



ZAVOD ZA  
GRADBENIŠTVO  
SLOVENIJE

SLOVENIAN  
NATIONAL BUILDING  
AND CIVIL ENGINEERING  
INSTITUTE

Član

Member of



[www.eta.eu](http://www.eta.eu)

Dimičeva 12,  
1000 Ljubljana, Slovenija

Tel.: +386 (0)1-280 44 72, +386 (0)1-280 45 37

Fax: +386 (0)1-280 44 84

e-mail: [info.ta@zag.si](mailto:info.ta@zag.si)

<http://www.zag.si>

## European Technical Assessment

**ETA-18/0011**  
of 6.12.2018

*English version prepared by ZAG*

### General Part

**Organ za tehnično ocenjevanje, ki je izdal ETA** ZAG Ljubljana  
*Technical Assessment Body issuing the ETA*

**Komercialno ime gradbenega proizvoda** Spaceloft A2, Slentex  
*Trade name of the construction product*

**Družina proizvoda, ki ji gradbeni proizvod pripada** 04: Proizvodi za toplotno izolacijo  
*Product family to which the construction product belongs* 04: Thermal insulation products

**Proizvajalec** ASPEN AEROGELS INCORPORATED  
*Manufacturer* 30 Forbes Road  
Northborough, MA 01532 USA

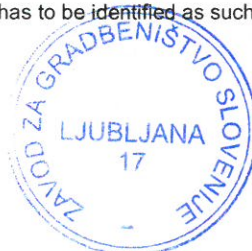
**Proizvodni obrat** 3 Dexter Road  
*Manufacturing plant* East Providence, RI 02914 USA

**Ta Evropska tehnična ocena vsebuje** 4 strani  
*This European Technical Assessment contains* 4 pages

**Ta Evropska tehnična ocena je izdana na podlagi Uredbe (EU) št. 305/2011 na podlagi** EAD 040643-00-1201, izdaja maj 2017  
*This European Technical Assessment is issued in accordance to Regulation (EU) No 305/2011, on the basis of* EAD 040643-00-1201, edition May 2017

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es) referred to above). However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.



## SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

### 1 Technical description of the product

#### 1.1 Definition of the construction product

Fibre reinforced silica Aerogel thermal insulation **SPACELOFT A2, Slentex**, is flexible and nanoporous blanket.

The product comprises no coating and is produced from newly formed isotropic oriented fibres.

The product is opaque and white in colour.

The product is delivered in rolls of the width of 1500 mm and length varying between 19000 mm and 58000 mm. The declared thickness of the product is 10 mm.

#### 1.2 Manufacturing

Aerogel is a solid with low density, acquired from the gel, where the liquid component is exchanged by the gas. The basis of the aerogel is the silica. Silica Aerogel is embedded into the fibrous reinforcement of 100% textile grade glass fibres.

The European Technical Assessment (ETA) is issued for the product on the basis of agreed data/information, deposited with Slovenian national Building and Civil engineering institute (ZAG), which identifies the product that has been assessed and judged.

Changes to the product or manufacturing process, which could result in this deposited data/information being incorrect, should be notified to the ZAG before they are introduced.

The ZAG will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

### 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 and ceiling as thermal insulation. The insulation can be used in constructions where it is not exposed to wetting, weathering, heavy moisture transport, condensation or wind and where the product either is or is not exposed to compression loads.

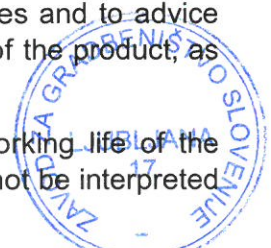
#### 2.2 General assumptions

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

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

Concerning product packaging, transport, storage, maintenance, replacement and repair it is the responsibility of the manufacturer to undertake the appropriate measures and to advise his clients on the transport, storage, maintenance, replacement and repair of the product, as he considers necessary.

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.

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

#### 3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

#### 3.2 Safety in case of fire (BWR 2)

Reaction to fire class of the product classified according to EN 13501-1 is: A2-s1, d0.

#### 3.3 Hygiene, health and the environment (BWR 3)

Short term water absorption by partial immersion  $W_p$  according to EN 1609, method A is  $W_p \leq 1 \text{ kg/m}^2$ .

Water vapour diffusion resistance factor is  $\mu \leq 6$  according to EN 12086.

#### 3.4 Safety in use (BWR 4)

Not relevant.

#### 3.5 Protection against noise (BWR 5)

The "No characteristic assessed" option is used.

#### 3.6 Energy economy and heat retention (BWR 6)

Thermal conductivity  $\lambda$  is measured according to EN 12667. Thermal conductivity is declared according to EN ISO 10456:  $\lambda_{D(23,50)} = 0.019 \text{ W/mK}$ . Thermal resistance is declared according to EN ISO 10456 as  $R_{D(23,50)} = 0.53 \text{ m}^2\text{K/W}$ .

Moisture conversion factors for conversion of thermal conductivity from  $\lambda_{10,\text{dry},90/90}$  to  $\lambda_{D(23,50)}$  and  $\lambda_{D(23,80)}$ :  $F_{m1} = 1$  (conversion from  $\lambda_{10,\text{dry},90/90}$  to  $\lambda_{D(23,50)}$ ),  $F_{m2} = 1$  (conversion from  $\lambda_{10,\text{dry},90/90}$  to  $\lambda_{D(23,80)}$ ).

Length and width measured according to EN 822 and thickness according to EN 823 have following tolerances:

length: - 300 mm / + no limit,

width:  $\pm 25 \text{ mm}$ ,

thickness:  $\pm 1.5 \text{ mm}$ .

Dimensional stability measured according to EN 1604 for storage for 48 h at  $(70 \pm 2) \text{ }^\circ\text{C}$ :

length:  $|\Delta\epsilon_l| \leq 1\%$ ,

width:  $|\Delta\epsilon_b| \leq 1\%$ ,

thickness:  $|\Delta\epsilon_d| \leq 1\%$ .

Nominal apparent density of the product measured according to EN 1602 is  $190 \text{ kg/m}^3$ . Its tolerances are  $\pm 40 \text{ kg/m}^3$ .



**3.7 Sustainable use of natural resources (BWR 7)**

The "No characteristic assessed" option is used.

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

According to the Decision 1999/91/EC of the European Commission<sup>1</sup> 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**

**5.1 Tasks of the manufacturer**

Technical details necessary for the implementation of the AVCP system for the manufacturer are laid down in chapter 3.2 of EAD 040643-00-1201.

**5.2 Tasks of the the notified body**

Technical details necessary for the implementation of the AVCP system for the notified body are laid down in chapter 3.3 of EAD 040643-00-1201.

Issued in Ljubljana on 6. 12. 2018



Signed by:

Franc Capuder, M.Sc.

Head of Service of TAB

---

<sup>1</sup> Official Journal of the European Communities L 29/44 on 03. 02. 1999.