessment and verification of constancy of performance (see Annex V to regulation (EU) No 305/2011) given in Table 15 apply.

Table 15

Product	Intended use	Level or class (Reaction to fire)	System
ELEVATEQ	for uses subject to regulations on reaction to fire	A1 (1), A2 (1), B (1), C (1)	1
		A1 (2), A2 (2), B (2), C (2), D, E,	3
		(A1 to E) (3), F	4
	as a cladding element for internal and external walls	any	4
	as a cladding element for external wall cladding system in ventilated and non-ventilated facades		

(1) Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)

(2) Products/materials not covered by footnote (1)

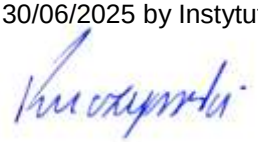
(3) Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of Class A1 according to Commission Decision 96/603/EC)

5 Technical details necessary for the implementation of the AVCP system, as provided in the applicable European Assessment Document (EAD)

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 30/06/2025 by Instytut Techniki Budowlanej



Krzysztof Kuczyński, PhD
Deputy Director of ITB