

cymment

Building opportunities



**The sustainable
concrete additive.**

Building on a CO₂-reduced basis.

Pioneer for new developments in concrete production: within the ALAS Group, cymment stands for the production of innovative additives for concrete and thus for future-oriented alternatives to CO₂-intensive cement. cymment's recipe for success is based on the use of existing resources – on optimized mixtures of sustainable raw materials.

The result: a concrete admixture whose CO₂ footprint shows how to do it right. Where can it be used?

On every construction site.



Solid basis for future-oriented development

Embedded in the structure of ALAS Baustoff-Holding, cymment draws on many years of diversified experience in the extraction and processing of mineral raw materials for the construction industry and in concrete production. At our plant in Mosonmagyaróvár, in the tripoint between Austria, Slovakia, and Hungary, we set new standards in terms of sustainable building materials production.

Cement reduction is the approach to a green footprint.

Conserve resources, optimize concrete

With cyment, we are addressing a crucial point: Our recipe for success for a low-emission future is to reduce the amount of cement in concrete and replace it instead with the highest possible proportion of climate-friendly, hydraulically effective additives.

Making innovative use of existing potential

By using innovative raw material blends for cyment, we create completely new possibilities for ecologically sound building material production.

CO₂ equivalent

26 kg

per ton cyment

up to

50%

Emission savings for the end product concrete

up to

60%

Reduction of the clinker content possible





With cymment on a climate-friendly path.



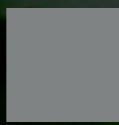
Aggregate



Water



cymment



Cement

The effective mixture for **green** concrete.

Today, it is important to create a solid basis for a tomorrow worth living. Innovations in harmony with our natural environment make it possible to tread sustainable paths and master climate-specific tasks together: We take responsibility for a future worth living.



Perfection as a constant process.

The production of cymment takes place in the border area of Austria, Slovakia and Hungary. Main ingredients: Pozzolana and other hydraulic substances.

How is cymment produced?

1

Raw material



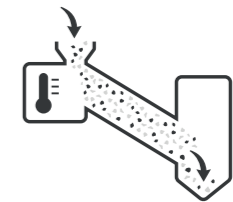
2

Preparation



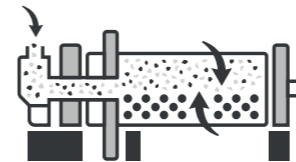
3

Drying



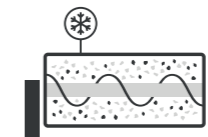
4

Grinding



5

Cooling



6

Delivery



Sustainably produced on site

In the most modern grinding plant in Europe, cymment is produced in a resource-saving and energy-efficient way. The most efficient equipment is used for preparing the various raw materials and processing them into a homogeneous powder: The use of proven technologies, coupled with state-of-the-art machine technology, ensures efficient production with the lowest possible energy consumption. High standards are guaranteed by advanced quality assurance – along the entire process chain.



High variability for targeted use.

cyment is suitable for all applications of mineral building materials due to its hydraulic properties.

Depending on the area of application and the resulting requirements for mechanical properties and durability, the binder composition can be flexibly adapted in the ready-mix concrete plant. This allows a high variability in the use of cyment in combination with cement and thus a targeted use of resources.

Ideal for:



Standard concretes in building construction and civil engineering



Precast elements



Concrete production at high temperatures



Massive components



Stabilizations



Mortar



Structural engineering

The possible applications of concrete in building construction are – just like the requirements – diverse and range from base and filler concrete to self-compacting concrete (SCC) and high-performance concrete. For sustainable production of ready-mix concrete, a variable proportion of the cement can be replaced by cyment, depending on the intended use, while the concrete properties remain unchanged or even better. This reduces CO₂ emissions, protects the environment and makes an important contribution to future-oriented concrete production.



Road construction

For the construction of roads and paved surfaces, in many cases the lower base courses are mixed with binder and compacted by rolling. For optimum force transmission in the subgrade a certain strength is aimed for: The targeted addition of cyment ensures a slower strength development and structured crack distribution.



Civil engineering

Supporting structures, retaining walls, dams, diaphragm walls, piles: In civil engineering, large concrete cubatures are required for very massive components. cyment is ideally suited for this area of application due to its high final strength and its – compared to pure cement – slower strength development. By using cyment, the heat development and thus the hydration in the component can be controlled in a targeted manner. The risk of cracking is significantly reduced, and the service life of structures is increased.



Building products

Due to the required processing properties, mortars, adhesives and plasters usually have a high proportion of fines. The composition can be favourably influenced by partial substitution of cement: Sustainable and hydraulically active cyment reduces the CO₂ footprint of building products and also enables product properties to be controlled in a more targeted manner.



Bundled competence.

In the building materials industry, quality assurance, research and development will meet under one roof in the future:
The **ALAS Competence Center** in Slovakia acts as a forward-looking innovation hub.

New standards for a responsible future

ALAS is continuously expanding its expertise in the application of mineral building materials, in securing raw materials, and in recycling building materials. For this purpose, existing R&D activities as well as building materials testing and quality assurance of the entire ALAS Group will be bundled on a cross-border basis in the new Competence Center in Bratislava in 2024. In the future, the center will combine know-how from the fields of mineralogy, chemistry, mortar, cement, rock and binder testing, and concrete technology in a state-of-the-art laboratory and training building.



Climate protection? For sure!

A new standard developed by the International Organization for Standardization (ISO) aims to provide clear definitions and parameters for carbon neutrality. In early 2023, the draft ISO 14068 standard was published to provide a general understanding with regard to carbon neutrality and the methods that will be used to achieve this goal.

ISO 14068 in turn feeds into other, upstream ISO standards that describe innovative, efficient and verifiable solutions. This makes the effect of the measures taken traceable and also verifiable.

In order to make the CO₂ footprint of cement and the associated CO₂ reduction in the end product concrete visible in figures, our calculation is based on the above-mentioned ISO 14068 as well as on the basis of the Greenhouse Gas Protocol (GHG Protocol). The calculations are carried out in cooperation with the University of Leoben. For cement a CO₂ equivalent of 26 kg per ton of the additive was calculated. In order to be able to present our surveys in a measurable and credible way for customers, they are accredited by an independent and official testing body.



The perfect additive.

Modern concrete technology supplements the traditional components of aggregate, cement and water with concrete additives and admixtures. In this way, optimized properties can be achieved for different areas of application, for example in terms of strength, durability and temperature development, achieve.

cyment is used as a type II additive (pozzolanic or latent hydraulic additives) in accordance with EN 206 and can thus be counted towards the cement content. The climate-friendly advantage? The significantly optimized life cycle assessment of concrete.

Advantages:

- +
CO₂-neutral production
- +
Dense concrete structure
- +
Low heat of hydration
- +
High durability

cyment

Scope

cyment can be used as a type II concrete additive according to EN 206 and improves the fresh concrete properties, the properties of concrete during hardening (reduction of hydration heat development) and the properties of hardened concrete (dense pore structure, high final strength and durability).

cyment is generally suitable for all applications in civil engineering and especially for use in massive structural elements, in water-impermeable structures and base layers stabilized with binders.

Product features

Properties according to valid ETA	Guide values	Requirements according to ETA 23/0294
Activity index [%, 28 days]	90	≥ 75 %
Activity index [%, 90 days]	100	≥ 85 %
Density [kg/dm ³]	3,0	2,9–3,3
Grinding fineness (Blaine) [m ² /kg]	670	≥ 400



**For sustainable construction
with optimized eco-balance.**



cyment
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