

	Declaration of Performance	No.
		1806/EC/SMW

1. Unique identification code of the product type:

SOLTHERM MW

2. Intended use or uses

The ETICS is intended for use as external insulation of buildings walls. The walls are made of masonry (bricks, stones, blocks) or concrete (cast on site or prefabricated panels. The ETICS can be used on new and existing (retrofit) vertical walls. It can also be used on horizontal or inclined surfaces that are not exposed to precipitation.

3. Producer:

BOLIX S.A., 34-300 Żywiec, ul. Stolarska 8, Poland

4. Authorised representative:

N/A

5. System or systems of assessment and verification of constancy of performance (AVCP):

System 2+

6a. Harmonised standard: **N/A**

Notified body or notified bodies: **N/A**

6b. European Assessment Document:

European Technical Assessment: ETA-18/0140 of 23/02/2018 „External Thermal Insulation Composite System (ETICS) with rendering”

Technical Assessment Body: Instytut Ceramiki i Materiałów Budowlanych, 31-983 Kraków, ul. Cementowa 8

Notified body or notified bodies:

Instytut Ceramiki i Materiałów Budowlanych, notified body no. 1487.

Instytut Techniki Budowlanej, notified body no. 1488, Certification of the factory production control 1488-CPR-0533/Z

7. Declared performance/s:

BOLIX®	Declaration of Performance	No.
		1806/EC/SMW

Reaction to fire	A1 - configuration with mineral render A2 – s1, d0 (other configurations)	ETAG 004:2013
Weathering resistance	Conforms to the requirements	ETAG 004:2013
Water absorption	< 0,5 kg/m² after 24 h	ETAG 004:2013
Impact resistance	See table 1	ETAG 004:2013
Water vapour permeability	See table 2	ETAG 004:2013
Release of dangerous substances	See point 3 of the Safety Data Sheets	-
Fixing strength (transverse displacement)	NPD	ETAG 004:2013
Bond strength between base coat and insulation material	≥ 0.01 MPa (MW boards) ≥ 0.08 MPa (MW lamella) Failure into MW	ETAG 004:2013
Bond strength between adhesive and substrate (concrete) and between adhesive and insulation product	Conforms to the requirements (See Table 3)	ETAG 004:2013
Wind load resistance	See Table 4	ETAG 004:2013
Sound insulation	NPD	ETAG 004:2013
Thermal resistance	See table 5	ETAG 004:2013

Table 1: Impact resistance*

MW board Rendering system: Base coat Soltherm MB + relevant key coat + finishing coat indicated hereafter	Single mesh layer except SOLTHERM HD 174/S
SOLTHERM MTC	Category III
SOLTHERM STF	Category II
SOLTHERM SFC-P / SFC-P eco-shield	Category II
SOLTHERM SFC-P+	Category I
SOLTHERM AF-P+	Category I
MW lamella Rendering system: Base coat Soltherm MB + relevant key coat + finishing coat indicated hereafter	Single mesh layer except SOLTHERM HD 174/S
SOLTHERM MTC	Category III
SOLTHERM STF	Category II
SOLTHERM SFC-P / SFC-P eco-shield	Category II
SOLTHERM SFC-P+	Category I
SOLTHERM AF-P+	Category I

	Declaration of Performance	No.
		1806/EC/SMW

MW board Rendering system: Base coat Soltherm UB special + relevant key coat + finishing coat indicated hereafter		Single mesh layer except SOLTHERM HD 174/S
SOLTHERM MTC		Category II
SOLTHERM STF		Category I
SOLTHERM SFC-P / SFC-P eco-shield		Category I
SOLTHERM SFC-P+		Category I
SOLTHERM AF-P+		Category I
MW lamella Rendering system: Base coat Soltherm UB special + relevant key coat + finishing coat indicated hereafter		Single mesh layer except SOLTHERM HD 174/S
SOLTHERM MTC		Category II
SOLTHERM STF		Category II
SOLTHERM SFC-P / SFC-P eco-shield		Category II
SOLTHERM AF-P+		Category I
MW board Rendering system: Base coat Soltherm MB + relevant key coat + finishing coat indicated hereafter		Single mesh layer SOLTHERM HD 174/S
SOLTHERM MTC		Category III
SOLTHERM STF		Category I
SOLTHERM SFC-P / SFC-P eco-shield		Category II
MW lamella Rendering system: Base coat Soltherm MB + relevant key coat + finishing coat indicated hereafter		Single mesh layer SOLTHERM HD 174/S
SOLTHERM MTC		Category III
SOLTHERM STF		Category II
SOLTHERM SFC-P / SFC-P eco-shield		Category II

**refers to the system with a single mesh:*

SOLTHERM HD 145/S, SOLTHERM HD 158/S, SOLTHERM HD 160/S, SOLTHERM HD 174/S,
AKE 145, ST2924-100/7 KM, 03-01, SSA-1363-160 SM0.5A, ST112-100/7KM, AKE 160

Table 2: Water vapour permeability

Rendering system: Base coat Soltherm MB + relevant key coat + finishing coat indicated hereafter + relevant decorative coat	Average equivalent air thickness (S _d)
SOLTHERM MTC + SOLTHERM STC-P / STC-P eco-shield + SOLTHERM MTC + SOLTHERM STPT	≤ 1.0 m results: 0.25 m 0.22 m
SOLTHERM STF + SOLTHERM STPT	≤ 1.0 m result: 0.24 m
SOLTHERM SFC-P / SFC-P eco-shield + SOLTHERM STC-P / STC-P eco-shield	≤ 1.0 m result: 0.50 m

	Declaration of Performance	No.
		1806/EC/SMW

SOLTHERM SFC-P+ + SOLTHERM STC-P / STC-P eco-shield + SOLTHERM STC-P+	≤ 1.0 m results: 0.50 m 0.50 m
SOLTHERM AF-P+ + SOLTHERM STC-P / STC-P eco-shield + SOLTHERM STC-P+	≤ 1.0 m results: 0.30 m 0.30 m
Rendering system: Base coat Soltherm UB special + relevant key coat + finishing coat indicated hereafter + relevant decorative coat	
	Average equivalent air thickness (S_d)
SOLTHERM MTC + SOLTHERM STC-P / STC-P eco-shield + SOLTHERM MTC + SOLTHERM STPT + SOLTHERM STC-P+	≤ 1.0 m results: 0.20 m 0.10 m 0.10 m
SOLTHERM STF + SOLTHERM STPT	≤ 1.0 m results: 0.10 m
SOLTHERM SFC-P / SFC-P eco-shield + SOLTHERM STC-P / STC-P eco-shield + SOLTHERM STC-P+	≤ 1.0 m results: 0.30 m 0.30 m
SOLTHERM SFC-P+ + SOLTHERM STC-P / STC-P eco-shield + SOLTHERM STC-P+	≤ 1.0 m results: 0.40 m 0.30 m
SOLTHERM AF-P+ + SOLTHERM STC-P / STC-P eco-shield + SOLTHERM STC-P+	≤ 1.0 m results: 0.30 m 0.40 m

Table 3: Bond strength between adhesive and substrate (concrete) and between adhesive and insulation product

Adhesive	Material	Initial state	48h immersion in water + 2 hours 23°C/50% RH	48h immersion in water + 7 days 23°C/50% RH
Soltherm MA / Soltherm MB	Concrete	≥ 0.80 MPa	≥ 0.60 MPa	≥ 0.90 MPa
Soltherm UB special		≥ 0.35 MPa	≥ 0.20 MPa	≥ 0.35 MPa
Soltherm MA (minimal bonded surface area: 30%)	MW lamella	≥ 0.08* MPa	≥ 0.03* MPa	≥ 0.08* MPa
Soltherm MB (minimal bonded surface area: 27%)		≥ 0.08* MPa	≥ 0.03* MPa	≥ 0.08* MPa
Soltherm UB special (minimal bonded surface area: 38%)		≥ 0.08* MPa	≥ 0.03* MPa	≥ 0.08* MPa
*failure into mineral wool lamella				

BOLIX®	Declaration of Performance	No.
		1806/EC/SMW

Table 4: Wind load resistance

Fixings to which the following breaking force values apply:	Washer diameter	≥ 60 mm		
	Washer stiffness	≥ 0,6 kN/mm		
MW boards performance to which the following breaking force values apply:	Thickness	≥ 50 mm		
	Tensile strength perpendicular to the faces	≥ 10 kPa		
Failure loads, N	Anchors not placed at the panel joints (Pull-through test) dry conditions	R_{panel}	Minimum: Average:	263 317
	Anchors not placed at the panel joints (Pull-through test) wet conditions	R_{panel}	Minimum: Average:	288 336
	Anchors placed at the panel joints (Pull-through test) dry conditions	R_{joint}	Minimum: Average:	182 277
	Anchors placed at the panel joints (Pull-through test) wet conditions	R_{joint}	Minimum: Average:	155 215

Table 5: Thermal resistance of ETICS

Thermal resistance of the insulation product R_D	Value declared by the producer of the insulation product (see product labelling on the packaging)
Thermal resistance of the render R_{render}	0.02 (m ² · K)/W
Thermal resistance of ETICS	$R_{ETICS} = R_D + R_{render}$
The thermal bridges caused by mechanical fixing devices influence the thermal transmittance of the entire wall and shall be taken into account using the following calculation (EN ISO 6946:2007): $U_c = U + \chi_p \cdot n$ with: U_c - corrected thermal transmittance $(\chi_p \cdot n)$ influence of thermal bridges n - number of anchors per 1 [m²] χ_p [W/K] Point thermal transmittance value of the anchor – declared by the producer or: = 0,002 W/K for anchors with a stainless steel screw with the head covered by plastic material, and for anchors with an air gap at the head of the screw = 0.004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material = 0.008 W/K for all other anchors (worst case)	

BOLIX®	Declaration of Performance	No.
		1806/EC/SMW

8. Appropriate Technical Documentation or Specific Technical Documentation:

N/A

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued compliant with the Regulation (EU) No. 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

BOLIX®
INŻYNIER ROZWOJU PRODUKTU
Witold Charyasz
Witold Charyasz

Żywiec, 12/02/2018

.....
Witold Charyasz