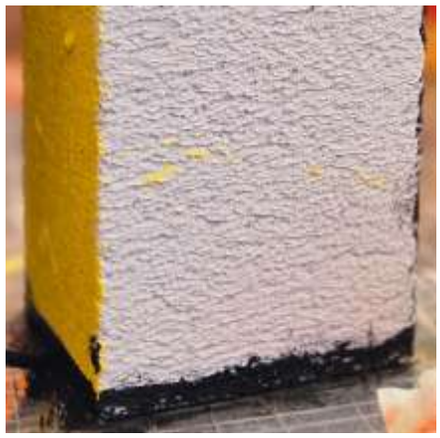






CELCO

Built to last.
Designed for generations.

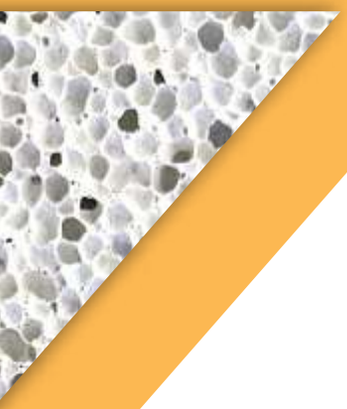






CELCO

Authentically Romanian,
proudly made in Romania.



We strongly believe that we have a major

RESPONSIBILITY

towards the society in which we operate.

We actively participate in a harmonious and beautiful

DEVELOPMENT

of the surrounding environment,

and our role is to create

VALUE

not only for shareholders, but also for society, constantly considering the impact of our actions on

FUTURE GENERATIONS.

What will you find in this catalog?

Strategic Partners

PRO BCA · OMER · EuLA · ORDINUL ARHITECȚILOR DIN ROMÂNIA DOBROGEA · eaaca · CLUSTER pRO nZEB · BEST MANAGED COMPANIES · CAMERA DE COMERȚ INDUSTRIE ȘI NAVIGAȚIE · Federația Română de Ciclism FRC · FRT

WE BUILD SUSTAINABLY, WE CREATE THE FUTURE.

TOGETHER WE RAISE THE STANDARDS!

In a constantly changing world, construction materials must meet increasingly strict requirements for safety, sustainability, and energy efficiency. CELCO AAC is not just a masonry material, but a complete solution for modern, efficient, and durable buildings, designed to meet the highest standards of quality and performance.

From the production stage, our AAC is designed to reduce environmental impact, contributing to buildings that consume less energy and provide superior comfort for residents. As part of future solutions, CELCO supports NZEB constructions, offering products aligned with the European Union's requirements for energy efficiency and CO2 emission reduction.

By choosing CELCO AAC, you choose a safer, more efficient, and more responsible future.

CELCO and Simone Tempestini: Performance Accelerators!

In motorsport, every decision counts. Precision, safety, and reliability are essential elements for success.

The same goes for construction. CELCO AAC is a material that leaves no room for compromise – just like a rally champion.

Performance means strength, efficiency and safety, and CELCO takes these principles to the next level, offering masonry solutions for durable and sustainable buildings.

Simone Tempestini and CELCO – the courage to push limits! In competitions, top technology and materials make the difference.

CELCO AAC delivers the same precision, innovation, and reliability needed to build the future.

Choose excellence!

3 Factories = One Name

CELCO®

Adhesives Factory

AAC Factory

Lime Factory

Tradition, Innovation and Excellence in Construction:

CELCO

With a tradition of over half a century, CELCO has established itself as a national leader in the production of construction materials, offering complete and innovative solutions for Romania's construction sector.

Evolution and Diversification

Founded in 1973, CELCO produced the first Autoclaved Aerated Concrete (AAC) block, using natural raw materials such as sand, lime, cement, and water. Over the decades, the company has expanded its portfolio to include:

- **5 Five distinct types of AAC, tailored to the diverse needs of the market.**
- **9 Nine types of adhesives and dry mortars, providing complete solutions for masonry and finishing.**
- **3 Three types of lime, produced in the most modern factory of its kind in Southeastern Europe.**
- **1 IZOMINERAL, an innovation in thermal insulation, manufactured entirely in CELCO's own facilities.**

Rooted in the Past, Present, and Future

CELCO harmoniously combines tradition with innovation, being present in all temporal dimensions:

- **Past: With extensive experience gained over more than 50 years, the company has consistently demonstrated its commitment to quality and excellence.**
- **Present: Meeting today's market demands, CELCO offers efficient, healthy, and eco-friendly products, contributing to sustainable and energy-efficient constructions.**
- **Future: The company is making significant progress toward future standards such as NZEB (Nearly Zero Energy Building) and ZEB (Zero Energy Building), ensuring that its products will meet the energy efficiency and sustainability requirements of the coming decades.**

Commitment to Community and Sustainability

CELCO stands out with a carbon footprint of only 143 kg/m³ for Standard AAC, well below the European average of 180 kg/m³, strengthening its position as a pioneer in sustainable construction in Romania and Europe.

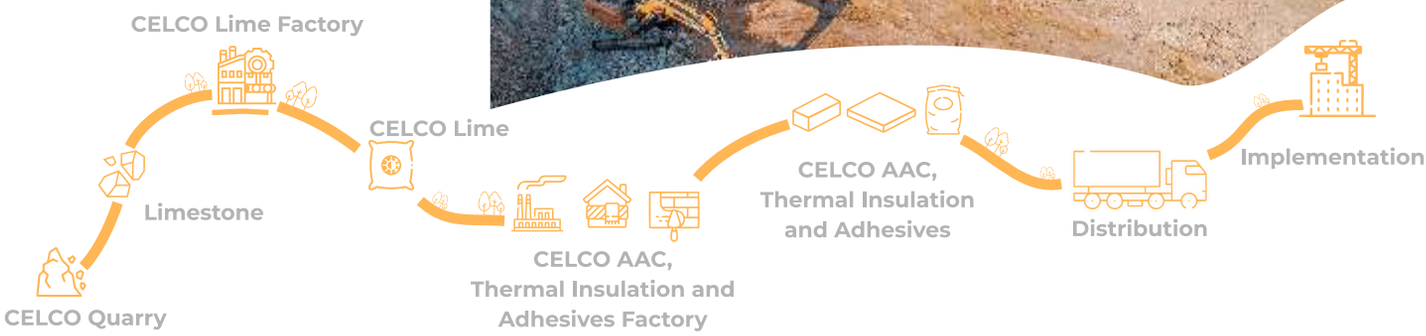
In addition to developing sustainable construction materials, CELCO actively invests in the community, supporting educational, cultural, and sports initiatives, remaining a pillar of progress, close to people and the future of the community.

The Journey of CELCO Products
From Raw Material to Durable Constructions

The quality of a construction material begins with the raw material, and CELCO has full control over the entire production process, from limestone extraction to the final product used on site.

Lime – The Foundation of Premium AAC

To obtain high-performance, durable, and energy-efficient AAC, one of the essential components is high-purity lime. CELCO is the only Romanian manufacturer that owns both its own limestone quarry and its own lime factory, ensuring superior quality and complete traceability of the CELCO AAC product.



An Optimized Path to Excellence

CELCO Quarry – This is where it all begins, with the extraction of high-purity limestone.
CELCO Lime Factory – Strategically built near the quarry, ensuring an efficient and sustainable production chain.
Minimal distance between factories – only 34 km apart, reducing environmental impact while maintaining consistent quality.
Manufacturing of AAC, thermal insulation, and adhesives – All materials are produced locally in modern facilities equipped with state-of-the-art technologies.
****Distribution and implementation – Materials are quickly delivered to construction sites, providing builders with 100% compatible solutions, with minimal waste and maximum efficiency.**

Thanks to this fully controlled production flow, CELCO offers premium products made from natural raw materials, perfectly compatible with each other, ideal for durable and energy-efficient constructions.




AAC


CELCO
megaterm
CELCO
megaterm
CELCO
megaterm
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megaterm
CELCO
supertook
CELCO
supertook
CELCO
struktoterm
CELCO
struktoterm

AAC Recipe

- Autoclaved Aerated Concrete -

Ingredients:

- Sand
- Cement
- Lime
- Water
- Gypsum
- Expanding agent

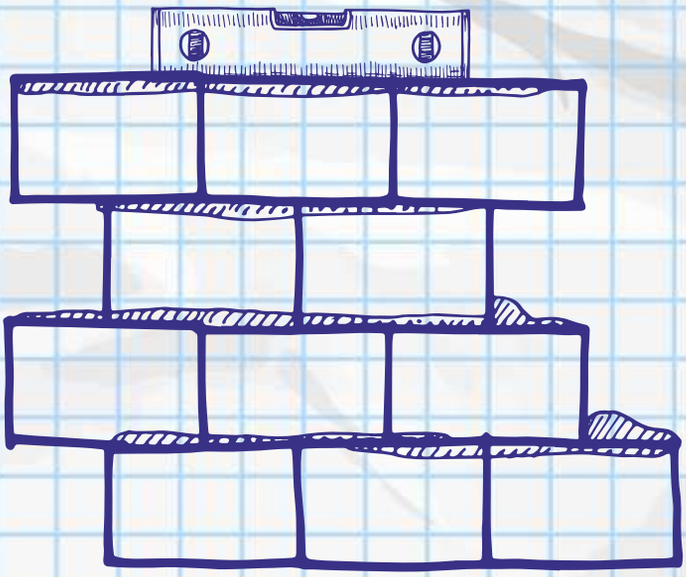
Mix everything and pour into molds.
Let it rise for 40 minutes and then set for 3 hours.
Remove from the mold and cut lengthwise and crosswise to obtain the desired dimensions.
Place in the 190-degree kiln. programmed with steam and pressure (12 bars).

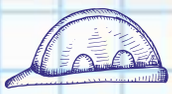
Hints

For the AAC to come out perfect. one of the main aspects is the quality of the ingredients.

Equally important are the equipment and the method of use.

*if it doesn't come out right the first time. experience is the key.





NZEB Masonry with Thin Joints

The thin-joint masonry system from CELCO combines 2.25 m³ of high-quality CELCO AAC blocks with 3 bags of CELCO ZID DDM5 or DDM10 mortar (a special mortar designed for thin-joint masonry of 1–3 mm).

The choice of CELCO AAC type depends on the application (interior/exterior walls) and requirements: thermal insulation, sound insulation, or compressive strength. All blocks have maximum fire resistance, classified as Euroclass A1 for reaction to fire.

thermal efficiency
0,08 ± 0,01 W/m°K
density
300 ± 25 kg/m³
compressive strength
Min. 1,5 N/mm²
fire reaction
clasa A1
thermal bridges reduced by
80%
sound insulation
40 - 52,5 Db

megaterm

***The best thermal insulation**

For walls with maximized thermal efficiency.

Applications:
Exterior walls for frame constructions.

Thicknes *centimeters*	15	20	25	30	35	37,5	40
DB	40	44	47	49	51	51.5	52,5

thermal efficiency
0,09 ± 0,01 W/m°K
density
350 ± 30 kg/m³
compressive strength
Min. 2 N/mm²
fire reaction
clasa A1
thermal bridges reduced by
80%
sound insulation
41 - 53 Db

megaterm plus

***Very good balance between thermal insulation and compressive strength**

For frame constructions that meet the requirements and regulations regarding building energy efficiency.

Applications:
Interior and exterior walls, multi-layer or single-layer, for frame constructions.

Thicknes *centimeters*	15	20	25	30	35	37,5	40
DB	41	44,5	48	50	52	52,5	53

AAC

thermal efficiency
0,10 ± 0,01 W/m°K

density
400 ± 30 kg/m³

compressive strength
Min. 2,5 N/mm²

fire reaction
clasa A1

thermal bridges reduced by
80%

sound insulation
42 - 54,5 Db

standard

***The most popular type.**

For multi-layer or single-layer exterior walls and high-strength interior walls.

Applications:
Non-load-bearing interior and exterior walls, multi-layer or single-layer, for frame constructions.

Thicknes *centimeters*	15	20	25	30	35	37,5	40
DB	42	46,5	49	51,5	53	53,5	54,5

thermal efficiency
0,12 ± 0,01 W/m°K

density
480 ± 30 kg/m³

compressive strength
Min. 3,5 N/mm²

fire reaction
clasa A1

thermal bridges reduced by
80%

sound insulation
44,5 - 56 Db

superblock

***Superior strength and sound insulation**

For soundproof constructions located in seismic areas, prone to floods and fires.

Applications:
Multi-layer or single-layer exterior walls and high-strength interior walls.

Thicknes *centimeters*	15	20	25	30	35	37,5	40
DB	44,5	48,5	51	53	54,5	55,2	56

thermal efficiency
0,15 ± 0,01 W/m°K

density
600 ± 50 kg/m³

compressive strength
Min. 5 N/mm²

fire reaction
clasa A1

thermal bridges reduced by
80%

sound insulation
47,5 - 57,5 Db

structoterm

***Superior strength and acoustic insulation**

For sound-insulated constructions located in seismic areas, prone to flooding and fire.

Applications:
Multi-layer or single-layer exterior walls and high-strength interior walls.

Thicknes *centimeters*	15	20	25	30	35	37,5	40
DB	47,5	51	53	55	56,5	57	57,5

EXCELLENT THERMAL INSULATOR – Energy savings, optimal thermal comfort

Thanks to its porous structure, CELCO AAC maintains the ideal temperature throughout the year, reducing heating and cooling costs for the home.

Exceptional thermal performance (λ = 0.10 W/mK)
Significant reduction of heat loss – Fewer temperature fluctuations, comfortable indoor climate.
Lower energy bills – An energy-efficient home means reduced maintenance costs.

The result? A warm house in winter and a cool house in summer, with significant savings on monthly bills.

RESISTANT – Uniform physical strength on all sides

CELCO AAC offers an ideal combination of strength, thermal insulation, and low weight, making structures built with this material less vulnerable to the effects of an earthquake.

Lightweight and durable: CELCO AAC is a lightweight yet highly durable material. This combination of features makes structures built with it less vulnerable to seismic forces and movements.

Shock absorption capacity: Thanks to its porous, uniform, and elastic structure on all sides, CELCO AAC has the ability to absorb shocks and vibrations produced by an earthquake. This feature helps reduce the transfer of seismic forces to other structural elements of the building.

Compressive strength: CELCO AAC is a material with good compressive strength, making it suitable for supporting the loads and forces generated during an earthquake.

ACOUSTIC INSULATOR – Complete quiet, absolute comfort

CELCO AAC creates a shield against external noise, providing a quieter environment in homes and commercial buildings.

- Significantly reduces noise pollution – Ideal for houses located in crowded urban areas or near heavy traffic.
- Improves quality of life – Less noise means better sleep and a more relaxing atmosphere.
- Acoustic protection for offices and commercial spaces – A more productive working environment without sound distractions.

The result? Increased comfort, less stress, and a pleasant atmosphere, regardless of location.

CELCO AAC = HEALTHY MATERIAL

Study on the Radioactivity of Construction Materials

According to the study conducted in 2015 by the Gheorghe Asachi Technical University of Iași, without exceeding the maximum values, Autoclaved Aerated Concrete (AAC) recorded much lower radioactivity indices than other masonry and insulation materials.

Certain admissible concentrations of radon, thorium, and potassium are established inside buildings, both at the European Union level and in Romania. According to Order MS 752/2018, the maximum allowable radioactivity indexes is 1.

Made from 100% natural raw materials – lime, sand, cement, water, gypsum, and a expansion agent – without toxic additives or hazardous compounds.

This simple yet perfectly balanced composition makes AAC a masonry material with a low environmental impact and a major advantage for the health of those living in buildings constructed with it. Being a mineral product, AAC is stable, does not emit harmful vapors, and contributes to creating a safe, clean, and comfortable indoor environment for generations to come.

NON-COMBUSTIBLE – Total protection against fires

A material that does not burn, does not emit toxic smoke, and does not spread flames. Safety is fundamental in any construction, and CELCO AAC offers Class A1 fire protection, acting as a safety shield for homes, commercial spaces, and public buildings.

- **Zero risks in case of fire – does not sustain burning, protecting the structure of the building.**
- **More time for evacuation – delays the spread of flames, increasing chances of rescue.**
- **Complies with the strictest fire safety standards – certified safety for any type of construction.**

The result? A safer home for you and your family, without the worry of fires.

CELCO AAC = ZERO WASTE ON SITE

Material waste – close to zero

Thanks to its structural and technical qualities, CELCO AAC has minimal technological losses during construction. This means fewer defects and less waste, which can reduce construction costs and improve project efficiency.

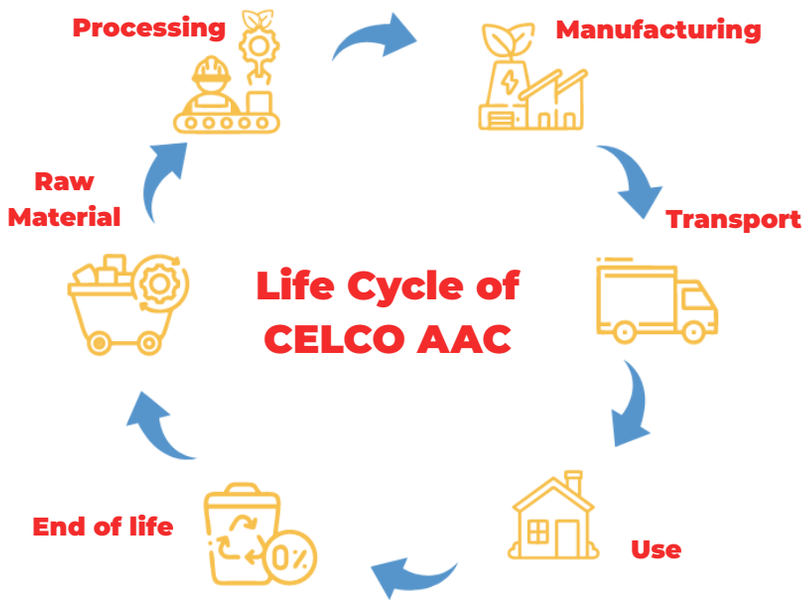
Cutting electrical grooves

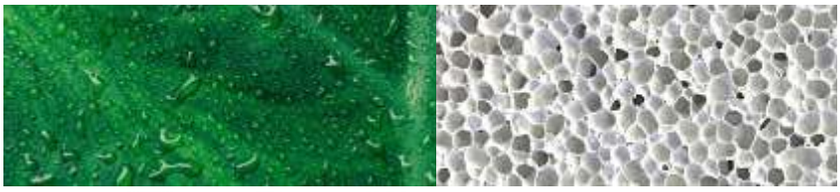
CELCO AAC facilitates electrical installations thanks to its low density, which allows quick cutting of grooves without extra effort. This makes interventions cleaner, more precise, and reduces execution time, contributing to the efficiency of the entire project.

video: how to cut electrical chases

Easy, precise, and fast cutting for any project

CELCO AAC can be cut quickly and precisely, either with special cutting machines, ideal for large projects, or manually with a saw for simple and efficient on-site adjustments. Its homogeneous structure allows accurate cuts with minimal effort, reducing waste and optimizing execution time.





Recyclable

A sustainable life cycle

CELCO AAC is fully recyclable, contributing to the circular economy in construction. The materials resulting from cutting, grinding, or demolition can be reintegrated into the production process, significantly reducing waste and operational costs. A sustainable, efficient choice that complies with modern responsible construction standards, CELCO AAC blocks are made only from raw materials that have no negative impact on the environment, both during production and throughout their entire lifespan.

An essential aspect in the effort to reduce the carbon footprint is the recarbonation potential of AAC. Research on AAC's ability to capture carbon dioxide from the atmosphere throughout the building's life cycle is remarkable. The recarbonation process can reduce global emissions by 43% and has the potential to turn the carbon footprint of AAC into a negative one.

CELCO AAC = LIGHTWEIGHT MATERIAL

Compared to other masonry materials, CELCO AAC stands out for its low weight, which places less load on the building's structural framework.

This advantage not only optimizes the use of materials for foundations and structural elements but also contributes to faster and more efficient execution.

In addition, the combination of low weight and excellent mechanical strength makes AAC ideal both for large-scale constructions and for projects where the total weight of the building must be carefully controlled. Thus, the use of this material provides structural safety, economic efficiency, and durability, without compromising thermal and acoustic comfort.

Weight	300 ± 25 kg/m³	350 ± 30 kg/m³	400 ± 30 kg/m³	480 ± 30 kg/m³	600 ± 50 kg/m³
Type	megaterm	megaterm plus	standard	superblock	structoterm

CELCO AAC = 100% Romanian

In a market where many construction materials come from imports, CELCO AAC stands out with an essential advantage: it is a 100% Romanian product, manufactured according to international standards.

With over half a century of experience and constant investments in technology, CELCO not only produces one of the highest-performing masonry materials in Romania but also supports the local economy, domestic workforce, and the development of the construction industry at a national level.

The largest AAC factory with 100% Romanian capital

Choosing this material means not only guaranteed quality but also supporting a strong Romanian brand that has proven over time it can compete with any international manufacturer. It means more than strong, high-performance walls – it means supporting innovation and the economic development of the country.

CELCO AAC Technical Specifications

	megaterm	megaterm plus	standard	superblock	structoterm
Applications	**Thermal masonry**	**Energy-efficient masonry**	**Efficient masonry**	**High-strength masonry**	**Load-bearing masonry**
Density	300 kg/m³	350 kg/m³	400 kg/m³	480 kg/m³	600 kg/m³
Thermal Conductivity ($\lambda_{10, dry}$)	0,08±0,01W/m°K	0,09±0,01W/m°K	0,10±0,01W/m°K	0,12±0,01W/m°K	0,15±0,01W/m°K
Compressive Strength	Min. 1,5 N/mm²	Min. 2 N/mm²	Min. 2,5 N/mm²	Min. 3,5 N/mm²	Min. 5 N/mm²
Dimensional Tolerance	±1 mm				
Reaction to Fire	Clasa A_1				

Block dimensions	m³/pallet	m²/pallet	Units per pallet	Sound Insulation (Rw)	Fire resistance EI criteria – non-structural walls REI criteria – structural walls
625 x 50 x 240	2,25	36+3*¹	240+20*¹		
625 x 75 x 240		24 +3*¹	160+20*¹		
625 x 100 x 240		18+3*¹	120+20*¹		**120 min** α ≤1,0 : 120 / α ≤0,6 : 120
625 x 100 x 240		22,5	150		
625 x 125 x 240		18	120		**180 min** α ≤1,0 : 180 / α ≤0,6 : 180
625 x 150 x 240		15	100	40 - 47,5	
625 x 200 x 240		10,5+1,5*²	70+10*²	44 - 51	
625 x 250 x 240		9	60	47 - 53	
625 x 300 x 240		7,5	50	49 - 55	**240 min** α ≤1,0 : 240/ α ≤0,6 : 240
625 x 350 x 240		6+1,5	40+10*²	51 - 56,5	
625 x 375 x 240		6	40	51,5 - 57	
625 x 400 x 240		4,5+3*¹	30+20*¹	52,5 - 57,5	

*¹ The pallet includes 20 blocks 625x150x240

*² The pallet includes 10 AAC blocks 625x100x240

A new way of working
BIM LIBRARY

Simplify design, streamline execution, optimize costs – with CELCO BIM.

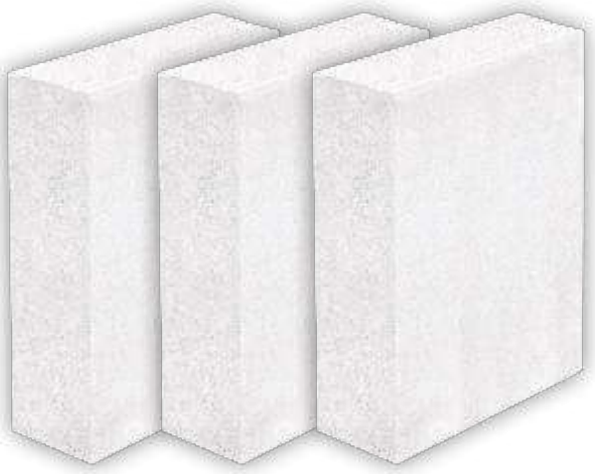
“Building Information Modelling” (BIM) is revolutionizing the way projects are designed and built. With the BIM files provided by CELCO, architects, engineers, and contractors can quickly integrate masonry and insulation solutions into digital projects, ensuring greater accuracy, shorter execution time, and sustainable results.

Download the BIM library here!

THERMAL INSULATION

izomineral

Innovation in Thermal Insulation



thermal conductivity — superior efficiency
0,050 ± 0,01 W/m°K

density
150 ± 10 kg/m³

compressive strength
Min. 0,4 N/mm² — The strongest thermal system — 400 kPa

fire reaction
class A1 — 100% non-combustible

thermal bridges reduced by
80%

IZOMINERAL is the first Romanian brand of mineral boards designed for the natural insulation of concrete structures and masonry.

With a thermal conductivity of only 0.050 W/m°K, IZOMINERAL insulation boards are used in non-load-bearing applications: interior and exterior wall cladding, floor slab cladding, and structural reinforcement cladding, to improve the building's thermal and acoustic comfort as well as fire protection.

To avoid thermal bridges and achieve façades made of the same material, reinforced concrete elements (columns, beams) should be lined with IZOMINERAL insulation boards.

This solution is recommended when aiming to eliminate condensation phenomena, in addition to improving thermal resistance, by cladding the entire wall surface or façade of the building (with the approval of the architecture and structural designer).

ADVANTAGES

- Superior thermal insulation
- Environmental responsibility
- Compressive strength
- Fast construction speed
- Fire resistance – A1 class
- Dimensional precision
- Comfort – breathable walls
- ISO9001, ISO14001, ISO45001

Steps for installing insulation

izomineral

#step 1 – Surface preparation

The supporting wall surface must be resistant, stable, clean, even, and free of anti-adhesive substances. Any irregularities should be mechanically removed beforehand.

#step 2 – Preparation and application of the adhesive

The dry adhesive, CELCO DD V9, for bonding mineral boards, is sprinkled into cold clean water in the ratio of 25 kg powder / 6–6.5 l water and mixed with an electric mixer. After a waiting time of 5–7 minutes, it is remixed. The adhesive is applied with a 10 mm notched metal trowel directly onto the IZOMINERAL AAC boards, covering the entire surface of the board.

#step 3 – Applying IZOMINERAL boards onto the base structure

It is recommended to install the first row of boards at a height of about 30 cm from the natural ground level, using starter profiles corresponding to the thickness of the thermal insulation. The boards are installed staggered on the wall surface, in horizontal rows. They must be offset to avoid forming vertical joints. The boards should be placed in close contact, leaving no gaps between them, and preventing adhesive from penetrating the joints. After fixing, the boards must be leveled with a straightedge to ensure correct installation of the thermal system.

IZOMINERAL boards are easy to cut with a hand saw to obtain the desired dimensions. At corners and where they meet other parts of the construction, only full boards or half boards interlocked should be used. Around window and door openings, the joints between boards must not align with the edges of the openings.

When applied on concrete substrates (columns, beams) in new constructions, the first row of IZOMINERAL boards is mounted directly on the concrete slabs protruding from the structure, as these act as support. A waterproofing layer must be placed between the ground floor reinforced concrete slab and the mineral boards.

#step 4 – Fixing IZOMINERAL boards with dowels

Ejot dowel 115 / 255

YouTube Cum se montează Izomineral

izomineral

Approved dowels made of plastic with metal screws, type EJOT Ejotherm STR U 2G, are used, with lengths L = 155 mm ÷ 255 mm and plate diameter 60 mm, where:

Dowel length = IZOMINERAL board thickness + 10 mm (adhesive) + old plaster (if present) + 40 mm (anchoring depth).

Drilling can only take place after the adhesive has hardened: 24–48 hours after fixing the boards, holes are drilled with a drill using an Ø 8 mm bit through the insulation board to a depth of approx. 40 mm into the concrete or masonry substrate.

The dowels must be installed slightly recessed (without excessively compressing the insulation material – the dowel head flush with the IZOMINERAL board surface). After inserting the dowels, a rubber mallet is used to drive them in fully, the metal screw is tightened with a Ø30 torx head, and the hole at the end of the plastic dowel is sealed with a thermal insulation cap.

#step 5 – Applying the fiberglass mesh

The fiberglass mesh with a minimum weight of 145 g/m² is used. A first layer of V9 adhesive is applied on the wall surface with a stainless-steel notched trowel (10x10 mm), in a minimum thickness of 3 mm. Then, the fiberglass mesh is fixed, which must be embedded smoothly, without wrinkles, into the fresh basecoat, applied in vertical strips from top to bottom. The strips must overlap by at least 10 cm (both horizontally and vertically), and the corner areas must be reinforced with mesh profiles. Over the mesh, a second layer of basecoat (the same adhesive mortar) is applied to fix the fiberglass mesh. The final layer is leveled with a straightedge to prepare the wall for decorative plaster.






#STEP 6 – Plastering

Areas of Application


Flooring


Floor slabs


Ventilated façades


Terrace flooring


Attic


Interior applications

IZOMINERAL can be applied to:

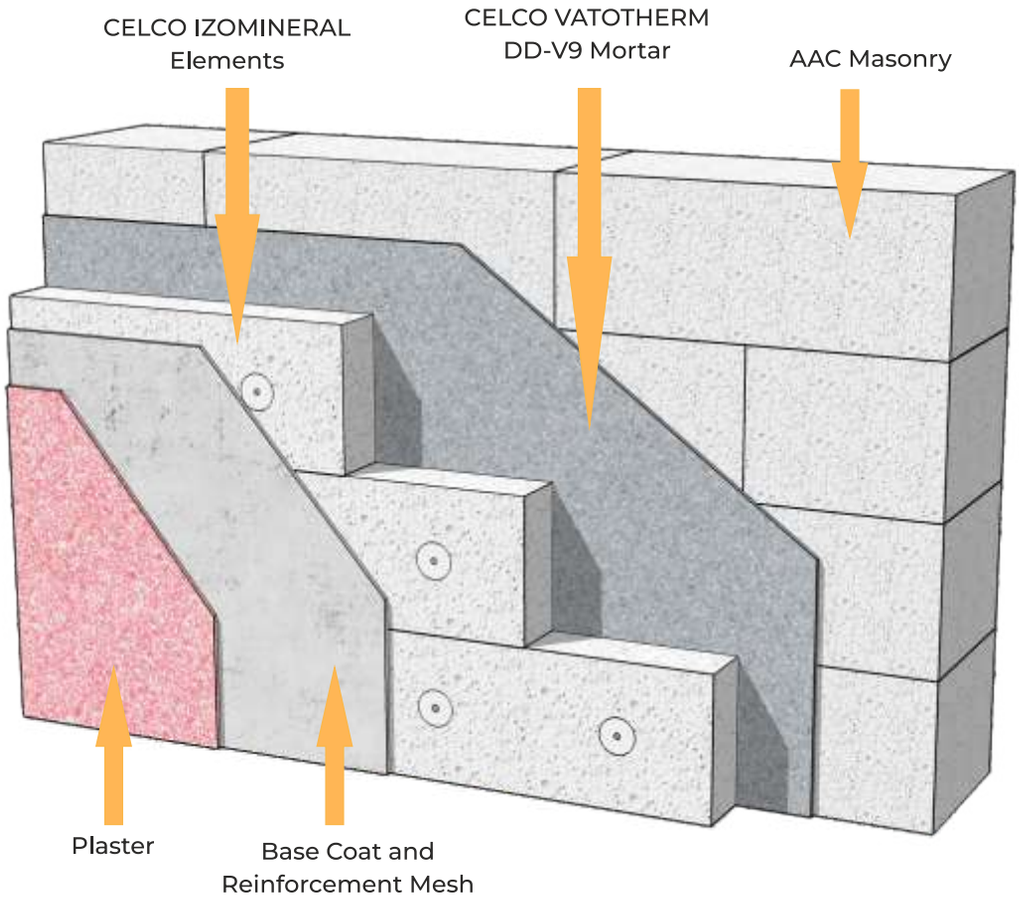
- floors,
- floor slabs,
- ventilated façades,
- terraces,
- roofs and
- interior spaces,

providing superior thermal and sound insulation, fire safety, and a healthy living environment.

Thanks to its vapor permeability, walls remain dry and breathable, preventing mold and condensation. Its high compressive strength makes it suitable for floors and roofs, while the reduction of thermal bridges helps to lower energy loss.

THE WALL

COMPLETE SYSTEM



The foundation of a solid, safe, and healthy construction

What does the "CELCO Wall" mean and why is it unique?

Building a wall is not just about combining materials, but about creating a complete system, where every component must work perfectly together. The CELCO Wall is a concept that redefines efficiency in construction, using exclusively materials produced by CELCO, a leader in the masonry and thermal insulation industry.

What does the CELCO Wall include?

- **CELCO AAC – A high-performance masonry material, easy to use and extremely durable.**
- **CELCO DD M5/M10 Premium Mortars – Specially formulated to ensure perfect adhesion and fast execution.**
- **CELCO IZOMINERAL Thermal Insulation – A vapor-permeable material that prevents dew point formation and mold growth.**
- **CELCO DD V9 Adhesive and Base Coat – Designed specifically for the optimal fixing of the thermal insulation.**
- **CELCO DD MTI8 Ultra-Fine Render – A premium-quality final finish, ensuring a uniform and durable appearance.**

Why choose a complete CELCO system?

- ✓ **100% compatibility – All products are developed and tested together to eliminate any risk of technical incompatibility.**
- ✓ **Efficiency in execution – Fast and precise work, reducing time and costs on site.**
- ✓ **Durability and safety – Materials are manufactured to the highest standards and tested both internally and by URBAN INCERC, the national institute specialized in verifying the quality of construction materials.**
- ✓ **Thermal comfort and health – The wall "breathes," regulating humidity and preventing mold formation, ensuring a healthy indoor environment.**

The CELCO Wall is more than just masonry – it is an integrated system, designed for efficient, durable constructions that comply with the latest energy efficiency standards.

More than 170 SOLUTIONS for energy-efficient walls – nZEB

Exterior walls - Thermal resistance calculation simulation

Type of AAC	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal insulation	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal resistance AAC + Izomineral
megaterm	30 cm	5,28 m^2K/W	300 kg/m^3 ± 25	0,08 W/m°K ± 0,01	izomineral	-		150 kg/m^3 ± 10	0,05 W/m°K ± 0,01	No additional thermal insulation required
	35 cm	5,9 m^2K/W				-				No additional thermal insulation required
	40 cm	6,53 m^2K/W				-				No additional thermal insulation required

Type of AAC	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal insulation	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal resistance AAC + Izomineral
megaterm plus	30 cm	3,5 m^2K/W	350 kg/m^3 ± 30	0,09 W/m°K ± 0,01	izomineral		1,36 m^2K/W	150 kg/m^3 ± 10	0,05 W/m°K ± 0,01	4,86 m^2K/W
	35 cm	4,06 m^2K/W				-				No additional thermal insulation required
	40 cm	4,61 m^2K/W				-				No additional thermal insulation required

Type of AAC	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal insulation	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal resistance AAC + Izomineral
standard	30 cm	3,17 m^2K/W	400 kg/m^3 ± 30	0,10 W/m°K ± 0,01	izomineral	10 cm	1,82 m^2K/W	150 kg/m^3 ± 10	0,05 W/m°K ± 0,01	4,99 m^2K/W
	35 cm	3,67 m^2K/W								5,49 m^2K/W
	40 cm	4,17 m^2K/W				-				No additional thermal insulation required

Type of AAC	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal insulation	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal resistance AAC + Izomineral
superblock	30 cm	2,67 m^2K/W	480 kg/m^3 ± 30	0,12 W/m°K ± 0,01	izomineral	10 cm	1,82 m^2K/W	150 kg/m^3 ± 10	0,05 W/m°K ± 0,01	4,49 m^2K/W
	35 cm	3,08 m^2K/W								4,9 m^2K/W
	40 cm	3,5 m^2K/W								5,32 m^2K/W

Type of AAC	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal insulation	Thickness	Thermal resistance	Density	Thermal conductivity- λ	Thermal resistance AAC + Izomineral
structoterm	30 cm	2,17 m^2K/W	600 kg/m^3 ± 50	0,15 W/m°K ± 0,01	izomineral	12,5 cm	2,27 m^2K/W	150 kg/m^3 ± 10	0,05 W/m°K ± 0,01	4,44 m^2K/W
	35 cm	2,5 m^2K/W				10 cm	1,82 m^2K/W			4,32 m^2K/W
	40 cm	2,83 m^2K/W				10 cm	1,82 m^2K/W			4,65 m^2K/W

Automatically calculate all options on the calculator at celco.ro!

COMPLETE SYSTEM

You should know that there is a Law on the energy performance of buildings: LAW NO. 372 / 2005. This law provides in Article 14:

"(1) New buildings, for which the final acceptance of works is carried out based on the building permit issued starting December 31, 2020, will be buildings whose energy consumption is nearly zero."

Interior walls – Acoustic comfort

Type of AAC	Thickness	Compressive strength	Thermal inertia	Sound insulation
standard	15 cm	400kg/m³ ± 30	60 kJ/m²·K ± 4,5	42 Db
	20 cm		80 kJ/m²·K ± 6	46,5 Db
	25 cm		100 kJ/m²·K ± 7,5	49 Db

Type of AAC	Thickness	Compressive strength	Thermal inertia	Sound insulation
superblock	15 cm	480 kg/m³ ± 30	72 kJ/m²·K ± 4,5	44,5 Db
	20 cm		96 kJ/m²·K ± 6	48,5 Db
	25 cm		120 kJ/m²·K ± 7,5	51 Db

Type of AAC	Thickness	Compressive strength	Thermal inertia	Sound insulation
structoterm	15 cm	600 kg/m³ ± 50	82,5 kJ/m²·K ± 7,5	47,5 Db
	20 cm		110 kJ/m²·K ± 10	51 Db
	25 cm		137,5 kJ/m²·K ± 12,5	53 Db

Comfort and functionality in every detail

An interior wall is not just a separation between rooms, but an essential element for the comfort of a home. It must provide thermal and acoustic insulation, maintain a stable indoor climate, and be strong enough to support furniture, paintings, or hanging fixtures.
To better understand the performance of interior walls, we analyze two essential factors: thermal inertia and sound insulation (decibels).

What is thermal inertia and why does it matter?

Simple explanation: Think of a ceramic stove. It stores heat and releases it gradually, even after the fire has gone out. The same happens with AAC walls – the higher their thermal inertia, the better they maintain the room temperature.

How does it help?

- **Energy savings – A wall with high thermal inertia absorbs heat during the day and releases it in the evening, keeping a constant temperature.**
- **Thermal comfort – You don't feel sudden temperature changes, as the walls naturally regulate the heat.**

Concrete example:
In winter, if the radiators are turned on and then switched off, a wall with high thermal inertia will continue to radiate heat, maintaining comfort for a longer time. In contrast, a thin wall with low thermal inertia will cool down quickly.

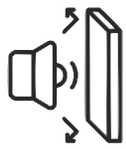
Sound insulation – How does it protect us from noise?

How does it help?

- **More privacy – Sounds from one room are not heard in the other.**
- **Increased comfort – You are no longer disturbed by the TV or conversations from another room.**

Wall Width mm	megaterm 300±25 kg/m³	megaterm plus 350±30 kg/m³	standard 400±30 kg/m³	superblock 480±30 kg/m³	structoterm 600±50 kg/m³
	dB				
150	40	41	42	44,5	47,5
200	44	44,5	46,5	48,5	51*
250	47	48	49*	51	53
300	49	50	51,5	53	55
350	51	52	53	54,5	56,5
400	52,5	53	54,5	56	57,5

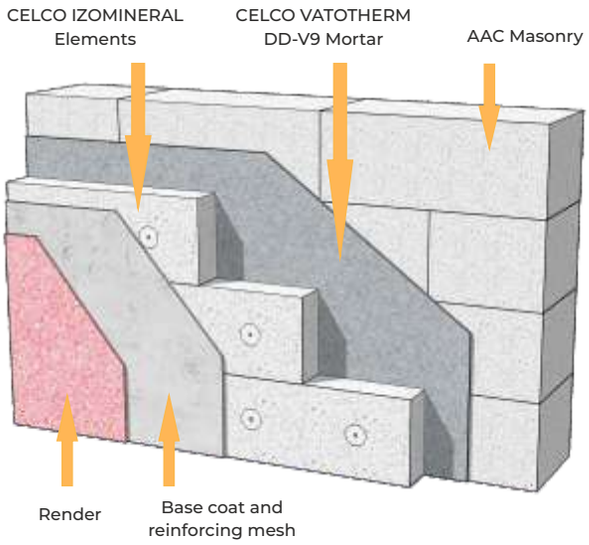
The measurements were carried out in the Construction Acoustics Laboratory of INCERC Bucharest in October 2008, in accordance with the provisions of SR EN ISO 140-3 Acoustics. Measurement of sound insulation in buildings and of building elements. Part 3: Laboratory measurement of airborne sound insulation of building elements.

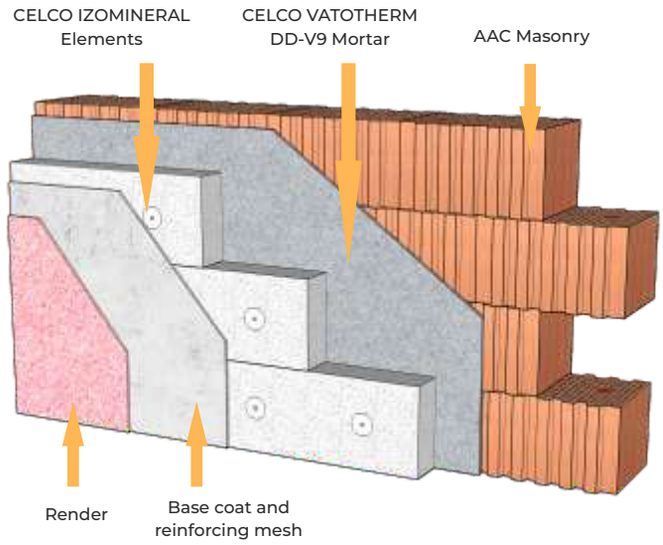


The thermal inertia of AAC masonry was calculated using the formula: $I=\rho \times c \times d$

I = thermal inertia of the wall (J/m²·K sau kJ/m²·K), ρ = apparent density of AAC(kg/m³),

c = specific heat of AAC (J/kg·K), d = wall thickness (m)





CELCO AAC Masonry with Superior Thermal Efficiency

Masonry	Block Density	Thermal Conductivity Masonry with M5 thin-joint mortar 1–3 mm	Insulation Thickness	Thermal λ Conductivity of Insulation	R (Thermal Resistance of the Wall) [m²K/W] Includes bonding / base coat of insulation and render	Wall Thickness
AAC CELCO MEGATERM 35 cm	300kg±25/m³	0,10 ± 0,01 W/m°K	7,5 cm	0,050 W/m°K	5,08	42,5 cm
AAC CELCO MEGATERM 37.5 cm					5,29	43 cm
AAC CELCO MEGATERM 40 cm			Not required	-	4.17	47,5 cm

AAC CELCO masonry + CELCO IZOMINERAL insulation

Masonry	Block Density	Thermal Conductivity Masonry with M5 thin-joint mortar 1–3 mm	Insulation Thickness	Thermal λ Conductivity of Insulation	R (Thermal Resistance of the Wall) [m²K/W] Includes bonding / base coat of insulation and render	Wall Thickness
AAC CELCO STANDARD 25 cm	400kg±30/m³	0,125 W/m°K	10 cm	0,050 W/m°K	4,00	35 cm
AAC CELCO STANDARD 30 cm					4,40	40 cm
AAC CELCO STANDARD 35 cm					4,80	45 cm
AAC CELCO STANDARD 37.5 cm					5,00	47.5 cm

Clay masonry + CELCO IZOMINERAL insulation

Masonry	Block Density	Thermal Conductivity Masonry with M5 thin-joint mortar 1–3 mm	Insulation Thickness	Thermal λ Conductivity of Insulation	R (Thermal Resistance of the Wall) [m²K/W] Includes bonding / base coat of insulation and render	Wall Thickness
CERAMIC BLOCKS 25 cm	770 kg/m³	0,254 W/m°K	17.5 cm	0,050 W/m°K	4,34	42,5 cm
CERAMIC BLOCKS 30 cm	850 kg/m³	0,227 W/m°K	15 cm		4,23	45 cm
CERAMIC BLOCKS 38 cm	850 kg/m³	0,223 W/m°K	12.5 cm		4,15	50,5 cm

Calculation formula:

$$R_{zid} = R_{si}\left(=\frac{1}{24}\right) + R_{se}\left(=\frac{1}{8}\right) + \frac{\text{Wall thickness(m)}}{\lambda_{zid}} + \frac{\text{Thermal insulation system thickness (m)}}{\lambda \text{ thermal insulation system}} + \frac{\text{Plaster thickness (0,005 m)}}{\lambda \text{ plaster (0,8 W/m0K)}} + \frac{\text{Thermal insulation system bonding/base coat thickness (2*0.003) (2*0,003)}}{\lambda \text{ thermal insulation system render in 2 layers (0,6)}}$$

Rse – surface thermal resistance of the external air layer of the element
Rsi – thermal resistance of the internal surface air layer of the element

** For the calculation, the technical characteristics of CELCO ZID DD-M5 for mortar joints, CELCO TERM DD-V9 for bonding/base coat of the thermal insulation system, and CELCO TENC DD-MA6 for render were taken into account.*

The easiest way to calculate the required quantities and thermal resistance for AAC, Thermal Insulation, Mortar, and Adhesive.

How many AAC blocks are in a pallet?

Have I reached the NZEB minimum?

What thickness should the thermal insulation have?

How much AAC do I need for 100 sqm, at 25 cm thickness?

How many bags of mortar do I need?

What thicknesses are available for AAC and for thermal insulation?

Which adhesive is suitable for thermal insulation?

If I build with 30 cm AAC, do I get good thermal resistance?

celco.ro/calculator-zidarie-completa

Families choose us, builders understand us.

Walls that shape dreams.

Safety, Comfort, Trust, and Durability.

Every construction begins with a wish.
A dream to live better, to work more safely, to exist in a space that offers peace, balance, and protection. Projects built with CELCO materials are, in fact, the expression of these wishes. They are buildings designed for people, built with responsibility, and made to last.

Whether it's a personal home, an apartment building, a school, an industrial hall, or a hospital, every wall built with CELCO means trust – in the materials used, in the team applying them, and in the future of those who will live or work there.

Choosing a Romanian product, manufactured with care and respect for quality, means choosing a partner who understands what well-done work means. CELCO AAC, IZOMINERAL insulation, mortars, and adhesives dedicated to every execution step are created not only to function but to provide extra safety, comfort, and stability over time. In these projects lie dreams, plans, and hopes – as well as families sleeping peacefully, children learning in warm classrooms, patients recovering in safe hospitals, and teams working in healthy environments.

Where the walls are solid, stories take shape.
And CELCO is the foundation behind those stories.

Optimization with CELCO systems

Verified performance in every detail

Modern construction is no longer just about materials chosen for strength or price. It requires integrated solutions, verified and adapted to the new standards of energy efficiency, sustainability, and durability. In this context, the complete **CELCO system offers builders and designers the guarantee of a controlled result, from the first AAC block to the final finish.**

CELCO AAC, in all its variants, is known for its excellent thermal insulation properties, for the dimensional accuracy that allows fast and clean installation, and for its ability to integrate perfectly with the other components of the system. Every element of the wall – the M5 or M10 masonry mortar, IZOMINERAL mineral insulation, V9 adhesive and base coat, and MTI8 fine render – is produced in the same production network, with formulas optimized for maximum compatibility and efficiency in application.

This advantage of total compatibility eliminates the common risks on construction sites caused by improvised combinations of materials from different manufacturers. Everything fits, everything works together.

Moreover, all CELCO products are rigorously tested, both in the internal research laboratory and by external reference institutions such as URBAN INCERC, the national authority that validates the technical performance of construction materials.

Projects that chose CELCO

ZEV Apartments

Located in the Mamaia resort, the ZEV Apartments project impresses with its contemporary architecture.

Built with CELCO masonry materials, this complex focused on thermal and acoustic efficiency, essential in a premium tourist area. The choice of CELCO AAC ensured remarkable indoor comfort, with walls providing excellent sound insulation and natural humidity regulation. At the same time, the workability of AAC allowed for elegant construction details, with clean and durable finishes adapted to an environment constantly exposed to factors such as humidity and salinity.

Building Ștefan 3

Building Ștefan Mamaia Nord 3 Located just 20 meters from the beach, in the center of the tourist area of Mamaia Nord, the Building Ștefan 3 project was designed to provide comfort, durability, and functionality, whether intended for living, vacation, or investment.

For this complex with 29 apartments and studios, the developer chose CELCO AAC masonry – a decision that ensured both the speed of execution, essential in seasonal tourist developments, and the thermal and acoustic performance required in the vicinity of an active and exposed area.

CELCO materials offered safety in execution, minimal waste, and perfect compatibility between components, contributing to a clean, efficient, and durable final result.

HOTEL
BUILDING STEFAN

Building Ștefan

With 20 buildings constructed and over 1000 apartments sold in Constanța, Mamaia Nord, and Tulcea, Building Ștefan is one of the most important real estate developers in the southeast of the country. This status has been confirmed by the thousands of families who confidently chose to be part of the residential projects developed.

For this stage, CELCO materials were chosen. AAC masonry provided fast installation, superior thermal insulation, and sound protection – all essential in a tourist area exposed to seasonal intensity.

By choosing a 100% compatible construction system, Building Ștefan proves that a successful development means more than just location: it means trust in partners, in quality, and in time-tested solutions.

TRL Residence

Located in Mamaia, the TRL Residence complex includes 69 apartments and studios.

The project was developed with attention to detail, offering modern and comfortable homes. For this project, the developer chose to use CELCO AAC for exterior walls and interior partitions. This decision was motivated by the desire to ensure good thermal and sound insulation, as well as to benefit from the advantages offered by this material in terms of durability and energy efficiency.


LINTELS

CELCO thermal insulation lintels, designed to support the masonry above doors and windows on both the interior and exterior, are auxiliary beam-shaped elements made of CELCO AAC that incorporate 2 reinforcing steel bars with a diameter of 10 mm each.

CLIP OF LINTEL STRENGTH

1250 x 150 x 240 mm	1250 x 200 x 240 mm	1250 x 240 x 200 mm 1875 x 240 x 200 mm	1250 x 250 x 200 mm 1875 x 250 x 240 mm
For walls with 150 mm thickness: interior doors and windows.	For walls with 200 mm thickness: interior doors and windows.	For walls with 240 mm thickness: interior/exterior doors and windows.	For walls with 250 mm thickness: exterior doors and windows.
Maximum load supported 1800 kg.	Maximum load supported 1800 kg.	Maximum load supported 1800 kg and 1500 kg respectively.	Maximum load supported 1800 kg and 1500 kg respectively.

5 ADVANTAGES offered by CELCO lintels

- Maximum load supported between 1500 kg and 1800 kg.
- Increased bending strength and shear strength.
- CELCO lintels provide thermal insulation in addition to classical ones.
- Optimized weight: lighter than standard concrete lintels.
- Efficient and fast installation.

CELCO thermal insulation lintels are very easy to install, in about 10 minutes, unlike standard lintels which require multiple operations (formwork preparation, reinforcement preparation, installation, and concrete pouring). This results in increased work productivity on site.

ADHESIVES AND MORTARS

MORTAR FOR AAC MASONRY WITH THIN JOINTS

USE	PACKAGING	CONSUMPTION M^3	COMPRESSIVE STRENGTH	THERMAL CONDUCTIVITY $\lambda_{10,dry}$	WATER ABSORPTION
Masonry with thin joints 1-3 mm	25 kg / bag 48 bags / pallet	1 bag / m^3	5 N /mm^2	0,80 W/m^{0}K	0,25 kg/ $m^2min^{0,5}$
Masonry with thin joints 1-3 mm	25 kg / bag 48 bags / pallet	1 bag/ m^3	10 N /mm^2	0,80 W/m^{0}K	0,35 kg/ $m^2min^{0,5}$

CELCO ZID DD-M10 and CELCO ZID DD-M5 are high-performance dry mortars used for executing masonry with thin joints of 1-3 mm from AAC blocks and panels.

The additive content improves the strength class of CELCO ZID mortar and doubles the strength of the masonry.

ADHESIVE FOR THERMAL INSULATION BOARDS

USE	PACKAGING	CONSUMPTION M^3	COMPRESSIVE STRENGTH	THERMAL CONDUCTIVITY $\lambda_{10,dry}$
Bonding and trowel application Izomineral and mineral wool	25 kg / bag 48 bags / pallet	Bonding: 3,5-4 kg/m^2 Spreading: 4,5-5 kg/m^2	8 N /mm^2	<0,66 W/m^{0}K
Bonding polystyrene boards	25 kg / bag 48 bags / pallet	Lipire: 3,5-4 kg/m^2 Șpăcluire: 4,5-5 kg/m^2	8 N /mm^2	<0,66 W/m^{0}K

CELCO TERM DD-T3 and CELCO VATOTHERM DD-V9 are high-performance adhesive mortars used for bonding polystyrene boards, mineral wool, or IZOMINERAL thermal insulation, as well as for applying the protective layer with embedded fiberglass mesh to improve the thermal insulation of exterior walls.

ADHESIVE FOR INTERIOR AND EXTERIOR CLADDING

USE	PACKAGING	CONSUMPTION M^3	ADVANTAGE
Adhesive ceramic tiles interior and exterior	25 kg / bag 48 bags / pallet	3-5 kg/m^2	Reduced slip, class C1T. Selected granulation, max. 0.5 mm
Adhesive ceramic tiles interior	25 kg / bag 48 bags / pallet	3-5 Kg / m^2	Reduced slip, class C1T. Selected granulation, max. 0.5 mm

CELCO PLAC DD-C12 is an adhesive based on mineral binders with normal setting and reduced slip (class C1T), used for bonding absorbent ceramic tiles both outdoors and indoors.

CELCO PLAC DD-C1 is the most efficient adhesive for bonding ceramic or natural stone tiles, terracotta, and mosaics indoors.

RENDERING MORTAR

USE	PACKAGING	CONSUMPTION M^3	COMPRESSIVE STRENGTH	THERMAL CONDUCTIVITY $\lambda_{10,dry}$
Floated renders	25 kg / bag 48 bags / pallet	2,5 kg/m^2/mm Layer thickness	6 N /mm^2	0,80 W/m^{0}K
Mechanized render	25 kg / bag 48 bags / pallet	12,5 kg/m^2/cm Layer thickness	CS I	0,40 W/m^{0}K

The high-performance CELCO TINCI DD-MTI8 is a special, industrial, dry mortar, highly additive-enhanced, used both indoors and outdoors as a fine render for smoothing rough plasters and correcting their unevenness.

CELCO TENC DD-MTI-E7 is a high-performance industrial dry rendering mortar, general purpose (GP), for interior use applied mechanically.

CELCO TENC DD-MA6 is a high-performance industrial dry rendering mortar, general purpose (GP), for interior and exterior use applied manually.

Manual render	25 kg / bag 48 bags/ pallet	12,5 kg/m^2/cm layer thickness	6 N /mm^2	0,80 W/m^{0}K

VIDEO MECHANIZED RENDERING APPLICATION

LIME

CELCO lime emerged from the need to ensure a constant supply of high-quality raw material for the production of AAC blocks and CELCO adhesives. In 2008, CELCO commissioned the Lime Factory in Corbu commune, with an initial daily production capacity of 200 tons, equipped with a high-performance MAERZ kiln, state-of-the-art installations, and automation systems.

Through this investment, CELCO became the most important lime supplier in southeastern Romania for major consumer industries: AAC factories, steelworks, metallurgy, producers of hydraulic road binders, producers of adhesives and mortars, chemical plants, etc.

Currently, the Lime Factory has a production capacity of 370 tons of lime per day, due to improvements made after the initial investment.

Investments:

2010: technological bunker of 8,000 tons.

2013: second lime kiln, an investment that increased production capacity by over 60%.

2015: solid fuel supply system and coke processing installation.

Using state-of-the-art technologies for vacuum packaging of bagged lime, the production process is carried out in a dust-free environment, thereby limiting the impact on the environment while ensuring the quality of the finished product and a longer shelf life.

The factory operates continuously and delivers lump lime, ground lime, and hydrated lime.

The investment covers 7 hectares of land. The production halls extend over an area of 4,000 sqm, while other spaces are occupied by raw material warehouses and conveyor belts. The main structures of the industrial unit are the raw material preparation section and the burning section, where the lime kilns are located. These installations were designed for a continuous activity flow.

Lime is a natural mineral product obtained by uniform burning of limestone in the kiln, widely found in nature.

Lime is also considered a universal binder, used by mankind since ancient times thanks to its main benefit: it allows houses to breathe, eliminating moisture problems.

Since heating a moisture-free house is much easier, by using lime in housing construction substantial energy savings can also be achieved.

Lime protects walls against weather conditions and is a good disinfectant. In addition, it is a resistant substance which, thanks to its flexibility and elasticity, tolerates building movements.

In 2010, the 8,000-ton technological bunker was built to promptly meet the demands of our customers. In the first quarter of 2014, the second lime kiln was commissioned at the CELCO Lime Factory, an investment that increased the factory's production capacity by over 60%. The new kiln is intended for the production of ground lime for AAC.

CELCO LIME FOR CONSTRUCTION CL 90-S

CHARACTERISTICS ACCORDING TO SR EN 459-1: 2011

CALCIC HIDRATAT PULBERE TIP CL 90-S

CELCO hydrated lime is obtained through the hydration process of granulated lime and, after grinding, is found in the form of a high fineness powder. It can be used in the production of mortars, as well as widely in construction.

CELCO hydrated lime is offered in vacuum-sealed plastic bags, arranged on pallets covered with shrink film, or it can be delivered in bulk by tank trucks.

VACUUM-SEALED PLASTIC	VACUUM-SEALED PLASTIC	LOADING ONTO PALLET	SHELF LIFE
17,5 KG	25 KG	50 / 72 BAGS	24 MONTHS

$CaO+MgO$(%)	MgO(%)	Co_2(%)
min. 90	max. 5	max. 4

SO_3(%)	Free water, %	Apparent density
max. 2	max. 2	0,3 - 0,6

CELCO LIME LUMPS

$CaO+MgO$(%)	MgO(%)	Co_2(%)	SO_3(%)	PACKAGING
min. 90	max. 5	max. 4	max. 2	BULK OR BIG-BAG

QUICKLIME CALCICCL 90-Q (R5,P_{sv})

By burning limestone in the kiln at high temperatures, physical and chemical changes occur, resulting in quicklime in the form of lumps.

Uses: steel manufacturing, chemical industry, environmental applications, agriculture, animal husbandry, fish farming, production of lime putty for construction.

HIDRACALC

CELCO LIME FOR CONSTRUCTION CL 70-S

HYDRATED CALCIC LIME POWDER TYPE CL 70-S

Calcium hydroxide powder, white in color, CELCO hydrated lime CL 70-S is a premix lime for masonry or interior/exterior rendering mortars, also used for manufacturing other construction products and civil engineering applications or for soil stabilization.

CELCO HIDRACALC is offered in vacuum-sealed plastic bags, arranged on pallets covered with shrink film, or it can be delivered in bulk by tank trucks.

CHARACTERISTICS ACCORDING TO SR EN 459-2 2011

CaO+MgO(%)	MgO(%)	Co_2(%)
MIN. 70	MAX. 5	MAX. 12

SO_3(%)	Apă liberă(%)	Stability (mm)
MAX. 2	MAX. 2	MAX. 2

VACUUM-SEALED PLASTIC BAG 17,5 KG

LOADING ONTO PALLET 72 BAGS

SHELF LIFE 24 MONTHS

CELCO GROUND LIME

GROUND LIME FOR AAC CL 90-Q (R4,P1)
INDUSTRIAL GROUND LIME CL 90-Q (R5,P1)

PACKAGIN

BULK DELIVERY BY TANK TRUCKS

Lime CL 90-Q has a very high degree of fineness and is obtained through the grinding process of granulated quicklime. The new technology and the effort of CELCO specialists in research work have resulted in the development of a wide range of reactive capacities adapted to the various requirements of ground lime users.

Product Name	CaO+MgO	MgO	CO_2	t_{60}
Ground Lime R4, P1	min. 90%	max. 5%	max .4%	< 25 min
Ground Lime R5, P1				< 10 min

CELCOSOL 95

from Dobrogea Limestone

CELCO® SOL 95

Amendment for acidic soils, based on Calcium Oxide (CaO) and Magnesium Oxide (MgO), recommended for increasing pH and improving soil structure.

CELCOSOL95 Benefits:

- Very high neutralization value;
- Excellent neutralization speed;
- Improves soil structure;
- Increases fertilizer efficiency;
- Reduces waterlogging.

Essential characteristics	Declared Performance	Harmonized technical specification
CaO + MgO, %	≥ 90	SR EN 459-1:2011
MgO, %	≤ 2	
CO2, %	≤ 4	
Harmonized technical specification	0 – 10 mm	
Neutralization value	(eq CaO) - min.95	

Application of CelcoSol95:
It is recommended to apply at least one week before sowing.
Use 0.5 - 2 tons/ha, depending on soil acidity.
Incorporation after application is recommended to obtain optimal results.

STONE QUARRY

In 2012, CELCO invested in a stone quarry located in Corbu, equipped with high-performance machinery, reaching a stone extraction, crushing, and sorting capacity of 320 tons/hour.

Corbu stone quarry grade	
0-40 mm	Crushed limestone
40 - 80 mm	Crushed stone
80 - 120 mm	

SUSTAINABLE

In a modern economy, sustainability is no longer an ideal, but a necessity. CELCO understands that every business decision has an impact on the environment, people, and the community – and takes responsibility for every stage of the production and distribution chain.

Corporate Social Responsibility (CSR) is not just a communication strategy, but an integral part of our organizational culture.

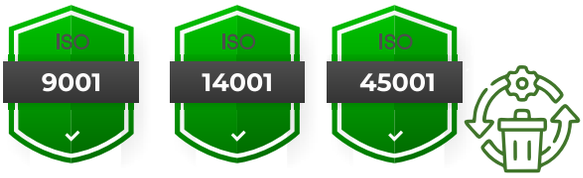
For over 50 years, CELCO has been investing in clean technologies, environmentally safe products, and people – whether employees, local communities, or partners.

We guide our activity by clear principles of ethics, sustainability, and efficiency: from reducing emissions and water consumption to reusing waste and optimizing energy consumption in factories.

Alongside industrial performance, we emphasize social and educational investments, through long-term partnerships with schools, institutions, athletes, and local organizations.

For us, sustainability begins with respect for nature, continues with respect for people, and is reflected in the quality of every product manufactured at CELCO.

Standards and certifications



Waste management

* selective collection
* we recover over 60% of plastic, paper, cardboard, metal, and over 80% of wooden packaging

Water management

* continuous monitoring
* own drilling well

Care for employees

* respect for employees
* minimizing turnover (steady at 4.5% in the last 3 years)
* over 37% women in management positions

Energy efficiency

* the energy intensity indicator has decreased fivefold in the last 6 years
* installation of a photovoltaic panel park at the AAC Factory
* installation of a wind turbine at the Lime Factory
* purchase of electric forklifts
* energy consumption metering system
* modernization of the production line
* fully electric wrapping line

QUALITY CONTROL AND INTEGRATED MANAGEMENT

CELCO, a leader in the market of AAC, lime, adhesives, and mortars for construction, has designed and implemented an Integrated Management System for quality – environment – occupational health and safety, certified by SRAC, which it maintains and continuously improves, thus ensuring that all organizational activities are carried out in a controlled manner, in accordance with legal requirements, applicable technical regulations, and customer requirements specified in contractual provisions.

We are constantly aware that the organization's activities and processes may generate a significant environmental impact, therefore, for CELCO's top management, environmental performance represents proof that activities are carried out under the designed conditions, as provided by the Integrated Management System.

The company's long-term objective is to offer a better future for the next generations by creating sustainable construction solutions. CELCO's priorities are the observance and implementation of safety policies and the commitments made in the field of the integrated management system for quality – environment – occupational health and safety.

WE REDUCE THE CO_2 FOOTPRINT RIGHT FROM THE SOURCE

-20% CO_2

compared to the European average

Through full control of resources and production, CELCO Standard AAC has a carbon footprint of only 143 kg CO_2/m^3, 20% lower than the European average.
Raw materials are locally extracted, and the short distances between quarry, factory, and warehouses drastically reduce transport emissions.

Over 70% of CO_2 emissions in Europe come from the transport of raw materials – an impact that CELCO efficiently minimizes.

Moreover, lime-based products continue to capture CO_2 throughout their life cycle through the process of recarbonation – a natural property of AAC that can eventually turn it into a negative-emission material.

With a complete LCA analysis and EPD certification, CELCO is already actively contributing to the European goal of reducing up to -70 kg CO_2/m^3 by 2050.

CELCO standard

SOCIAL, EDUCATIONAL AND SPORTS INVOLVEMENT

#STUDENTS IN INTERNSHIP

With the aim of supporting the information and professional training of future generations – with enthusiasm and the necessary attention, we opened our doors to all students and pupils who wanted to learn more about the production process. From raw material processing, casting in molds, cutting, palletizing, to chemical and physical testing, students from 4 universities went through the entire technological flow together with the CELCO team. We encourage, support, and involve young people!

#SUMMER SCHOOL

#PRACTICAL WORKSHOPS

We strive to cultivate a culture of excellence, innovation, and performance among students and pupils, reflecting the qualities we seek in them and that we also uphold: performance, education, innovation, future orientation, and, of course, healthy construction.

We are actively involved in the education of young people through various initiatives such as factory visits, internships, workshops, and presentations.

Promoting a healthy lifestyle

#CELCO - SOLIDARITATE ÎNAINTE DE TOATE

"We are constantly connected to the needs of Constanța hospitals and show solidarity and responsibility.Through our actions and involvement, we manage to improve quality of life and bring hope where we are needed.

"Niculae Dușu – President of CELCO.

#MUSIC FOR AUTISM

The campaign is carried out by the ART – Music for People Association, an NGO founded in 2015 with the aim of promoting social inclusion and supporting the integration of people in difficulty. The concerts raise funds to finance therapies, educational activities, and the modernization of specialized centers dedicated to children with autism.

Supporting the Music for Autism campaign is a natural act of solidarity that reflects CELCO's commitment to people and to the future.

THIS IS HOW IT WAS AT #PLANTEZ

CELCO FOREST

Out of the desire to restore the ecosystem and ecological balance, to reduce carbon dioxide emissions, and to create a source of oxygen for the future, CELCO initiated in March 2019 the CELCO Forest by organizing the first #plantez – Let's reforest Dobrogea event. We planted 6,000 willow seedlings on an area of 1.6 ha, with the help of 200 volunteers. Our goal is to grow a large forest in this beautiful area of Dobrogea and to continue planting actions.

#HABITAT FOR HUMANITY CUMPĂNA

Through a partnership with Habitat for Humanity, CELCO donated construction materials needed for the building of a quadruplex in Cumpăna, Constanța County, for 4 low-income families. We pay special attention to the community in which we operate. The houses built are made of CELCO AAC with high thermal efficiency, so that in the long term, the families will be able to save on energy consumption.

#JUNE 1ST - DE-A ARHITECTURA

During the workshop, children aged 6–12, divided into teams, created models representing their vision of the ideal city. The novelty for them was the opportunity to come into direct contact, for the first time, with masonry materials. For building the models, they used AAC blocks and masonry mortar, under the guidance of architects and a mason present for the demonstration.

CELCO – SPONSOR AND PARTNER OF THE FC FARUL CONSTANTA AND CSM CONSTANTA FOOTBALL TEAMS

We are always committed to sports and physical activity, as evidenced by the Constantza-based sports clubs we support, such as FCV Farul Constanta and CSM Constanta.

#CELCO TENNIS CUP

Since 2009, this tournament has become a tradition, has developed, and now has a national profile. The matches bring together over 50 participants annually in Constanța and promote physical health through sport.

Highlight: exhibition matches played by Andrei Pavel, George Cosac.

#CELCO BLACK SEA CYCLING TOUR

The 3rd stage of the FRC National Road Cycling Cup was brought to the Southern Coast by CELCO, organizing the largest race in Dobrogea. It took place with the participation of over 300 cycling enthusiasts, both amateurs and professionals, of all ages, from 5 to 75 years old. The tour started in 2021.

HERE'S HOW IT WENT AT THE 3RD EDITION!

#CELCO BLACK SEA SAND MARATHON

For CELCO, involvement in this race does not only mean supporting a sporting event, but also strengthening a broader mission – that of investing in education, in the health of future generations, and in the development of a sustainable community.

We support performance in all its forms – whether we are talking about sustainable construction materials or about children running with a smile

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