



IZOME POLYSTYRENE RFS

High-adhesion thermal and
acoustic plaster for interior
and exterior walls.



Raman Fidar Sazeh

is a manufacturer of various dry and ready-mixed thermal insulation mortars, including spray and cast-in-place insulations, using the latest global technology and under the license of Italian technology. The ready-mixed dry mortars of this company are categorized as ultra-lightweight mortars and are used for all types of building envelopes, including walls, floors, and ceilings. In the production process of this company's products, treated/charged processed EPS beads are used for lightweighting and thermal insulation.

Due to the use of processed EPS technology, all products of this company possess extraordinary thermal and acoustic properties. The extraordinary effectiveness of these products in the thermal insulation of buildings, along with saving energy consumption and providing acoustic comfort, brings a healthy, safe, and comfortable environment for residents. The factory of this complex is located in Caspian 2 Industrial City in Qazvin Province and currently offers a variety of products in its portfolio. It is worth mentioning that all products and outputs of this complex have obtained national standards, technical certificates from the Road, Housing and Urban Development Research Center, and valid international approvals.



Utilizing the latest global technology

in Raman Fidar Sazeh Company's ultra-lightweight products Polystyrene is one of the most common and effective ultra-lightweight materials with thermal insulation properties; however, due to its low specific weight, mixing it with cement paste is almost impossible, and there is a high probability of separation between them. In the applied technology, the E.I.A additive is impregnated with processed raw EPS beads, which ensures its complete combination with cement and water, forming a completely homogeneous mortar with thermal insulation properties.

In addition, all cement-based dry mortars of this company include various additives, fibers, and special polymers to modify the mortar's characteristics, eliminate potential cracks, and increase adhesion, among other benefits.

IZOME Thermal Insulation Plaster

IZOME plaster is an ultra-light, ready-mixed dry mortar with very low conductivity, formed by combining and mixing processed, charged, and coated EPS beads with cement and special additives. IZOME thermal insulation plaster is used as thermal insulation for exterior wall systems, insulation between double walls, and ceilings. The use of this product results in complete acoustic sealing and thermal insulation, the elimination of thermal bridges, and the fulfillment of the requirements of Chapter 19 of the National Building Regulations.



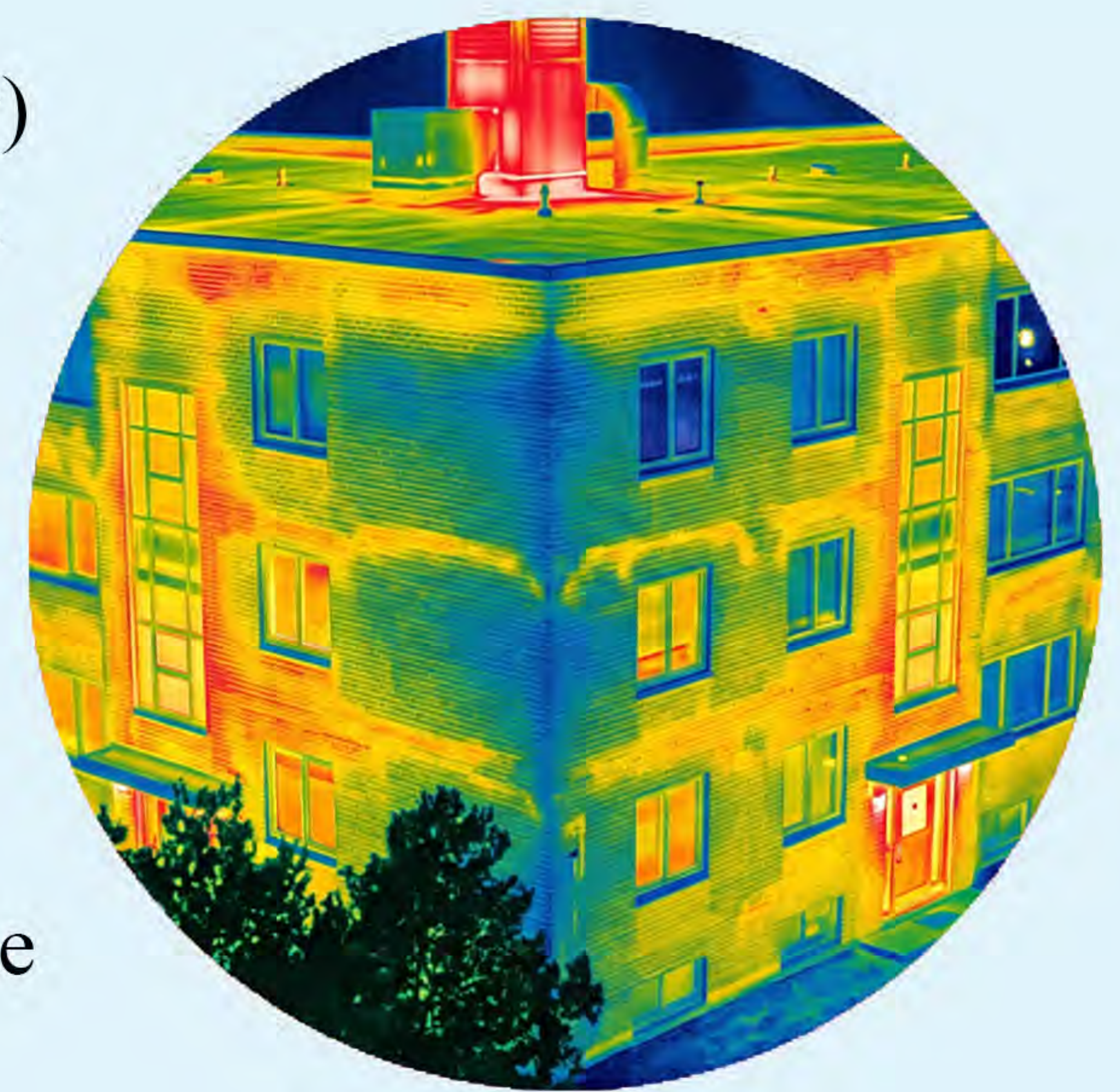
IZOME RFS Thermal Insulation Plaster

IZOME RFS is a dry mortar similar to IZOME, which, with the addition of special polymers, has lower vapor and water permeability and prevents the transfer of moisture to the inner walls of the building. The use of this product is recommended in humid regions such as the north of the country like Basrah



Advantages of Using IZOME and IZOME RFS Types

- Complete insulation and elimination of thermal bridges (such as beams, columns, wall posts, etc.)
- Lightening (ultra-light plaster with a density of 110-230 kg/m³)
- High durability against various environmental conditions such as freeze-thaw cycles
- Exceptional ease and speed of execution
- Acoustic sealing and air tightness
- High adhesion due to polymer materials and special fibers
- Reduction of cracking and higher ductility during elastic deformations of the structure
- Free of any chemicals or substances harmful to humans and the environment
- Upgrades the building's energy rating to EC and even EC+
- Compliance with international standards and standard 706-2



The use of a single layer of IZOME thermal insulation plaster acts as complete insulation, insulating the building homogeneously and preventing heat loss caused by the conductivity of structural components to the uncontrolled outside environment. Therefore, depending on the project conditions and the implemented building systems, it easily meets the requirements of Chapter 19 of the National Building Regulations.

All Raman Fidar Sazeh products are classified in group A2-s1,d0 (unaffected by fire) according to the EN 13501-1 standard.

TECHNICAL SPECIFICATIONS OF VARIOUS IZOME AND IZOME RFS TYPES

TECHNICAL SPECIFICATION	STANDARD	IZOME LIGHT 110	IZOME 150	IZOME 230	IZOME RFS 230
Dry density	n.d.	110 kg/m³	150 kg/m³	230 kg/m³	230 kg/m³
Specific weight (dry mortar) ±10%	(UNI EN 1015-10)	approx. 130 kg/m³	approx. 165 kg/m³	approx. 245 kg/m³	approx. 245 kg/m³
Reaction to fire	(EN 13501-1)	A2-s1,d0	A2-s1,d0	A2-s1,d0	A2-s1,d0
Adhesion	(UNI EN 1015-12)	0.1 N/mm²	0.1 N/mm²	0.1 N/mm²	0.1 N/mm²
Capillary water absorption coefficient	(UNI EN 1015-18) (UNI EN 998-1)	0.1 kg/m²min ^{0.5}	0.1 kg/m²min ^{0.5}	0.1 kg/m²min ^{0.5}	0.1 kg/m²min ^{0.5}
Water vapor diffusion resistance μ	(UNI EN ISO 12572) (a) (UNI EN 1015-19)(b/c/d)	4.6	9	9	9
Thermal conductivity λd	(UNI EN 12667)	0.043 W/mK	0.058 W/mK	0.063 W/mK	0.063 W/mK
Compressive strength	(UNI EN 826)(a) (UNI 6132)(b/c/d)	0.45 N/mm²	0.61 N/mm²	0.83 N/mm²	0.83 N/mm²
Flexural strength	(UNI EN 1015-11)(a) (UNI 6133)(b/c/d)	0.27 N/mm²	0.42 N/mm²	0.65 N/mm²	0.65 N/mm²
Weighted sound reduction index R_w	(UNI EN ISO 140-3)	42 dB (*)	42 dB (*)	42 dB (*)	42 dB (*)
Sound insulation power increase amount ΔR_w	(UNI EN ISO 140-16)	7 dB (*)	7 dB (*)	7 dB (*)	7 dB (*)

(*) 6 cm thickness on perforated block walls with 8 cm thickness with a 1.5 cm cement layer on the opposite side.

Note: The numbers in the above table have been determined under controlled conditions.

Some of the implemented projects



Jahan-e Koodak Tower - Tehran



Niayesh Residential Tower - Tehran



Roya Residence Hotel Mazandaran Iran

IZOME DECORATIVE

Ready-Mixed Dry Render as Final Facade Finish

The IZOME DECORATIVE product is a ready-to-use, cement-based dry polymer coating for finishing facade surfaces, produced through an industrial process at the Raman Fidar Sazeh factory. This product can be applied to various types of walls, including blocks, clay bricks, and panels.

This render is classified as a thin-coat render. Because it is applied in a thickness of 5 to 6 mm, it helps reduce the overall weight of the render layer. Typically, gray or white IZOME DECORATIVE is used for exterior rendering, while for interior spaces, various colored IZOME DECORATIVE products can be utilized in addition to these base colors.

The materials used and the resulting surface of IZOME DECORATIVE are designed to provide excellent paintability.



IZOME DECORATIVE Specifications:

- Highly formable and workable
- Reduces cracking and dust absorption
- Inherent colorability
- Grain size: 0-1 mm
- Colors: Red, yellow, gray, white, and black spectrums
- Packaging: 10 kg bags

Application Method:

First, ensure proper surface preparation according to the technical instructions, then mix the contents of the bag with the required amount of water. Apply the prepared mortar as a very thin layer of Monocap on the surface. Next, place a fiberglass mesh over this thin layer; it will adhere to the surface like glue. Then, add the remaining layer of Monocap over it to allow for final surface finishing using a trowel.

The application of Monocap must follow this schedule after the underlying layer has completely dried:

- A) Warm season: After 6 days or more
- B) Cold season: After 10 days or more

Some of the completed projects



Residential – Tehran / Iran



Kelardasht Villa – Mazandaran / Iran



Maya Zist Golrang Complex – Kordan

SOME PROJECTS WITH IZOME IN GREECE



School in Nea Moudania Chalkidiki year 2009



Private house in Melisochori Thessaloniki year 2012



Private house in Matala-Crete island year 2016



Private house in Agios Antonios Thessaloniki year 2015



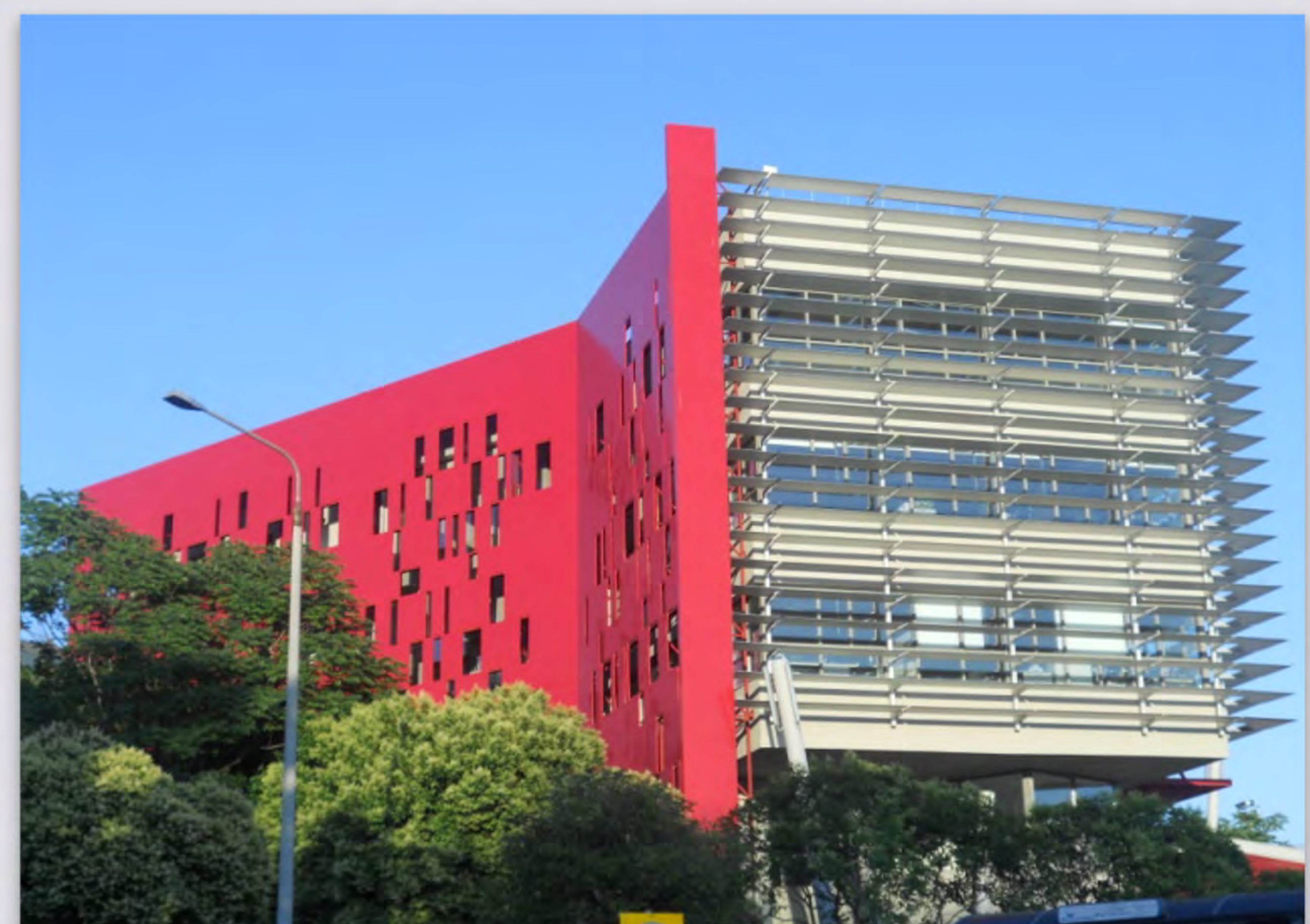
Private house in Paros island year 2015



Complex luxury houses in Toumpa Thessaloniki year 2009



Private house in Nea Makri Athens year 2014



Aristotelio University of Thessaloniki year 2005

SCOPE OF IZOME PRODUCT APPLICATION

- ①-External Wall Thermal Insulation
- ②-Cavity Wall Thermal Insulation
- ③-Under-Roof Thermal Insulation
- ④-Internal Wall Plastering/Coating
- ⑤-External Thermal Insulation - Attic/Under-Roof
- ⑥-Internal Thermal Insulation



Thermal insulation
refurbishment and dehumidification



Acoustic
insulation

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TEST REPORT No. 464/03 OF 09/30/2003

SUBJECT: EXPERIMENTAL DETERMINATION OF THE THERMAL CONDUCTIVITY COEFFICIENT ACCORDING TO THE UNI 7745/77 STANDARD

Description of the sample

The sample, received and tested on September 26, 2003, consists of a square-section slab of 0.30 m made of premixed plaster, bearing the trade name "ISOLSAN".

Test equipment

The equipment used for the determination of the thermal conductivity coefficient consists of a heating plate and a cooling plate; the test specimen is placed horizontally in contact with the lower heating plate and the upper cooling plate.

Description of the test specimen

The measurements taken on the test specimen provided the following values:

- Average thickness of the sample: 0.03043 m
- Volume of the sample: 0.0027387 m³

Test results

From the execution of the test, the following value of the thermal conductivity coefficient was derived:

$$\lambda = 0.0631 \text{ W/m K}$$

Techno Analisis S.r.l.



CAP. SOC. I.V. Euro 31.000 Reg. Imp. 02794110367 REA 331292 C



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جمهوری اسلامی ایران
وزارت بهداشت، درمان و آموزش پزشکی
مرکز تحقیقات راه، مسکن و شهرسازی

کوابینامه فنی
بررسی عملکرد محصول تولیدی



Respected Managing Director of Raman Fidar Sazeh Company

Pursuant to Part (5) of the Second Paragraph of Article (2) of the Articles of Association of the Road, Housing & Urban Development Research Center, and Article 16 of the Executive Regulations of Article 14 of the Law on the Organization and Support of the Production and Supply of Housing approved in 1395 [2016], this certificate has been granted to the manufactured product of Raman Fidar Sazeh Company with the national ID 14006411615, as described below:

- **Product Name:** Lightweight plastering mortar (LW) and thermal insulation (T) under the brand name ISOLTECO;
- **Applicable in:** Plastering of internal and external walls of buildings;
- **Fire reaction class:** B-s1,d0;
- In accordance with the technical criteria accepted by this center, Iran National Standard No. 1-706, and compliance with the requirements of various topics of the National Building Regulations;
- Produced by Raman Fidar Sazeh Company located at: Saadat Abad, Jouriki Blvd., Davoud Hosseini St., Dead-end One, Tashrifat Tower A, 5th Floor, Unit 18;
- Place of Production: Qazvin Province, Abyek County, Abyek Industrial Estate, Standard Blvd., Fanavari St., First Noavari St.

This certificate indicates that the requirements related to the performance of this product, based on the results of the tests performed in accordance with the requirements and criteria accepted by this center, for the scope of application listed in this certificate and the attached technical report, which is an inseparable part of it, have been evaluated and approved. The responsibility for controlling and maintaining its quality rests with the manufacturer.

This certificate was issued for the first time on 1402/05/31 and has been renewed 1 (one) time, and will remain valid until 1404/08/06, provided that the technical criteria relied upon for granting this certificate, the quality of the product, and production conditions do not change, and the certificate has not been suspended or revoked.

محمد مهدی حدادی
رئیس مرکز تحقیقات راه، مسکن و شهرسازی