



ÉMI ÉPÍTÉSÜGYI MINŐSÉGELLENŐRZŐ INNOVÁCIÓS NONPROFIT KORLÁTOLT
FELELŐSÉGŰ TÁRSASÁG
[ÉMI NON-PROFIT LIMITED LIABILITY COMPANY FOR QUALITY CONTROL
AND INNOVATION IN BUILDING]

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ÉMI NON-PROFIT LIMITED LIABILITY COMPANY FOR QUALITY CONTROL AND INNOVATION IN BUILDING

ÉMI SOCIÉTÉ À BUT NON LUCRATIF POUR LE CONTRÔLE DE LA QUALITÉ ET L'INNOVATION DU BÂTIMENT, RESPONSABILITÉ LIMITÉE

ÉMI NON-PROFITGESELLSCHAFT FÜR QUALITÄTSKONTROLLE UND INNOVATION I M BAUWESEN MIT BESCHRÄNKTER HAFTUNG

A-44/2017

NMÉ

[Hungarian acronym]

NATIONAL TECHNICAL ASSESSMENT

Trade name of the product:	Foam glass granules designated as "Foam glass granules 150-175 kg/m ³ " and "Foam glass granules 175-200 kg/m ³ "
Intended field of use/Intended uses of the product:	As a replacement of the sub-concrete bedding layer in buildings with slab-on-grade floors, of gravel or concrete debris bedding layers, and as a thermal insulation layer
Product scope:	Thermal-insulation materials (3)
Product manufacturer:	Daniella Ipari Park Szolgáltató Kft. 4031 Debrecen, Köntösgát sor 1-3.
This national technical assessment is valid from*:	29.01.2021

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Budavári Zoltán

Head of Technical Assessment Office

This National Technical Assessment consists of 7 pages and 0 numbered Annexes.

*The validity of the national technical assessment is subject to conditions. The validity of the national technical assessment is to be checked on the homepage of the ÉMI Non-profit Limited Liability Company (www.emi.hu). This national technical assessment replaces National Technical Assessment no. A-44/2017

I. LEGAL FRAMEWORK AND GENERAL TERMS AND CONDITIONS

1. This this national technical assessment has been issued by the ÉMI Non-profit Ltd. for Quality Control and Innovation in Building on the basis of
 - the Government Decree No 275/2013 (VII. 16.) on the detailed rules relating to the requirements against construction products in case of planning, installation, and verification of performance in the course,
 - the designation of the Hungarian Trade Licensing Office (MKEH-128/22/2013/FHÁ), and
 - the National Technical Assessment dated on 22 June 2017 of the same number as this national technical assessment, the data provided in Performance Assessment Report No. A-44/2017 dated on 22. 06.2017, and in the Performance Assessment Report No. A-44/2017 dated on 17 December 2020.
2. The holder of the national technical assessment is the manufacturer of the construction product.
3. The holder of the national technical assessment may not transfer the national technical assessment to any third party. The national technical assessment is only valid for the product manufactured in the indicated manufacturing plants.
4. The manufacturer of the product or the authorized representative thereof is obliged to report if the essential characteristics of the product, the quality of its raw materials or the conditions of manufacturing change and must request the revision of the national technical assessment and its modification as required.
5. ÉMI Non-profit Kft. shall withdraw the national technical assessment of the product, based on the request of the manufacturer or their authorized representative, on the decision of the market surveillance authority or, as stipulated in Article 17 (5) of Regulation No 305/2011 of the European Parliament and of the Council, after the end of the coexistence period with the harmonized standard covering the construction product subject to the national technical assessment.
6. ÉMI Non-profit Kft. shall issue the national technical assessment in Hungarian, and on the request of the manufacturer or their authorized representative – in case of a subsequent request for an additional fee – in English translation as well. The Hungarian version of the national technical assessment shall constitute the grounds of legal validity.
7. The national technical assessment may only be copied or disclosed on any other data carrier in its entirety. Extracts of this national technical assessment may be published only with the written consent of ÉMI Non-profit Kft. In the event any extracts are published, this fact shall be indicated. The wording and diagrams of the promotion materials may not be contrary to the content of the national technical assessment and may not give rise to misunderstanding.
8. The national technical assessment shall not replace the other permits, certificates (environment and property protection, public health, building authority) specified by a separate rule of law regarding the distribution, application, installation, and use of the product, and the documents relating to the constancy of product performance (e. g. product certificate, factory production control certificate, declaration of performance).
9. The declaration of performance issued on the basis of the national technical assessment does not entitle the manufacturer or the authorized representative thereof to place the CE marking on the construction product, the packaging or the accompanying documents thereof.
10. The national technical assessment does not establish the suitability of the construction product for its intended use, it provides values on the performance of the essential characteristics to serve as a basis for the declaration of performance. On the basis of the performance declared in the declaration of performance issued by the manufacturer, the construction product can only be built into structures where it satisfies the expected technical performance.

II. INDIVIDUAL CONDITIONS RELATING TO THE NATIONAL TECHNICAL ASSESSMENT

1. DATA

1.1. Manufacturing plant of the product

Daniella Ipari Park Szolgáltató Kft.
4031 Debrecen, Köntösgát sor 1-3.

1.2. Description of the product

Product code and name: - Foam glass granules 150-175 kg/m³
 - Foam glass granules 175-200 kg/m³

Main characteristics of the product:

Characteristic	Value			Assessment method
Product code: Foam glass granules 150-175 kg/m ³				
Particle size distribution	broad-range, G _{A85} , f ₃			MSZ EN 933-1:2012
Flakiness index	Fl ₂₀			MSZ EN 933-3:2012
Resistance to wear (Micro Deval test)	M _{DE} 75			MSZ EN 1097-1:2012
Resistance to fragmentation, Los Angeles coefficient	LA ₆₀			MSZ EN 1097-2:2020
Bulk density [mg/m ³]	ρ_a 0.31	ρ_{rd} 0.29	ρ_{ssd} 0.34	MSZ EN 1097-6:2013
Classification of constituent materials	Rg ₁₀₀			MSZ EN 933-11:2009
Product code: Foam glass granules 175-200 kg/m ³				
Particle size distribution	broad-range, G _{A85} , f ₃			MSZ EN 933-1:2012
Flakiness index	Fl ₂₀			MSZ EN 933-3:2012
Resistance to wear – Micro Deval test	M _{DE} 85			MSZ EN 1097-1:2012
Resistance to fragmentation – Los Angeles coefficient	LA ₇₅			MSZ EN 1097-2:2020
Bulk density [mg/m ³]	ρ_a 0.38	ρ_{rd} 0.36	ρ_{ssd} 0.40	MSZ EN 1097-6:2013
Classification of constituent materials	Rg ₁₀₀			MSZ EN 933-11:2009

1.3. General description of the intended use of the construction product

As a replacement of the bedding layer, gravel or concrete debris bedding layer under slab-on-ground type floors, and as thermal insulation layer.

2. ESSENTIAL PRODUCT CHARACTERISTICS, PERFORMANCE AND ASSESSMENT METHODS

2.1. Mechanical resistance and stability

Essential characteristic	Performance	Assessment method
Product code: Foam glass granules 150-175 kg/m ³		
Static modulus of load-bearing capacity (mean value) - on 1-m thick compacted layer of foam glass granules - on 1-m thick compacted layer of foam glass granules + 0.25-m concrete rubble + cover layer of 0/22 stone rubble mixture - on 1-m compacted layer of foam glass granules + 0.25-m cover layer of 0/22 stone rubble	$E_2 \geq 50 \text{ N/mm}^2$ $E_2 \geq 80 \text{ N/mm}^2$ $E_2 \geq 75 \text{ N/mm}^2$	e-UT 09.02.35 (ÚT 2-2.124:2005) [Road Technical Specification] MSZ 2509-3:1989
Compacted dry bulk density (ρ_d) [kg/m ³]	$\geq 220 \text{ kg/m}^3$ (245 kg/m ³ -10%)*	ASTM D 2167-08
Product code: Foam glass granules 175-200 kg/m ³		
Load-bearing capacity [Mpa]	NPD**	e-UT 09.02.35 (ÚT 2-2.124:2005) [Road Technical Specification] MSZ 2509-3:1989

* 1.4 compaction coefficient in relation to the 175 kg/m³ bulk density

**NPD – No performance determined.

2.2. Safety in case of fire

Essential characteristic	Performance	Assessment method
Product code: Foam glass granules 150-175 kg/m ³		
Fire protection class	A1	MSZ EN 13501-1:2007+A1:2010
Product code: Foam glass granules 175-200 kg/m ³		
Fire protection class	A1	MSZ EN 13501-1:2007+A1:2010

2.3. Hygiene, health care and environmental protection

Essential characteristic	Performance	Assessment method
Product code: Foam glass granules 150-175 kg/m ³		
Water absorption (%)	≤ 10	MSZ EN 1097-6:2013
Acid-soluble sulfate content (%)	AS _{0.2}	MSZ EN 1744-1:2009+A1:2013
Water-soluble sulfate content (%)	SS _{0.2}	
Total sulfur (%)	S ₁	
Product code: Foam glass granules 175-200 kg/m ³		
Water absorption (%)	≤ 12	MSZ EN 1097-6:2013
Acid-soluble sulfate content (%)	AS _{0.2}	MSZ EN 1744-1:2009+A1:2013
Water-soluble sulfate content (%)	SS _{0.2}	
Total sulfur (%)	S ₁	

2.4. Safe use and accessibility

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2.5. Protection against noise

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2.6. Energy saving and heat retention

Essential characteristic	Performance	Assessment method
Product code: Foam glass granules 150-175 kg/m ³		
Thermal conductivity - λ [W/mK]	≤ 0.086	MSZ EN 1934:2000
Product code: Foam glass granules 175-200 kg/m ³		
Thermal conductivity - λ [W/mK]	NPD*	MSZ EN 1934:2000

*NPD – No performance determined.

2.7. Sustainable use of natural resources

Essential characteristic	Performance	Assessment method
Product code: Foam glass granules 150-175 kg/m ³		
Resistance to freezing	F ₁	MSZ EN 1367-1:2007
Magnesium sulfate soundness	MS ₁₈	MSZ EN 1367-2:2010
Product code: Foam glass granules 175-200 kg/m ³		
Resistance to freezing	F ₁	MSZ EN 1367-1:2007
Magnesium sulfate soundness	MS ₁₈	MSZ EN 1367-2:2010

3. REQUIREMENTS REGARDING THE ASSESSMENT AND VERIFICATION OF THE CONSTANCY OF PERFORMANCE

3.1. System(s) used to assess and verify the constancy of performance

In accordance with Commission Decision No. 99/91/EC, and Annex V of Regulation (EU) No. 305/2011 of the European Parliament and of the Council:

system (3).

3.2. Functions of the manufacturer

3.2.1. Factory production control (FPC)

The manufacturer shall set up, document, and operate an FPC system which ensures that the performance of the products to be installed continuously corresponds to the values specified in this NMÉ in a verifiable manner.

A manufacturer whose quality management system satisfies the EN ISO 9001 standard, and it is completed with the requirements regarding factory production control specified in this NMÉ is deemed to have a factory production control system meeting the requirements in place.

With regard to the product, it is the task of the manufacturer to set up, operate and control a factory production control system which ensures the constancy of the performance of the products.

The factory production control system must include the following:

- the tasks to be performed within the scope of the procedure and the persons in charge thereof,
- regulations regarding the qualifications and training of staff, the manufacturing and test equipment, raw materials, the supplied products, the manufacturing process, the handling of arising non-compliance issues and complaints and the revision of the factory production control system by the manufacturer,
- the assessment of the results of the tests carried out within the scope of factory production control, and their comparison with the performance assessment results,
- tests to be carried out within the scope of factory production control according to the production control inspection plan, the frequency and inspection method of which are included in the following table.

Inspected product characteristics	Test method	Minimum frequency of inspection
Load-bearing capacity	e-UT 09.02.35 (ÚT 2-2.124:2005) [Road Technical Specification]	once per year
Water absorption (%)	MSZ EN 1097-6:2013	once per year
Acid-soluble sulfate content (%)	MSZ EN 1744-1:2009+A1:2013	once per year
Water-soluble sulfate content (%)	MSZ EN 1744-1:2009+A1:2013	once per year
Total sulfur (%)	MSZ EN 1744-1:2009+A1:2013	once per year
Thermal resistance	MSZ EN 1934:2000	once per year
Resistance to freezing	MSZ EN 1367-1:2007	once per two years
Magnesium sulfate soundness	MSZ EN 1367-2:2010	once per two years
Particle size distribution	MSZ EN 933-1:2012	once per week

Flakiness index	MSZ EN 933-3:2012	once per month
Resistance to wear (Micro Deval test)	MSZ EN 1097-1:2012	once per six months
Resistance to fragmentation, Los Angeles coefficient	MSZ EN 1097-2:2010	once per six months
Bulk density	MSZ EN 1097-6:2013	once per year
Classification of constituent materials	MSZ EN 933-11:2009	once per year

3.2.2. Drawing up the declaration of performance

The declaration issued by the manufacturer must include the following information by bullet points:

- the reference number of the declaration of performance,
- the unique identification code of the product-type,
- the intended use or uses of the construction product specified by the manufacturer,
- the name, registered trade name, registered trademark, and the mailing address of the manufacturer,
- if necessary, the name and mailing address of the authorized representative,
- system or systems used to assess and verify the constancy of performance of the construction product,
- name and identification number of the organization issuing the national technical assessment, and the identifier of the national technical assessment issued thereby,
- the performance values specified in chapter 2,
- and the following sentences:
 - The performance of the product specified in paragraph 1.2 of the No. A-44/2017 national technical assessment [Hungarian acronym: NMÉ] corresponds to the performance as per the declaration.
 - The manufacturer (or the authorized representative thereof) specified in the declaration of performance is solely responsible for issuing this declaration of performance.
- the person (name/position) signing for and on behalf of manufacturer (or the authorized representative thereof),
- place/date/signature.

3.3. Function of the designated inspection body

3.3.1. Assessment of the product performance

This national technical assessment shall be regarded as the assessment of the product performance taking account of section 1.6. of Annex V of Regulation No 305/2011 of the European Parliament and of the Council, therefore the designated inspection body no longer needs to perform this task.

This national technical assessment was produced by:

Professionally checked and approved by:

[indecipherable signature]

[indecipherable signature]

Lochmayer Rita
Technical Assessment Engineer

Tóth Péter
Product Manager

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