

# Extraordinary Sustainable Innovative

Experience the harmony of nature and  
30 years advanced engineering











# Unlock Your Potential for a Sustainable and Efficient Future with WELTEZ

In a world where energy efficiency is paramount, buildings account for 40% of all energy consumption. This presents a critical challenge and a significant opportunity. At WELTEZ, we empower you to meet this challenge head-on, transforming your buildings into models of sustainability and high performance.

Our solutions are designed not only to achieve significant energy savings and reduce operating costs but also to optimize your operational performance and minimize your environmental impact. Partner with Weltez to navigate rising energy costs and evolving regulations, and take a bold step towards a more efficient and sustainable future.

# Who is Professor Muhammed Eltez?

Professor Muhammed Eltez completed his undergraduate and graduate studies in the Mechanical Engineering Department at Middle East Technical University (METU) and earned his PhD from Ege University. With 46 years of experience in the building materials industry, Professor Eltez began his work in the brick sector in 1977, where he first started incorporating perlite to lighten materials and improve their thermal insulation properties.

Since 1981, he has developed and applied energy and building technologies through his company, 'Eltez Engineering'. He conducted material and product development studies at Etibank Cumaovasi/Izmir facilities and established the private sector's first perlite blasting plant in the Bergama/Dikili region. Through the Engineering Office, which he founded in 1981, he integrated perlite plaster into his projects, provided training to municipalities, and secured its approval for use. During that time, he also served as a product and facility consultant to hundreds of factories across the country through the Brick and Tile Association (TUKDER).

Throughout his academic career at Ege University's Vocational School of Ceramics, he delivered applied lectures and supervised theses on building materials, for which he received several patents. After retiring in 2009, he worked as a consultant on perlite-based insulating plasters and conducted seminars for civil works engineers at various municipalities and construction contractors in Istanbul. Subsequently, since 2014, he has undertaken numerous practical studies in Germany and the Netherlands to introduce and promote perlite-based insulating plasters.



# Who are Weltez and what do Weltez do?

WELTEZ Insulation is a company at the forefront of the insulation industry, pioneering sustainable, engineering-driven, and environmentally conscious insulation solutions. With a strong emphasis on research and development, the company develops high-performance insulation materials for a wide range of applications in buildings and facilities, including interior and exterior surfaces, as well as foundations.

A key feature of WELTEZ's product line is its high degree of customization. The company offers insulation materials that can be engineered to specific performance requirements, including the ability to modulate heat transfer through phase shift and amplitude damping. Furthermore, products can be enhanced with anti-radiation properties, offering a comprehensive approach to thermal management. This innovative approach aims to transform the concept of thermal insulation from a static construction component into a dynamic, adaptable engineering material.

At the core of WELTEZ's product portfolio are lightweight, inorganic-bonded insulation plasters based on perlite. These plasters provide a multi-faceted solution, delivering not only excellent thermal insulation but also fire resistance, water repellency, breathability, and sound insulation. This holistic performance profile is designed to maximize energy savings and ensure the longevity and durability of structures.

By leveraging its R&D capabilities, WELTEZ aims to redefine the standards of the insulation industry. The company is dedicated to pushing the boundaries of material science to create products that can be tailored to any desired condition, whether for internal or external applications. This commitment to innovation is geared towards improving thermal properties and diversifying the application areas of insulation, ultimately contributing to more energy-efficient and resilient buildings.

Our Respect  
WELTEZ Family





# Why is Weltez A Revolutionary Product?

This revolutionary WELTEZ product collects 12 different properties of efficient insulation characteristics in one material. This is the reason of singularity for WELTEZ.



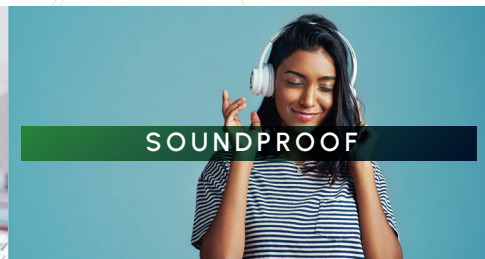
**ECOLOGICAL**

WELTEZ is a Natural and Ecological Material.



**HEAT INSULATING**

Heat Insulating



**SOUNDPROOF**

Soundproof



**FIREPROOF**

Fireproof



**WATERPROOF**

Waterproof



**BREATHABLE FORMULA**

Breathable Formula with Water Repellency



**HYGIENIC**

Allows for a Hygienic Environment



**NATURAL BASIS**

It's Natural Basis, Perlite, is a Volcanic Glass, Which is Recyclable.



**NON CO2**

It Does Not Cause Any CO2 Emissions Which Could Lead to Global Warming.



**NO PETROCHEMICAL**

The Manufacturing Process Does Not Use Any Petrochemical Products.



**NON CARCINOGENIC**

Non Carcinogenic.



**INHALABLE**

No Problem with Inhalation.



# Why is Weltez A Revolutionary Product?

## HEAT INSULATING

- It is used in all building surfaces: interior, exterior, terraces, and floors.
- Classified as T1 according to TSE 998-1.
- Heating expenses such as coal, natural gas, etc., will be reduced.
- Cooling costs during summer will also decrease.
- Complies with the thermal insulation regulation (TS 825) for buildings.

Provides both thermal and waterproof insulation on building facades. It prevents reinforced concrete elements from being exposed to corrosion.

Prevents the rusting of steel reinforcements in the structural parts of the building and the reduction of their load-bearing capacity, thereby increasing the earthquake resistance of buildings.

## THERMAL INSULATION AND NON-COMBUSTIBILITY

- Products are the only permissible option for mass housing projects, workplaces, and buildings.
- It does not emit flammable or carcinogenic gases and have flame resistance above 1100°C.
- Classified as A1 – the highest non-combustibility class.
- The fire regulation mandates the use of A1-class materials in high-rise and mass housing structures.

The regulation states: "A1-class materials do not contribute to any stage of fire development, including fully developed fires. Therefore, it is automatically accepted that these materials sufficiently meet all the required characteristics for lower-temperature fire scenarios."

## BREATHABLE

- Thanks to the natural components in its special formula, it is breathable.
- Does not cause mold or dampness.
- Does not produce any odor.
- Natural and breathable, it extends the lifespan of the building.

Thermal insulation plaster, with its water-repellent properties as specified in the TS EN 998-1 standard, allows the structure to breathe and prevents condensation.



# Why is Weltez A Revolutionary Product?

## ECOLOGICAL

- Completely ecological product.
- Raw material is an inorganic mineral, 75-80% of the world's reserves of which are found in Türkiye.
- Does not emit CO gases that contribute to global warming and contains no petrochemical substances.
- It is non-carcinogenic.
- Does not release any lethal gases when inhaled.

Prevents the corrosion of steel reinforcements in the structural parts of the building and reduce load-bearing capacity, thereby ensuring that the building's earthquake resistance does not weaken.

It is applied quickly and does not harm the environment.

Thanks to exterior-insulated buildings, less fuel will be consumed, resulting in a reduced amount of CO<sub>2</sub> released into the atmosphere, thus making a significant contribution to environmental protection.

It is permanent and maintenance-free. It remains in good condition on walls for a lifetime.

Helps reduce the environmental pollution caused by the burning of fuels such as natural gas, wood, and coal. etc

Unlike EPS/XPS applications, there is no need for breaking, drilling, mesh installation, priming, or top coat plastering.

## WATER REPELLENCY

- Water-repellent feature is present on vertical surfaces.
- It prevents water from passing through hairline cracks in your walls.
- On horizontal surfaces such as roofs and terraces, the water-repellent feature is produced with three times increased protection in our insulation plaster.
- Due to its breathable property, it expels the moisture within its structure.

Due to its breathability and water-repellent properties, it regulates the humidity levels in living spaces.

The formation of thermal bridges is prevented and the structure is protected from external effects.



# New Generation

## WELTEZ Pioneers New Generation of Perlite-Based Insulation Plaster

Harnessing Türkiye's vast perlite reserves, which account for approximately 75-80% of the world's total, WELTEZ Insulation has developed a "New Generation Multipurpose Lightweight Natural and Environmentally Friendly Perlite Based Insulation Plaster." This innovative product positions the company to be a significant player in the global insulation sector.

To spearhead the development and application of this advanced material, WELTEZ has established a dedicated team for research, implementation, training, and field studies. This initiative is supported by a pilot production facility and a private research laboratory, enabling specialized studies and continuous product improvement. The company's efforts are backed by a group with 30 years of experience in the sector, which has successfully implemented WELTEZ material in various applications over the last decade.

In a strategic move to promote the adoption of their lightweight, ecological thermal insulation plaster, WELTEZ has been actively engaged in educating key stakeholders within Türkiye. The company's team has conducted special briefings and training sessions for directors and engineers of several municipalities and associated contractors.



## WELTEZ Aligns with Global Green Economy Principles

WELTEZ Insulation firmly positions itself as a follower and supporter of the global green economy and the ongoing green transformation within the industry. This commitment is not merely a statement but is deeply embedded in the company's core operational and product philosophies.

The green economy, an economic model centered on environmental sustainability, seeks to harmonize economic growth with robust environmental protection. Its primary objectives include addressing critical global challenges such as climate change, the depletion of natural resources, and the loss of biodiversity.

# Our Products



## External Insulation Plaster

- It is used as insulation plaster on exterior surfaces such as bricks, concrete, briquette, gas concrete, etc.
- It provides sound and heat insulation on the applied surfaces.
- It breathes.
- No condensation, mold, moisture and perspiration.
- It is water repellent due to its hydrophobic structure, it does not absorb moisture even in heavy rain.
- Thanks to its lightness, it supports the earthquake resistance of buildings.
- Practical and fast application is possible.
- Suitable for hand and machine applications.
- Significantly reduces the cost of labour, does not require dowelling and netting.
- It is light and economical, healthy.
- Fireproof material.
- It does not contain carcinogenic substances due to its natural structure.

## Internal Insulation Plaster

- It is a perlite based light insulation plaster that can be used on interior facades.
- Provides thermal insulation, reduces energy consumption.
- Thanks to its porous structure, it prevents dampness and odour.
- Creates structures resistant to fire.
- It is applied manually on materials such as brick, concrete, gas concrete, exposed concrete, pumice block etc. indoors.
- It does not form bacteria, mold and fungus due to its chemical structure.
- Due to its light weight, it protects the building from unnecessary loads.
- Environmentally friendly.
- It does not contain carcinogenic substances due to its natural structure.
- It provides a quiet, healthy and peaceful environment compatible with the human body.
- It is applied by traditional plaster application methods.





# Our Products

## Floor Insulation Plaster

- Perlite based light insulation screed.
- It can be used on floors, between floors, roofs and terraces.
- It provides the following features with a single product.
- Thermal insulation and fuel saving.
- It has high fire resistance.
- Provides sound insulation.
- It is easily applied by traditional methods.
- It breathes.
- No condensation, mold, moisture and perspiration.
- Due to its light weight, it protects the building from unnecessary loads.
- Environmentally friendly.



## Roof Insulation Plaster

- Waterproofing is provided by using WELTEZ insulation products in places that receive rain and water such as terraces and balconies.
- It breathes.
- No condensation, mold, moisture and perspiration.
- It does not contain carcinogenic substances due to its natural structure.
- Due to its light weight, it protects the building from unnecessary loads.
- Protects against fire.
- It provides heat and sound insulation simultaneously.
- Does not cause dampness on the terrace due to its hydrophobic (water repellent) feature



# Technical Specifications



## Packaging and Appearance

Packaging	: Polyethylene reinforced kraft paper bags
Colour	: Pure White (RAL 9010)
Density	: Granular form $175 \pm 5 \text{ kg/m}^3$
Solid Form	: $340\text{--}365 \text{ kg/m}^3$



## Thermal and Acoustic Properties

Thermal Conductivity	: $0.045 \text{ W/mK}$ (tested according to EN 12667)
Sound Absorption	: 25 dB at 500 Hz with 3 cm thickness
Fire Resistance	: Fireproof Class A1/A2 (according to EN 13501-1)



## Strength Properties

Compressive Strength	: Indoor: $\geq 0.7 \text{ N/mm}^2$ (at $23^\circ\text{C}$ and 50% RH)
Outdoor	: $\geq 1.0 \text{ N/mm}^2$ (at $23^\circ\text{C}$ and 50% RH)
Adhesion Strength	: $0.40 \text{ N/mm}^2$ (measured according to EN 1015-12)
Bending Strength ( $\text{N/mm}^2$ )	: Interior: $\geq 0.5 \text{ N/mm}^2$ (after 28 days drying)
Outdoor	: $\geq 0.8 \text{ N/mm}^2$ (after 28 days of drying)



## Water Features

Capillary Water Absorption	: $0.3 \text{ kg/m}^2\cdot\sqrt{\text{h}}$ (measured according to EN 1015-18)
Total Water Absorption	: $<15\%$ (measured according to EN 1015-10)



## Application Information

Implementation Method	: PFT G4/G5 spraying machine or stainless steel trowel
Application Thickness	: Minimum 5 mm, maximum 50 mm single layer
Consumption	: 8 kg covers approx. $3 \text{ m}^2$ 1 cm thick
Cracking	: No cracks between 5 mm and 50 mm thickness



## Time Factors

Drying Time	: 8 hours at $20^\circ\text{C}$ and 65% RH
Full Curing Time	: 28 days at $20^\circ\text{C}$ and 65% RH
Ready for painting	: 52 hours at $20^\circ\text{C}$ and 65% RH
Plastering Duration	: 60–90 minutes at $20^\circ\text{C}$
Socket Duration	: 120–180 minutes at $20^\circ\text{C}$ and 65% RH
Shelf Life	: 1 year from the date of production under ideal conditions (Store in a dry place at $5\text{--}35^\circ\text{C}$ )



# Technical Specifications

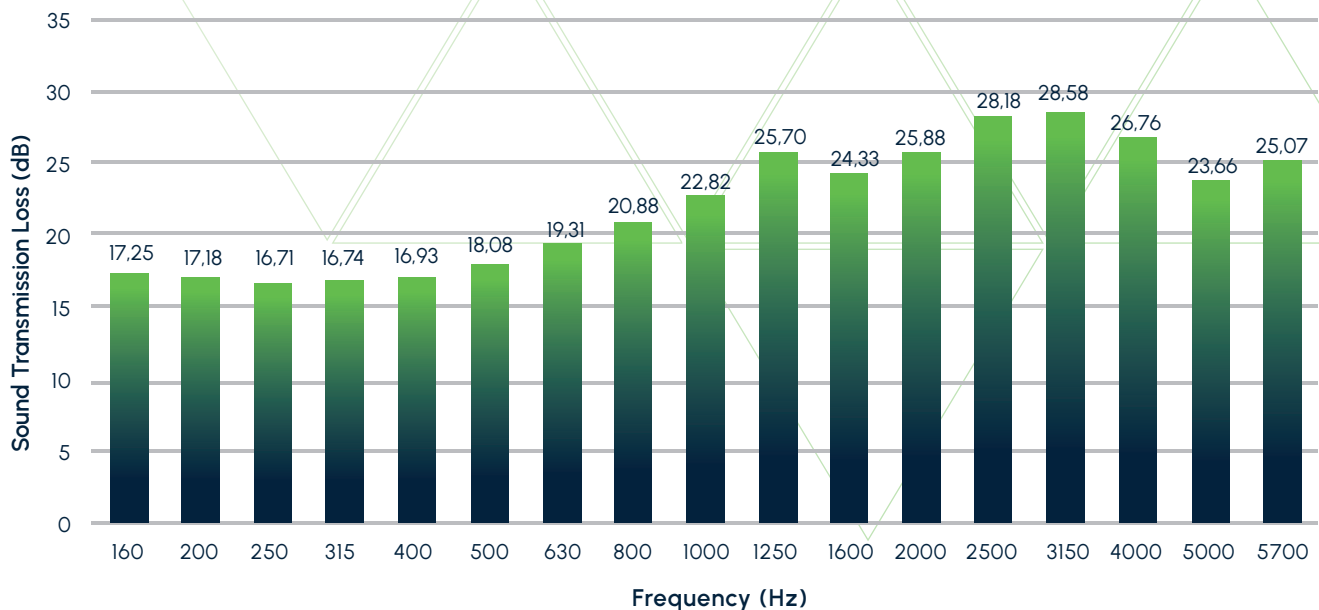
## COMPARISON OF MATERIALS USED IN CONSTRUCTION

Insulation Composite Material	Thermal Conductivity ( $\lambda$ ) W/mK	Density kg/m <sup>3</sup>
WELTEZ	0,045	160-190
Plaster (Gypsum)	0,35	1100
Gas Concrete	0,14	500
Dark Plaster	0,87	1800
Brick with Cavities	0,34	700
Pumice Stone	0,18	600

## SOUND INSULATION (25mm Thick Weltez Insulation Plaster Sample)

Frequency (Hz)	Sound Transmission Loss (dB)	Frequency (Hz)	Sound Transmission Loss (dB)	Frequency (Hz)	Sound Transmission Loss (dB)
150	17,39	500	18,08	2000	25,88
160	17,25	630	19,31	2500	28,18
200	17,18	800	20,88	3150	28,58
250	16,71	1000	22,82	4000	26,76
315	16,74	1250	25,70	5000	23,66
400	19,93	1600	24,33	5700	25,07

Temperature (C°)	Humidity (%)
25,8	49

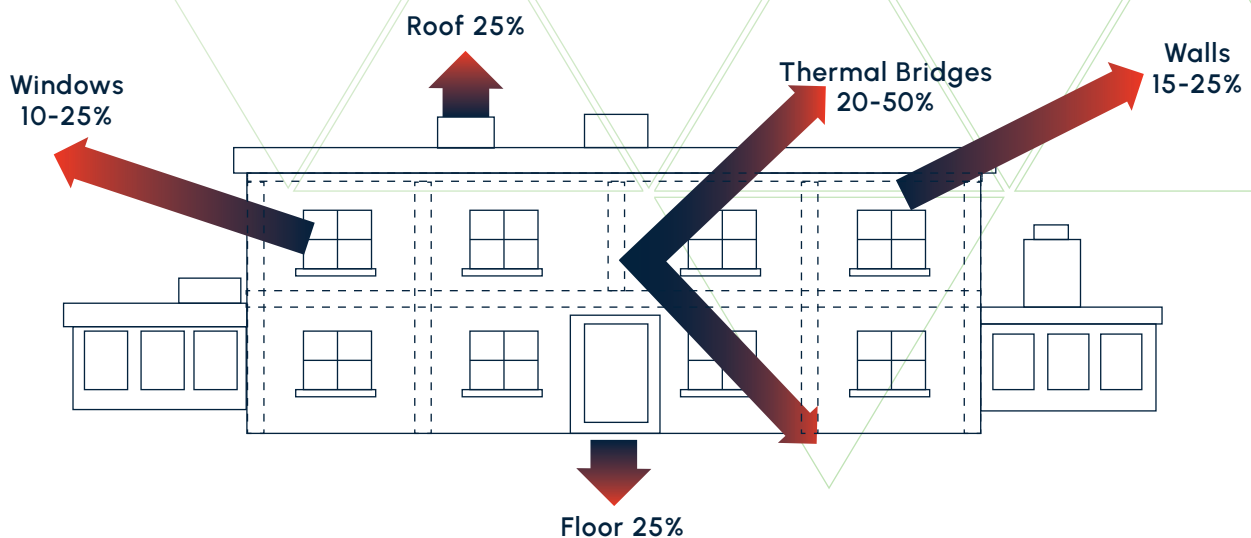


# Technical Specifications

## BENEFITS OF EXTERIOR INSULATION WITH WELTEZ

- Provides up to 50% energy savings by reducing heat losses.
- Due to these savings, it reduces the investment cost to approximately 2.5 years.
- Provides both thermal insulation and waterproofing on building facades.
- Prevents reinforced concrete elements from being exposed to corrosion.
- It prevents the steel in the load-bearing parts of the building from rusting and decreasing its capacity, so that there is no decrease in the earthquake resistance of the buildings.
- Reduces maintenance and repair costs of buildings.
- Initial investment costs of the building is minimized with WELTEZ.
- Provides protection from cold in winter and extreme heat in summer.
- It provides a more comfortable environment by preventing condensation and moisture in the interior of the building.
- It is applied quickly and does not contain any harmful effect for the environment.
- With the application of WELTEZ insulation, less fuel will be consumed and the amount of CO<sub>2</sub> released to the air will be less, making a significant contribution to the protection of the environment.

## THERMAL LOSS VALUES





# Technical Specifications

## LEIGHTWEIGHT AND FASTER APPLICATION THAN OTHERS

- WELTEZ is leight-weight.
- A package with 50-60 liters of end product with measurements of 45 x 75 cm only weights 8 - 9 kg.
- It reduces the weight and the load on the construction, which results in an improvement of the statics.
- It is easy to transport.
- In contrast to conventional insulation material and plasters, WELTEZ is roughly 7 times faster and easier to apply and thus enables a straightforward execution with a short construction time and saves both time and costs
- One package of WELTEZ applied with a thickness of 1 cm allows coating of an area of 3m<sup>2</sup>.
- It can be applied upon a diverse range of materials.
- It is economically worthwhile and does not require additional use of plaster, nets or screwing connections.

## COMPARISON OF APPLICATION STEPS

WELTEZ APPLICATION STEPS	APPLICATION STEPS FOR OTHER INSULATIONS
1. External Plaster with spraying machine	1. Rough Plaster
2. Exterior Paste	2. Adhesive application under styrofoam
3. Final Paint	3. Styrofoam bonding
	4. Styrofoam plugging
	5. Applying adhesive on styrofoam
	6. Netting on styrofoam
	7. Adhesive on net
	8. Mineral plaster application
	9. Paint Primer
	10.Final Paint

## INSULATING PLASTER

- BASIC TECHNICAL CHARASTERISTICS
- (TS EN 998-1)(T 1. W 1, CS II)
- Poz No (TR)
- 04.484-Insulating Plaster
- Inorganic Bounded Heat and Water Insulated, Breathing, Premixed (Fabrication) Rough/Fine Insulating Plaster (TS EN 998-1)(T 1. W 1, CS II)

# Technical Specifications

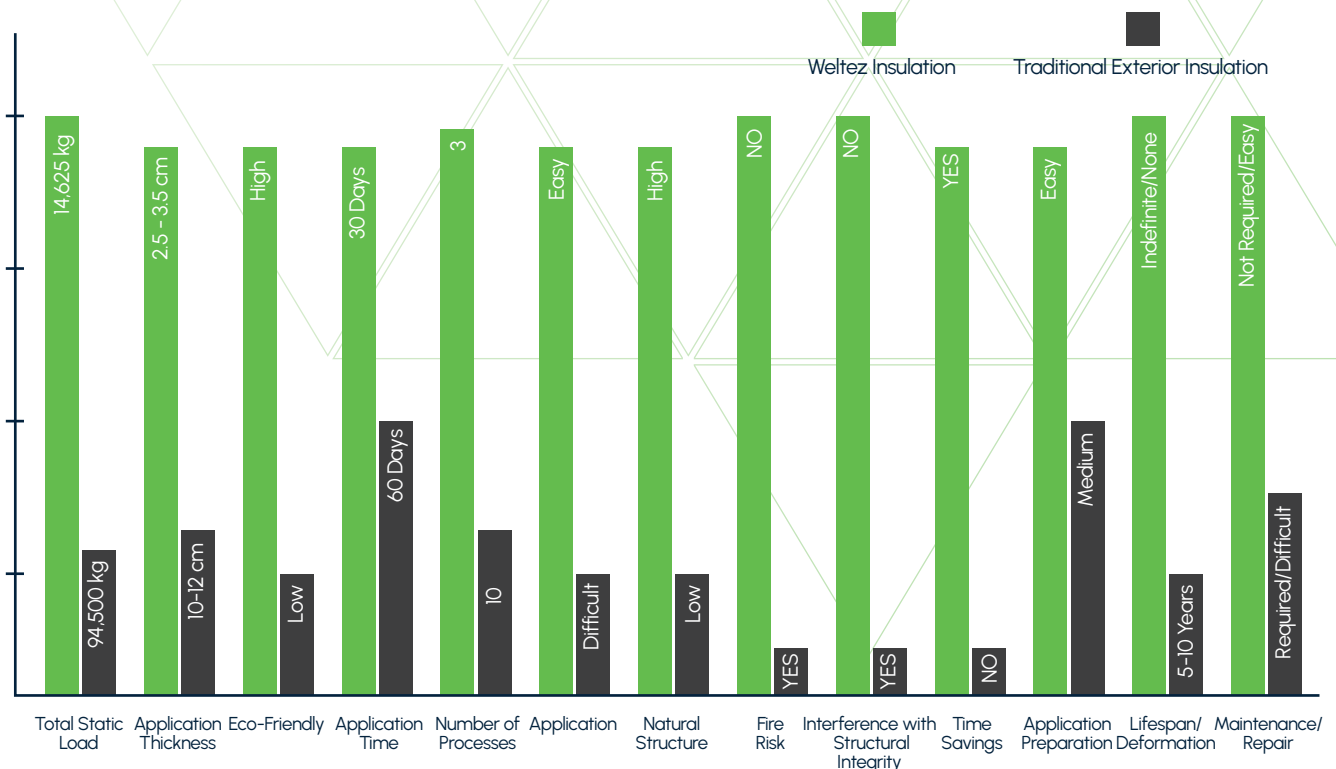
A greener future, high efficiency, and long-term savings

Weltez's innovative and high-engineering insulation plasters add long-term value to your building's quality and comfort from the moment they are applied

Unlike traditional exterior insulation, buildings undergo fewer processes due to the shorter application time and fewer stages. Weltez's lightweight insulation plaster takes structural integrity to the next level. It is approximately 6-7 times lighter than traditional exterior insulation. Thanks to its natural components, it does not contain carcinogenic substances, unlike many traditional exterior insulation materials. It prevents the formation of dampness, mold, and fungus, and further prevents the deformation of the structure. The joint application of Weltez interior insulation plaster will maximize these efficiencies.

Procedures such as drilling walls and applying dowels, which are performed in traditional exterior insulation, are not necessary with the Weltez Insulation application. For an average area of 1,500 m<sup>2</sup>, traditional methods require more than 6,000 pcs 10 cm dowel holes and applications. This application, done by drilling the walls, can affect the building's earthquake resistance.

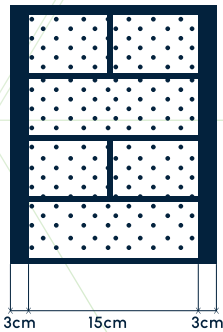
In the example below, you can examine the comparisons for an exterior facade area calculation of 1,500 m<sup>2</sup>.





## EXTERNAL WALL HEAT LOSS SAMPLE CALCULATIONS

### CALCULATION FOR TRADITIONAL PLASTER

Wall Element	Thickness D (cm)	Heat Transfer Coefficient, $\lambda \rightarrow (W/mK)$	
External Plaster	3,0	1,4 cement mortar	
Outer Wall	15	0,2	
Internal Plaster	3,0	0,87 lime-cement mortar	
		$\alpha_o = 0,04 (m^2.K/W)$ $\alpha_i = 0,13 (m^2.K/W)$	

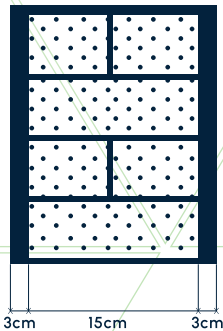
$$1/U = 1/\alpha_i + d_1/\lambda_1 + d_2/\lambda_2 + d_3/\lambda_3 + 1/\alpha_o$$

$$1/U = 0,13 + (0,03 / 0,87) + (0,15 / 0,20) + (0,03 / 1,4) + 0,04$$

$$1/U = 0,971 \rightarrow U = 1,03 W/m^2K$$

Calculated Value:  $U = 1,03 W/m^2K$

### CALCULATION FOR WELTEZ INSULATION PLASTER

Wall Element	Thickness D (cm)	Heat Transfer Coefficient, $\lambda \rightarrow (W/mK)$	
Weltez External Plaster	3,0	0,045	
Outer Wall	15	0,2	
Weltez Internal Plaster	3,0	0,045	

Calculated Value:

0,444 W/m<sup>2</sup>K

# Technical Specifications

## OUR STRENGTH – EFFORTLESS APPLICATION ON ALL TYPES OF SURFACES

A BREATHABLE, READY-TO-USE INSULATION PLASTER FOR BUILDING ELEMENTS,  
FEATURING A HYDROPHOBIC, FIRE-RESISTANT, LIGHTWEIGHT INORGANIC BINDER.

PRODUCTS	FEATURES	APPLICATION SURFACES
EXTERNAL PLASTER	<ul style="list-style-type: none"><li>•Insulation in both hot and cold environments</li><li>•Non-combustible (Class A1)</li><li>•Hydrophobic (water-repellent)</li><li>•Sound insulation</li><li>•Natural content and environmentally friendly</li><li>•Healthy (does not cause condensation, resists mold and moisture, not suitable for microbial growth)</li><li>•Saves on labor costs</li><li>•Lightweight, applies minimal load on the structure</li><li>•Economical</li></ul>	<ul style="list-style-type: none"><li>•Exterior surfaces of buildings</li><li>•Brick, pumice blocks, autoclaved aerated concrete (AAC/Ytong), concrete, columns, and beams</li></ul>
INTERNAL PLASTER	<ul style="list-style-type: none"><li>•Insulation in both hot and cold environments</li><li>•Non-combustible (Class A1)</li><li>•Breathable structure that transfers internal moisture without retaining it</li><li>•Sound insulation</li><li>•Natural content and environmentally friendly</li><li>•Healthy (does not cause condensation; resists mold and moisture, not suitable for microbial growth)</li><li>•Saves on labor costs</li><li>•Lightweight, applies minimal load on the structure</li><li>•Economical</li></ul>	<ul style="list-style-type: none"><li>•Interior walls and ceilings of all buildings</li><li>•Workplaces</li><li>•Shopping centers</li><li>•Schools</li><li>•Hotels</li><li>•Residences</li></ul>
ROOF PLASTER	<ul style="list-style-type: none"><li>•Insulation in both hot and cold environments</li><li>•Non-combustible (Class A1)</li><li>•Hydrophobic (water-repellent)</li><li>•Sound insulation</li><li>•Natural content and environmentally friendly</li><li>•Healthy (does not cause condensation; resists mold and moisture, not suitable for microbial growth)</li><li>•Saves on labor costs</li><li>•Lightweight, applies minimal load on the structure</li><li>•Economical</li></ul>	<ul style="list-style-type: none"><li>•Building terraces</li><li>•Basement floors</li><li>•Substrates for coatings</li><li>•Flat and sloped roofs made of all types of materials (concrete, etc.)</li><li>•Structural terraces</li></ul>
FLOOR PLASTER	<ul style="list-style-type: none"><li>•Insulation in both hot and cold environments</li><li>•Non-combustible (Class A1)</li><li>•Hydrophobic (water-repellent)</li><li>•Sound insulation</li><li>•Natural content and environmentally friendly</li><li>•Healthy (does not cause condensation; resists mold and moisture, not suitable for microbial growth)</li><li>•Saves on labor costs</li><li>•Lightweight, applies minimal load on the structure</li><li>•Economical</li></ul>	<ul style="list-style-type: none"><li>•Wet floors</li><li>•Areas in buildings requiring waterproofing</li><li>•Basement slabs</li><li>•Terraces and roofs</li><li>•Foundation retaining walls in buildings</li></ul>



# Frequently Asked Questions

## **What is PERLITE?**

Perlite is a material used in construction. It is a naturally occurring silica-based volcanic rock containing approximately 74% SiO<sub>2</sub> and around 15% Al<sub>2</sub>O<sub>3</sub>. Raw perlite aggregate is obtained by crushing these rocks at specific intervals.

## **How is PERLITE transformed into WELTEZ Construction Material?**

In expanded perlite facilities, the raw perlite is first pre-dried at around 400°C. It is then exposed to temperatures between 700–1200°C, where the water content is vaporized. As a result, the perlite expands up to 20 times its original volume, similar to popcorn.

## **Why is WELTEZ Thermal Insulation Plaster Preferred?**

Its most important feature is its extremely low weight. Compared to alternative construction materials and mixtures, it is approximately 50% lighter. Moreover, it is up to 7 times more durable than other available products.

## **Does WELTEZ Thermal Insulation Plaster Provide Heat Insulation?**

· Yes,  
Perlite provides benefits such as vapor diffusion, fire resistance, and energy savings.

## **Does WELTEZ Thermal Insulation Plaster Prevent Moisture Formation?**

· Yes, it does.  
Due to its inorganic composition (inorganic = not containing living cells), perlite does not support biological life. This prevents the formation of dampness and mold.

## **Does WELTEZ Thermal Insulation Plaster Save Time?**

· Yes,  
It saves time thanks to its ease of application and minimal required processes.

## **What Should Be the Application Thickness of WELTEZ Thermal Insulation Plaster?**

Considering the climate conditions and building structure, a minimum thickness of 1.5 cm is recommended.

## **What Is the Health Significance of PERLITE?**

As a breathable material, perlite offers a healthier alternative compared to other options, placing it one step ahead in terms of user well-being.

## **When Does Wearing Begin in Buildings Where WELTEZ Thermal Insulation Plaster is Applied?**

When used together with its decorative coating, our perlite material not only resists deformation but also strengthens over time. There is no occurrence of wearing, deterioration, or degradation.

## **What Are the Advantages of Using WELTEZ Thermal Insulation Plaster in Applications?**

Unlike its alternatives, WELTEZ requires fewer application steps and offers a more robust structure. Its lightweight nature also prevents additional load on the building, resulting in time and energy savings.

## **What Is the Fire Resistance and Fire Classification of WELTEZ Thermal Insulation Plaster?**

Tests have shown that our perlite material can withstand temperatures up to 1000°C.

## **Can I Obtain an Energy Performance Certificate (EPC) with WELTEZ Thermal Insulation Plaster?**

· Yes,  
Our product meets the necessary standards to obtain an EPC (Energy Performance Certificate).

## **Can WELTEZ Thermal Insulation Plaster Be Applied by Hand or Machine?**

· Yes,  
It is suitable for both manual and machine application methods.

# How is it applied?

The surface to be plastered must be free of oil, dirt, dust, and paint. In special applications (rough walls), the adhesion value of the plaster can be increased if necessary.

For walls made of materials such as brick, pumice blocks, etc., it is sufficient to moisten the surface and remove any dust.

Main laths are mounted by nailing or gluing according to the desired insulation thickness.

The wall is made ready for insulation application.

## WELTEZ PREPARATION AND APPLICATION STAGES

For 1 kg of dry WELTEZ

1. Pour 0.225 liters of water into a clean tank to ensure small components remain in the tank.
2. Add the entire 1 kg of powder material into the tank in one go.
3. Add an additional 0.600 liters of water into the tank.
4. Mix the material for 3 minutes with up-down and circular motions.
5. Check the plaster with a trowel.
6. Apply the mixture to the relevant surface either manually or with a machine.
7. This mixture must be used within 2 hours.

## IMPORTANT NOTES

To ensure the small polymer components in the bag are properly dispersed, all material must be poured into the tank AT ONCE.

The desired insulation material can be designed during the production process with a polymer recipe tailored to climate conditions (hot-cold-humid-dry...) and surface type (e.g., vibrating metal factory wall...)

The prepared mixture must be consumed within 2 hours.

Application temperature should be above 5 °C.

### Drying times:

- After 8 hours (at 20 °C): Weltez becomes workable.
- After 10 days (at 20 °C): special tests can be performed.
- After 28 days (at 20 °C): complete drying (calcification) is achieved.

WATER RATIOS	For 1 kg WELTEZ (dry plaster):	For 8 kg (dry plaster):	For 16 kg (dry plaster):
Total water:	1 liters	8 liters	16 liters
Stage 1 water:	0.280 liters	2.2 liters	4.5 liters
Stage 2 water:	0.720 liters	5.8 liters	11.5 liters

# Certificates and Documents

**Ekol**  
BELGELENDİRME

**CERTIFICATE**

**WELTEZ İZOLASYON VE YAPI KİMYASALLARI ANONİM ŞİRKETİ**

KAZIÇEŞME MAH. 245. SK. NO: 5 ZEYTİNBURNU/ İSTANBUL

**KAPSAM:** MINERAL SES/İSİ İZOLASYON MALZEMELERİNİN İMALATI (CÜRUF YÜNLERİ, TAŞ YÜNÜ, MADENİ YÜNLER, PUL, PUL AYRILMIŞ VERMİKULİT, GENLEŞTİRİLMİŞ KİL, SOĞUK TANDIŞI PLAKASI, VB. İSİ VE SES YALITIM MALZEMELERİ)

**SCOPE:** MANUFACTURING OF MINERAL SOUND/HEAT INSULATION MATERIALS (SLAG WOOL, ROCK WOOL, MINERAL WOOL, FLAKED VERMICULITE, EXPANDED CLAY, COLD TUNDISH PLATE, ETC. HEAT AND SOUND INSULATION MATERIALS)

**ISO 14001:2015**  
**ÇEVRE YÖNETİM SİSTEMİ**  
(ENVIRONMENTAL MANAGEMENT SYSTEM)

Kuruluşunu ve uyguladığını belgelemekte ve EKOL tarafından gerçekleştirilen denetim bu yönetim sisteminin yukarıda belirtilen standartları karşıladığını doğrulamaktadır.

It certifies that it is established and implemented, and the audit performed by EKOL it confirms that this management system meets the requirements of the following standard.

Sertifika Numarası / Certificate Number : 9101938292  
Sertifika Kodu / Certificate Code : WELTEZ  
Sertifika Yayın Tarihi / Certificate Issue Date : 07.05.2025  
Sertifika Geçerlilik Tarihi / Certificate Validity Date : 07.05.2026  
Sertifika Periyodu / Certificate Period : 1 Yıl / 1 Year

IAC ACCREDITED IAC-005-004  
Ekol Belgeleme Şirketi  
Maslak Mah. Maslak Meydanı Sokak Beşçi Güz Plaza No:1 Kat:15 D:05 Sarıyer/İstanbul/Türkiye Tel: +90 212 909 12 07  
Belgeyi görüntüleyin: <https://www.ekolbelgeleme.com.tr/weltez>

**Ekol**  
BELGELENDİRME

**CERTIFICATE**

**WELTEZ İZOLASYON VE YAPI KİMYASALLARI ANONİM ŞİRKETİ**

KAZIÇEŞME MAH. 245. SK. NO: 5 ZEYTİNBURNU/ İSTANBUL

**KAPSAM:** MINERAL SES/İSİ İZOLASYON MALZEMELERİNİN İMALATI (CÜRUF YÜNLERİ, TAŞ YÜNÜ, MADENİ YÜNLER, PUL, PUL AYRILMIŞ VERMİKULİT, GENLEŞTİRİLMİŞ KİL, SOĞUK TANDIŞI PLAKASI, VB. İSİ VE SES YALITIM MALZEMELERİ)

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**TS EN ISO 9001:2015**  
**KALİTE YÖNETİM SİSTEMİ**  
(QUALITY MANAGEMENT SYSTEM)

Kuruluşunu ve uyguladığını belgelemekte ve EKOL tarafından gerçekleştirilen denetim bu yönetim sisteminin yukarıda belirtilen standartları karşıladığını doğrulamaktadır.

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**Ekol**  
BELGELENDİRME

**CERTIFICATE**

**WELTEZ İZOLASYON VE YAPI KİMYASALLARI ANONİM ŞİRKETİ**

KAZIÇEŞME MAH. 245. SK. NO: 5 ZEYTİNBURNU/ İSTANBUL

**KAPSAM:** MINERAL SES/İSİ İZOLASYON MALZEMELERİNİN İMALATI (CÜRUF YÜNLERİ, TAŞ YÜNÜ, MADENİ YÜNLER, PUL, PUL AYRILMIŞ VERMİKULİT, GENLEŞTİRİLMİŞ KİL, SOĞUK TANDIŞI PLAKASI, VB. İSİ VE SES YALITIM MALZEMELERİ)

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**ISO 45001:2018**  
**İŞ SAĞLIĞI VE GÜVENLİĞİ YÖNETİM SİSTEMİ**  
(OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM)

Kuruluşunu ve uyguladığını belgelemekte ve EKOL tarafından gerçekleştirilen denetim bu yönetim sisteminin yukarıda belirtilen standartları karşıladığını doğrulamaktadır.

It certifies that it is established and implemented, and the audit performed by EKOL it confirms that this management system meets the requirements of the following standard.

Sertifika Numarası / Certificate Number : 9101938293  
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**Ekol**  
BELGELENDİRME

**CERTIFICATE**

**DECLARATION OF CONFORMITY**

**NAME :** WELTEZ İZOLASYON VE YAPI KİMYASALLARI ANONİM ŞİRKETİ  
**ADDRESS :** KAZIÇEŞME MAH. 245. SK. NO: 5 ZEYTİNBURNU/ İSTANBUL

Teslim edilen versiyonumuzda sağda açıklanan ürünler, tarafımızca piyasaya sürüldüğü şekliyle, tasarımı ve tipine göre 2001/95/AT GENEL ÜRÜN DİREKTİFİ'ne dayanarak uygun temel güvenlik ve sağlık gereksinimlerine uygundur. Tarifemize katılanlar bu üründe değişiklik yapmadan derinlemesine bu beyan gereğini yerine getirir.

The product described below is not defined version, as placed on the market by us, complies with the appropriate essential safety and health requirements based on the GENERAL PRODUCT DIRECTIVE 2001/95/EC by design and type. This declaration will lose its validity if changes are made to this product as agreed by us.

**Description of the Product / Ürün Tanımı:**  
MINERAL SES/İSİ İZOLASYON MALZEMELERİNİN İMALATI (CÜRUF YÜNLERİ, TAŞ YÜNÜ, MADENİ YÜNLER, PUL, PUL AYRILMIŞ VERMİKULİT, GENLEŞTİRİLMİŞ KİL, SOĞUK TANDIŞI PLAKASI, VB. İSİ VE SES YALITIM MALZEMELERİ)

**Product Commercial Brand / Marka:**  
WELTEZ

**Related Directives/ İlgili Direktifler:**  
2001/95/AT GENEL ÜRÜN DİREKTİFİ

**Regulations Applied according to HARMONIZED STANDARDS:**  
ISO 9001, ISO 14001

**CLASSIFICATIONS:**  
CERTIFICATE NUMBER : 9101938294  
CERTIFICATE CODE : WELTEZ  
CERTIFICATE ISSUE DATE : 07.05.2025  
CERTIFICATE VALIDITY DATE : 07.05.2026

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# R&D Project

On behalf of your company, **WELTEZ YAPI KİMYASALLARI A.Ş.**, the evaluation process by the review committee for the project titled "Development of a New Generation Perlite-Based Insulation Material" has been completed. As a result of the evaluations, it has been deemed appropriate for the mentioned project to be carried out within the scope of Biruni Technopark.

The evaluations by our reviewers are as follows:

Reviewer 1:

It is clear that the project will benefit both the company and the national economy at a domestic level. Given the extensive successful project management experience of the company's staff in the sector, it is observed that the targeted project can be successfully sustained. The technology to be used within the scope of the project is appropriate for the objectives.

Reviewer 2:


The main aim of the submitted project is to develop a ready-to-use insulation plaster mortar that is inorganic binder-based, breathable, and provides thermal and water insulation by using expanded perlite. The project's objectives and rationale have been sufficiently presented, assuming successful completion will yield significant benefits. The perlite-based insulation material planned for development is expected to contribute importantly to critical areas such as energy savings, structural safety, and environmental sustainability, leading to both economic and national gains. There is commercialization potential within this scope. It is foreseen that the project's financial resources will be covered by equity capital. Although the project budget is deemed sufficient, it may be challenging to secure this level of funding. Applying for external funding sources may be advisable. Overall, my opinion on the project is positive.

Reviewer 3:

The project application aims to develop an innovative and environmentally friendly product and is well-structured in terms of technical details, work plan, and goals. The expanded perlite-based insulation material to be developed holds potential to fill a significant gap in the sector with features such as energy savings, waterproofing, and fire resistance. The project demonstrates a technology development and commercialization approach capable of providing competitive advantage in both national and international markets. It aims to develop a low carbon footprint product aligned with sustainability goals, offering environmental benefits. The necessary equipment is adequate and appropriate for the project objectives. Compliance of the product with environmental regulations such as the European Green Deal indicates strong demand potential in international markets. Additionally, it holds potential to create import substitution opportunities in the local market. The academic and industrial experience of the project team members is supportive of achieving the project goals. Overall, the application is assessed as a strong project in terms of objectives, equipment infrastructure, and commercialization potential. Accordingly, it is deemed appropriate for the project to be conducted within the Biruni University Technology Development Zone.

[illegible]

Ölçüm Değeri : 2.0000000000000000

 **BİRÜN**  
UNIVERSİTESİ

**BİRÜN ÜNİVERSİTESİ TEKNOLOJİ GELİŞTİRME BÖLGESİ  
YÖNETİCİ VE BİLİRLİK A.Ş.**

**Tarih :** 25.12.2024

**Konu :** 1/24 / PİYODUR - 632

**İmza :** Fikri Nispeti Hukuk İşleriye Müdürlüğüne Gönderilmiş olan diğer  
değerlendirmeler.

**WELTSE ISOLATION VE YAPI KİRALAMASI A.Ş.**

BİRÜN ÜNİVERSİTESİ TEKNOLOJİ GELİŞTİRME BÖLGESİ YÖNETİCİ VE BİLİRLİK A.Ş. Teknoloji Geliştirme Bölgesine katıldığı 19/11/2023 Kurulda sayın **Partli Takanur Fırat Nispeti Hukuk İşleriye Müdürlüğüne Gönderilmiş olan diğer değerlendirme** ile görüşen **BİRÜN ÜNİVERSİTESİ TEKNOLOJİ GELİŞTİRME BÖLGESİ YÖNETİCİ VE BİLİRLİK A.Ş.** ile 0001 sayılı karar raporunda A.Ş. tarafına çıkarılan protokolünde yer alan görüşme.

**Partli Takanur Fırat Nispeti Hukuk İşleriye Müdürlüğüne Gönderilmiş olan diğer değerlendirme** ile görüşen **BİRÜN ÜNİVERSİTESİ TEKNOLOJİ GELİŞTİRME BÖLGESİ YÖNETİCİ VE BİLİRLİK A.Ş.** ile görüşme 25.12.2024 tarihli diğer karar ile birliğin karar 25.12.2024 tarihli kararında ayrılmıştır.

**Proje için 1350 Satış Değeri ve diğer değerlendirme değerlendirme**

**Proje için görüşme sonuçlandırılmıştır.**

**Saygılarımla**

**Emel Kızılcı**

**BİRÜN ÜNİVERSİTESİ TEKNOLOJİ GELİŞTİRME BÖLGESİ YÖNETİCİ VE BİLİRLİK A.Ş.**

**Yönetim Kurulu Başkanı Dr. Fikri Nispeti Hukuk İşleriye Müdürlüğüne Gönderilmiş olan diğer değerlendirme**

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