



Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment	UKTA-0836-22/6217 of 12/12/2022
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	ATLAS GRAWIS
Product family to which the construction product belongs:	External Thermal Insulation Composite System with rendering (ETICS)
Manufacturer:	Atlas sp. z o.o. ul. Jana Kilińskiego 2 91-421 Łódź Poland
Manufacturing plant(s):	Manufacturing plant no. 1 Atlas sp. z o.o. Zakład Produkcyjny w Zgierzu ul. Szczawińska 52a 95-100 Zgierz Poland Manufacturing plan no. 2 Atlas sp. z o.o. Zakład Produkcyjny w Piotrkowie Trybunalskim ul. 18 Stycznia 28 97-300 Piotrków Trybunalski Poland
This UK Technical Assessment contains:	13 pages including 2 Annexes which form an integral part of this Assessment
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of:	UKAD 040083-00-0404: <i>External Thermal Insulation Composite Systems with Rendering</i>

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1 Technical description of the product

External Wall Insulation System with rendering ATLAS GRAWIS called EWIS in the following text is a kit comprising components which are factory-produced by the manufacturer or component suppliers.

EWIS is made up on site from these components. The EWIS manufacturer is ultimately responsible for all components of the EWIS specified in this UKTA.

The EWIS (kit) comprises a prefabricated insulation product of expanded polystyrene (EPS) to be bonded onto a wall. The method of fixing and the relevant components are specified in the table 1.

The insulation product is faced with a rendering system consisting of one or more layers (site applied), one of which contains reinforcement. The rendering is applied directly to the insulating panels, without any air gap or disconnecting layer.

The EWIS may include special fittings. Assessment and performance of these components is not addressed in this UKTA, however the EWIS manufacturer is responsible for adequate compatibility and performance within the EWIS when components are delivered as a part of the kit.

Table 1

	Components	Coverage (kg/m²)	Thickness (mm)
Insulation material with associated methods of fixing	Bonded EWIS: fully bonded or partially bonded (bonded surface shall be at least 40%). National application documents shall be taken into account.		
	<ul style="list-style-type: none"> • Insulation product: factory prefabricated standard expanded polystyrene (EPS) according to EN 13163. See Annex 1 for product characteristics 	-	≤ 250
	<ul style="list-style-type: none"> • Adhesive: • ATLAS GRAWIS S cement based powder requiring addition of 0.20 to 0.22 l/kg of water • ATLAS GRAWIS U cement based powder requiring addition of 0.21 to 0.23 l/kg of water 	4.0 to 5.0 ¹ (powder)	-
Base coat	<ul style="list-style-type: none"> • ATLAS GRAWIS U cement based powder requiring addition of 0.21 to 0.23 l/kg of water composition: sand, cement, mineral fillers, synthetic resin, additives 	3.0 to 3.5 (powder)	2.0 to 3.5
Glass fibre meshes	<ul style="list-style-type: none"> • Standard glass fibre meshes see Annex 2 for product characteristics 	-	-
Key coats	<ul style="list-style-type: none"> • ATLAS CERPLAST composition: water, styroacrylat binder, mineral fillers, additives ready to use liquid to be used with ATLAS CERMIT mineral 		
	<ul style="list-style-type: none"> • ATLAS SILKON ANX composition: water, styroacrylat binder, silicone resin, mineral fillers, additives ready to use liquid to be used with ATLAS SILKON, Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render, Tynk silikonowy ATLAS/ATLAS silicone render, ATLAS Tynk silikonowy IN/ATLAS silicone render IN, Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render 	0.25 to 0.35 0.25 to 0.35	- -

¹ refers to fully bonded system

	Components	Coverage (kg/m ²)	Thickness (mm)
Finishing coats	<ul style="list-style-type: none"> Mineral finishing coats composition: sand, cement, mineral fillers, additives ATLAS CERMIT mineral powder requiring addition of 0.18 to 0.26 l/kg of water; particle size 1.5; 2.0; 2.5; 3.0 mm; grained or ribbed structure 	2.5 to 4.5	regulated by particle size
	<ul style="list-style-type: none"> Silicone and acrylic-silicone finishing coats composition: water, silicone resin, acryl-copolymer binder, sand, mineral fillers, additives ready to use paste Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render particle size 1.5; 2.0 mm; grained structure Tynk silikonowy IN ATLAS/IN ATLAS silicone render particle size 1.5; 2.0 mm; grained structure Tynk silikonowy ATLAS/ATLAS silicone render particle size 1.5; 2.0 mm; grained structure 	2.5 to 3.5	regulated by particle size
	<ul style="list-style-type: none"> Silicone-silicate finishing coats composition: water, silicate binder, silicone binder, sand, mineral fillers, additives ready to use paste Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render particle size 1.5; 2.0 mm; grained structure 	2.5 to 3.5	regulated by particle size
	<ul style="list-style-type: none"> Acrylic finishing coats composition: water, acrylic co-polymer binder, sand, mineral fillers, additives ready to use paste Tynk akrylowy ATLAS/ATLAS acrylic render particle size 1.5; 2.0 mm; grained structure 	2.5 to 3.5	regulated by particle size
	<ul style="list-style-type: none"> ATLAS SALTA S to be used optionally with all finishing coats composition: silicate binder, pigments, additives ready to use liquid 	0.200 to 0.280*	-
Decorative coats (paints)	<ul style="list-style-type: none"> ATLAS SALTA to be used optionally with all finishing coats composition: silicone resin, pigments, additives ready to use liquid 	0.125 to 0.250*	-
	<ul style="list-style-type: none"> ATLAS SALTA E to be used optionally with mineral and acrylic finishing coats composition: acryl-copolymer binder, pigments, additives 	0.125 to 0.250*	-
	<ul style="list-style-type: none"> ATLAS SALTA N to be used optionally with all finishing coats composition: silicone resin, pigments, additives 	0.125 to 0.250*	-
Ancillary materials	Remain under EWIS manufacturer responsibility. Anchors as supplementary mechanical fixings covered by UKTA issued according to UKAD 330196-00-0604.		

* decorative coats coverage in dm³/m²

2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

This EWIS is intended to be used as external thermal insulation of buildings' walls constructed of masonry (bricks, blocks, stones, etc.) or concrete (cast on site or as prefabricated panels) with or without rendering. The characteristics of the walls shall be verified prior to use of the EWIS, especially regarding conditions for reaction to fire classification and for fixing of the EWIS (bonding).

The EWIS can be used on new or existing (retrofit) vertical walls. It can also be used on horizontal or inclined surfaces which are not exposed to precipitation.

The EWIS is made of non-loadbearing construction elements. It does not contribute directly to the stability of the wall on which it is installed, but it can contribute to durability by providing enhanced protection from the effects of weathering.

The EWIS is not intended to ensure the airtightness of the building structure.

The provisions made in this UK Technical Assessment are based on an assumed working life of the EWIS of at least 25 years, provided that the conditions for the packaging, transport, storage, installation as well as appropriate use, maintenance and repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer or the Technical Assessment Body but should only be regarded as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

Design, installation, maintenance, and repair shall consider principles given in the relevant clause of UKAD 040083-00-0404.

3 Performance of the product and references to the methods used for its assessment

Performances of the EWIS as described in this clause are valid provided that the components of the kit comply with Annexes 1 and 2.

3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

3.2 Safety in case of fire (BWR 2)

Table 2

Configuration	Maximum declared organic content	Declared flame retardant content	Reaction to fire class according to EN 13501-1
EWIS ATLAS GRAWIS with EPS boards (reaction to fire class E) and rendering system:			
<ul style="list-style-type: none"> Adhesives: ATLAS GRAWIS S, ATLAS GRAWIS U Meshes: ATLAS 150, ATLAS 165, R 117 A 101 / AKE 145 / VERTEX 145, SSA 1363-150 SM0.5 Base coat: ATLAS GRAWIS U Finishing coats (with relevant key coats): ATLAS CERMIT mineral, Tynk akrylowy ATLAS/ATLAS acrylic render, Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render, Tynk silikonowy ATLAS/ATLAS silicone render, Tynk silikonowy IN ATLAS/IN ATLAS silicone render, Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render Decorative coats (with relevant primers): ATLAS SALTA N, E, ATLAS SALTA S, ATLAS SALTA 	<p>≤ 1.90%</p> <p>≤ 10.57%</p> <p>≤ 22.7%</p>	<p>0% (no flame retardant)</p>	<p>C – s2, d0</p>

Mounting and fixing

The assessment of reaction to fire is based on tests with an insulation layer (EPS) thickness of 180 mm – SBI test according to EN 13823, 60 mm – test according to EN ISO 11925-2 and a maximum insulation material (EPS) density of 20 kg/m³ as well as finishing coats with maximum organic content.

For the SBI test according to EN 13823, the EWIS is mounted directly to a substrate (Class A2-s1, d0) with a thickness of 12 mm. For the test according to EN ISO 11925-2 no substrate is used.

The installation of the EWIS was carried out by the manufacturer following the manufacturer's specifications (instruction of installation) using a single layer of the glass fibre mesh all over the test specimen (no overlapping glass fibre mesh). The test specimens were prefabricated and did not include any joints.

Anchors were not included in the tested EWIS as they have no influence on the test results.

3.3 Health, hygiene and the environment (BWR 3)

3.3.1 Water absorption

- Base coat ATLAS GRAWIS U:
 - water absorption after 1 hour < 1.0 kg/m²,
 - water absorption after 24 hours < 0.5 kg/m²,
- Rendering systems – according to Table 3.

Table 3

		Water absorption after 24 h	
		< 0.5 kg/m ²	≥ 0.5 kg/m ²
Rendering system: base coat ATLAS GRAWIS U (with the relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT mineral	X	-
	Tynk akrylowy ATLAS/ATLAS acrylic render	X	-
	Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render	X	-
	Tynk silikonowy IN ATLAS/IN ATLAS silicone render	X	-
	Tynk silikonowy ATLAS/ATLAS silicone render	X	-
	Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render	X	-

3.3.2 Watertightness

Heat-rain and heat-cold cycles have been performed on a rig. The EWIS is assessed as resistant to hygrothermal cycles.

The water absorption of both the base coat and the rendering system was lower than 0.5 kg/m² after 24 hours. The EWIS is therefore assessed as resistant to freeze/thaw behaviour.

3.3.3 Impact resistance

Table 4

		Impact resistance EPS TR100 Single standard mesh layer
Rendering system: base coat ATLAS GRAWIS U (with the relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT mineral	Category III
	Tynk akrylowy ATLAS/ATLAS acrylic render	Category III
	Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render	Category III
	Tynk silikonowy IN ATLAS/IN ATLAS silicone render	Category III
	Tynk silikonowy ATLAS/ATLAS silicone render	Category III
	Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render	Category II

Table 5

		Impact resistance EPS TR80 Single standard mesh layer
Rendering system: base coat ATLAS GRAWIS U (with the relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT mineral	Category III
	Tynk akrylowy ATLAS/ATLAS acrylic render	Category III
	Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render	Category III
	Tynk silikonowy IN ATLAS/IN ATLAS silicone render	Category III
	Tynk silikonowy ATLAS/ATLAS silicone render	Category III
	Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render	Category II

3.3.4 Water vapour permeability

Table 6

		Equivalent air thickness s_d
Rendering system: base coat ATLAS GRAWIS U + finishing coat indicated hereafter:	ATLAS CERMIT mineral	≤ 2.0 m ATLAS CERPLAST + ATLAS CERMIT 3.0 mm: 0.18 m ATLAS CERPLAST + ATLAS CERMIT 3.0 mm + ATLAS SALTA: 0.18 m ATLAS CERPLAST + ATLAS CERMIT 3.0 mm + ATLAS SALTA S: 0.20 m ATLAS CERPLAST + ATLAS CERMIT 3.0 mm + ATLAS SALTA N: 0.20 m
	Tynk akrylowy ATLAS/ATLAS acrylic render	≤ 2.0 m ATLAS CERPLAST + Tynk akrylowy ATLAS/ATLAS acrylic render 2.0 mm + ATLAS SALTA E: 0.43 m ATLAS CERPLAST + Tynk akrylowy ATLAS/ATLAS acrylic render 2.0 mm + ATLAS SALTA N: 0.42 m ATLAS CERPLAST + Tynk akrylowy ATLAS/ATLAS acrylic render 2.0 mm + ATLAS SALTA: 0.36 m
	Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render	≤ 2.0 m ATLAS SILKON ANX + Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render 2.0 mm + ATLAS SALTA N: 0.21 m ATLAS SILKON ANX + Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render 2.0 mm + ATLAS SALTA: 0.34 m
	Tynk silikonowy IN ATLAS/IN ATLAS silicone render	≤ 2.0 m ATLAS SILKON ANX + Tynk silikonowy IN ATLAS/IN ATLAS silicone render 2.0 mm + ATLAS SALTA N: 0.21m ATLAS SILKON ANX + Tynk silikonowy IN ATLAS/IN ATLAS silicone render 2.0 mm + ATLAS SALTA: 0.34 m
	Tynk silikonowy ATLAS/ATLAS silicone render	≤ 2.0 m ATLAS SILKON ANX + Tynk silikonowy ATLAS/ATLAS silicone render 2.0 mm + ATLAS SALTA N: 0.45 m ATLAS SILKON ANX + Tynk silikonowy ATLAS/ATLAS silicone render 2.0 mm + ATLAS SALTA S: 0.33 m ATLAS SILKON ANX + Tynk silikonowy ATLAS/ATLAS silicone render 2.0 mm + ATLAS SALTA: 0.37 m
	Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render	≤ 2.0 m ATLAS SILKON ANX + Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render 2.0 mm + ATLAS SALTA S: 0.38 m ATLAS SILKON ANX + Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render 2.0 mm + ATLAS SALTA: 0.43 m ATLAS SILKON ANX + Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render 2.0 mm + ATLAS SALTA N: 0.53 m

3.3.5 Release of dangerous substances

The written declaration on dangerous substances was submitted by the manufacturer to the Technical Assessment Body.

3.4 Safety and accessibility in use (BWR 4)

3.4.1 Bond strength between base coat and insulation product

Table 7

Bond strength between base coat and insulation product (EPS panels)			
Base coat	Initial state	After hygrothermal cycles (on the rig)	After freeze/thaw cycles
ATLAS GRAWIS U	≥ 0.08 MPa	≥ 0.08 MPa	test not required as freeze/thaw cycles not necessary

3.4.2 Bond strength between adhesive / substrate and adhesive / insulation product

Table 8

Bond strength between: adhesive – substrate (concrete) and adhesive – insulation product (EPS)				
Adhesives		Under dry conditions	48 h immersion in water + 2 h drying at (23±2)°C and (50±5)% RH	48 h immersion in water + 7 days drying at (23±2)°C and (50±5)% RH
ATLAS GRAWIS S	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
	XPS	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa
ATLAS GRAWIS U	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
	XPS	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa

The EWIS shall be installed on the substrate with application of the adhesive on the following minimal surface:

Table 9

	Tensile strength perpendicular to the faces of EPS	
	TR80	TR100
	≥ 80 kPa	≥ 100 kPa
ATLAS GRAWIS S	40%	40%
ATLAS GRAWIS U		

3.4.3 Bond strength after ageing

Table 10

		After hygrothermal cycles
Rendering system: base coat ATLAS GRAWIS U (with relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT mineral	≥ 0.08 MPa
	Tynk akrylowy ATLAS/ATLAS acrylic render	≥ 0.08 MPa
	Tynk akrylowo-silikonowy ATLAS/Atlas acryl-silicone render/ATLAS silicone hybrid render	≥ 0.08 MPa
	Tynk silikonowy IN ATLAS/IN ATLAS silicone render	≥ 0.08 MPa
	Tynk silikonowy ATLAS/ATLAS silicone render	≥ 0.08 MPa
	Tynk silikonowo-silikatowy ATLAS/ATLAS silicone-silicate render	≥ 0.08 MPa

3.5 Protection against noise (BWR 5)

Not relevant.

3.6 Energy economy and heat retention (BWR 6)

3.6.1 Thermal resistance and thermal transmittance

The thermal transmittance of the wall covered by the EWIS is calculated in accordance with the standard EN ISO 6946:

$$U_c = U + \chi_p \cdot n$$

where: $\chi_p \cdot n$ has only to be taken into account if it is greater than 0.04 W/(m²·K)
 U_c : corrected thermal transmittance of the covered wall (W/(m²·K)
 n : number of anchors (through insulation product) per m²
 χ_p : local influence of thermal bridge caused by an anchor. The values listed below can be taken into account if not specified in the anchor's UKTA:
= 0.002 W/K for anchors with a plastic screw, stainless steel screw with a head covered by plastic material and for anchors with an air gap at the head of the screw ($\chi_p \cdot n$ negligible for $n < 20$)
= 0.004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material ($\chi_p \cdot n$ negligible for $n < 10$)
= 0.008 W/K for all other anchors (worst case)
 U : thermal transmittance of the current part of the covered wall (excluding thermal bridges) (W/(m²·K) determined as follows:

$$U = 1 : [R_i + R_{render} + R_{substrate} + R_{se} + R_{si}]$$

where: R_i : thermal resistance of the insulation product (according to declaration in reference to EN 13163) in (m²·K)/W
 R_{render} : thermal resistance of the render (about 0.02 in (m²·K)/W or determined by test according to EN 12667 or EN 12664)
 $R_{substrate}$: thermal resistance of the substrate (e.g. concrete, brick) in (m²·K)/W
 R_{se} : external superficial thermal resistance in (m²·K)/W
 R_{si} : internal superficial thermal resistance in (m²·K)/W

The value of thermal resistance of insulation product shall be given in the manufacturer's documentation along with the possible range of thicknesses. In addition, the point thermal conductivity of anchors shall be given when anchors are used in the EWIS.

3.7 Sustainable use of natural resources (BWR 7)

No performance assessed

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied

4.1 System of assessment and verification of constancy of performance

According to UKAD No. 040083-00-0404 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011 as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) of table 13 applies.

Table 11

Product	Intended use	Level or class (Reaction to fire)	System
External thermal insulation composite systems/kits (EWIS) with rendering	in external wall subject to fire regulations	A1 ⁽¹⁾ , A2 ⁽¹⁾ , B ⁽¹⁾ , C ⁽¹⁾	1
		A1 ⁽²⁾ , A2 ⁽²⁾ , B ⁽²⁾ , C ⁽²⁾ , D, E, (A1 to E) ⁽³⁾ , F	2+
	in external wall not subject to fire regulations	any	2+

(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 for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

5.1 UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- Number of certificate of constancy of performance
- UKTA number.

On behalf of the British Board of Agrément



Date of Issue: 12 December 2022

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ANNEX 1

Thermal insulation products characteristic

Description and characteristics		EPS panels according to EN 13163
Reaction to fire EN 13501-1		Class E thickness: 20 mm to 250 mm density: up to 20.0 kg/m ³
Thermal resistance (m²·K)/W		Defined in EN 13163
Thickness EN 823		EN 13163 – T1
Length EN 822		EN 13163 – L2
Width EN 822		EN 13163 – W2
Squareness EN 824		EN 13163 – S5
Flatness EN 825		EN 13163 – P5
Surface condition		Cut surface (homogeneous and without “skin”)
Dimensional stability	laboratory conditions EN 1603	EN 13163 – DS(N)2
	specified temperature and humidity EN 1604	EN 13163 – DS(70,-)1 EN 13163 – DS(70,-)2
Short-term water absorption (partial immersion) (kg/m²) EN 1609		≤ 1.0
Water vapour diffusion resistance factor (μ) EN 12086		20 to 60
Tensile strength perpendicular to the faces in dry conditions EN 1607		EN 13163 – TR80 EN 13163 – TR100
Bending strength (kPa) EN 12089		≥ 75
Shear strength (MPa) EN 12090		≥ 0.02
Shear modulus (MPa) EN 12090		1.0 ≤ G _m ≤ 3.0

ANNEX 2
Glass fibre meshes characteristic

Mesh trade name	Description	Alkalis resistance	
		Residual resistance after ageing N/mm	Relative residual resistance, (after ageing) of the strength in the as delivered state, %
R 117 A 101 / AKE 145 / VERTEX 145	standard mesh mass per unit area: 145 g/m ² mesh size: 4.0 x 4.5 mm	≥ 20	≥ 50
SSA 1363 SM(100)	standard mesh mass per unit area: 145 g/m ² mesh size: 3.5 x 3.5 mm	≥ 20	≥ 50
ATLAS 150	standard mesh mass per unit area: 150 g/m ² mesh size: 4.5 x 5.0 mm	≥ 20	≥ 50
ATLAS 165	standard mesh mass per unit area: 160 g/m ² mesh size: 3.7 x 3.9 mm	≥ 20	≥ 50



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