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European Technical Assessment

ETA-20/0308
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English version prepared by ZAG

General Part

Technical Assessment Body issuing the European Technical Assessment:	**ZAG Ljubljana**
Trade name of the construction product	**Evergel**
Product family to which the construction product belongs	**04: Thermal insulation products**
Manufacturer	**Evertec Sp z o.o** **ul. Leszno 59** **06-300 Przasnysz** **Poland**
Manufacturing plant	**Plant 1**
This European Technical Assessment contains	5 pages
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 040685-00-1201, July 2019, "Factory-made insulation on glass fibres' support loaded with silica amorphous"

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SPECIFIC PARTS

1 Technical description of the product

1.1 Definition of the construction product

The construction products "Factory-made insulation on glass fibres' support loaded with silica amorphous" Evergel is flexible and nanoporous blanket. It consists of uniformly distributed blend of glass fibres with embedded silica amorphous and additives.

The product is opaque (it is neither translucent nor transparent), hydrophobic and is white in colour. The fibres are isotropic oriented, i.e. the directions of the fibres are uniform and randomly distributed.

The product comprises no coating. It is produced from recycled glass fibres. Mass content of oxides of sodium, potassium, calcium, magnesium and barium (Na_2O + K_2O + CaO + MgO + BaO) in glass fibres is above 18 % by weight.

The construction product is thermal and acoustic insulation product.

The product is delivered in rolls.

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

2.1 Intended use

The product blankets are intended to be used in walls, floors, ceilings, for building equipment and industrial installation as thermal and acoustic insulation. Operation range of the product is from 0°C to 675°C.

The insulation can be used in constructions where it is not exposed to wetting, weathering, heavy moisture transport, condensation or wind and where it is not exposed to compression loads.

Concerning the application of the insulation material also the respective national regulations was observed.

The design value of thermal conductivity was laid down according to relevant national provisions.

The provisions made in this ETA are based on an assumed intended working life of the thermal insulation of 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

It is assumed that the product will be installed according to the manufacturer's instructions or (in absence of such instructions) according to the usual practice of the building professionals and professionals for industrial installations.

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

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

Reaction to fire of the product was assessed according to EAD 040685-00-1201, point 2.2.1. Product was tested with respect to relevant class, where the testing standards are written in EN 13501-1.

The product is classified as class **A2-s1,d0** according to delegated Regulation 2016/364/EU for end-use application on non-combustible mineral substrates/surface products of classes A1 or A2. The "No performance assessed" is used for end use applications on other types of substrates.

3.1.2 Propensity to undergo continuous smouldering

The "No performance assessed" option is used.

3.2 Hygiene, health and the environment (BWR 3)

3.2.1 Content and/or release of dangerous substances

The "No performance assessed" option is used.

3.2.2 Short-term water absorption

The "No performance assessed" option is used.

3.2.3 Water vapour diffusion resistance

Water vapour diffusion resistance factor μ of the product was assessed according to EAD 040685-00-1201, point 2.2.5. Product is measured according to EN 12086, method B.

Water vapour diffusion resistance factor μ is greater than 4.

3.2.4 Mould growth

The "No performance assessed" option is used.

3.3 Protection against noise (BWR 5)

3.3.1 Dynamic stiffness

The "No performance assessed" option was used.

3.4 Energy economy and heat retention (BWR 6)

3.4.1 Thermal conductivity and thermal resistance

Thermal conductivity values was assessed according to EAD 040655-00-1201 (point 2.2.8 an Annex B). Product was measured according to EN 12667 at mean temperature of 20°C. The samples was conditioned at 23°C/50% up to the constant mass before measurements.

Declared thermal conductivity at 10°C mean temperature $\lambda_{D,10(23,50)}$ is 0.018 W/mK. Declared thermal conductivity at 0°C mean temperature is equal to $\lambda_{D,10(23,50)}$.

3.4.2 Geometry

Length and width was assessed according to EAD 040685-00-1201, point 2.2.9. Product is measured according to EN 822.

Length is not shorter than 2% of nominal value. Width is not lower than 1,5% of nominal value.

Thickness was assessed according to EAD 040685-00-1201, point 2.2.9. Product is measured according to EN 823.

Thickness was inside tolerances: (-1mm, +3mm).

3.4.3 Dimensional stability under specified temperature and humidity

Dimensional stability under specified temperature and humidity conditions was assessed according to EAD 040685-00-1201, point 2.2.10. Product is measured according to EN 1604. Samples was stored at temperature (70 ± 2)°C and relative humidity (90 ± 5)°C for 48 hours.

Declared level of relative change in length $\Delta\varepsilon_l$ is ±0%.

Declared level of relative change in width $\Delta\varepsilon_b$ is ±0%.

Declared level of relative change in thickness $\Delta\varepsilon_d$ is ±0%.

No value of relative change in length, width and thickness shall exceed these values.

3.4.4 Dimensional stability under specified compressive load and temperature conditions

The "No performance assessed" option is used.

3.4.5 Density

Density was assessed according to EAD 040685-00-1201, point 2.2.12. Product is measured according to EN 1602.

Declared density is **173 ± 20kg/m^3**.

3.5 General aspects relating to fitness for use

3.5.1 Compressive stress

The "No performance assessed" option is used.

3.5.2 Tensile strength perpendicular to faces

Tensile strength perpendicular to faces σ_{mt} was assessed according to EAD 040685-00-1201, point 2.2.15. Product is measured according to EN 1607 on the test specimens of size 100 × 100 mm.

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Declared level, TR, of tensile strength perpendicular to faces σ_{mt} is 5 kPa. No test result will be less than the declared level.

3.5.3 Tensile strength parallel to faces

Tensile strength parallel to faces σ_t was assessed according to EAD 040685-00-1201, point 2.2.16. Product is measured according to EN 1608 on test specimens, which are 500 mm long.

Tensile strength parallel to faces σ_t on longitudinal direction is greater than 350 kPa.

Tensile strength parallel to faces σ_t on transversal direction is greater than 1000 kPa.

3.5.4 Nail tearing resistance

The "No performance assessed" option is used.

3.5.5 Point load

The "No performance assessed" option is used.

3.5.6 Bending strength

The "No performance assessed" option is used.

3.5.7 Maximum service temperature

Maximum service temperature ST (+) was assessed according to EAD 040685-00-1201, point 2.2.20. Product is measured according to EN 14706 on the test specimens of size 300×300 mm with load 500Pa.

Maximum service temperature at deformation of 5% of test specimen is up to 675°C.

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

According to the Decision 2001/596/EC(EU) of the European Commission[1] system of assessment and verification of constancy of performance (AVCP) **1** applies.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ZAG Ljubljana.

Issued in Ljubljana on 10. 12. 2021

Signed by:

Franc Capuder, M.Sc.

Head of Service of TAB

[1] Official Journal of the European Communities L 29/44 on 03. 02. 1999.