

CEMENT
INTERNATIONAL
TECHNOLOGIES | **cit**

ULTRA**VAL**

*Ultra Fast
and
Ultra Resistant*



MORE THAN A CEMENT, IT IS THE SOLUTION

WHAT IS ULTRAVAL?

It's a Portland type cement with very high mechanical performance, especially at early ages, allowing the immediate completion of works.

It also allows increased productivity in general, and especially in the precast industry.

It is very suitable for cold weather concreting concrete, for high-strength concretes to which active additives are added (mainly silica fume), when high quality of surface appearance of exposed concrete is required, and in cases where the quality of the aggregates would not allow high performance concrete.

Ultra Fast and Ultra Resistant.

It's an extraordinarily fast cement offering strengths of 25-50 MPa concrete in a time of 4 to 8 hours versus the 28 days needed by other conventional cements.

Ultra Independent.

It's the only cement in the market that doesn't need accelerating additives to work in conditions of extreme temperatures and aggressive environments such as marine areas.

Ultra Custom.

Not only have we achieved the fastest cement in the market, it's also the most flexible and versatile. Together with our R + D + i we will develop appropriate and profitable dosages for works wherever applied.

There are no limits, its capacity is never diminished whatever the external conditions

Ultraval has revolutionized the cement world and is the latest generation and the only product capable of solving any work requirement, which has positioned it as the market leader.

It is the only cement that guarantees, under certification, the very high initial strength and high mechanical performance. This makes it the ultimate solution in the cement world, as it allows to manufacture high performance concrete in few hours.

It drastically reduces construction costs, accelerating the pace of production in any of its wide range of applications.

We get involved with each client in the application design of Ultraval to adapt it and get the optimum results. This way we make one product specifically to suit the needs of each customer.

Further, the manufacturing technology used for Ultraval can be developed anywhere so that any country in the world can benefit from its advantages.

"With Ultraval we reduced by half the time of formwork stripping thus doubling the performance. Moreover, the improvement in finishes is surprising with Ultraval: you get a much finer and polished surface. **With Ultraval we could reopen to traffic 3-4 hours after its use."**

"We incorporated Ultraval to shotcrete and we got very high initial and final strengths, therefore obtaining lighter coatings with corresponding savings in production costs.

Ultraval used for shotcrete is a solution without competition."

**Miquel Andonegui,
FCC Construcción.**

"Ultraval has provided the possibility to save time that we can use now to improve our productivity. In addition the finishes achieved with Ultraval are significantly finer, softer and less porous than the ones resulting from other products."

**Esther Valdeolivas
Chief of Quality of RAIL.ONE Track Systems,
S.A.**

"Ultraval Cement is a flexible and viable solution in various applications, both in situ and precast, especially when high strength is required. It also avoids side effects such as shrinkage. "

"Ultraval Cement with other innovative techniques, such as concrete slabs with fibres, **could double the pace of construction in regular and standard plants"**.

**Antonio Aguado,
Professor at the Polytechnic University of
Catalonia.**

CHARACTERISTICS

ULTRAVAL

Cement type I 52.5 R manufactured according to norm UNE-EN 197-1.

- Blaine of 6.000cm²/g.
- Low alkali content. Na₂O equivalent <0.50.
- Initial setting time 90 min.
- Final setting time 120 min.
- Between 4 and 8 hours to reach 25-50 MPa in concrete and exceeding 100 MPa at 28 days.



Product/ Technology	Initial resistance	Regardle of weather conditions	Speed and strenght in marine environments	Infrastructure repairs	Structural concrete	Performance in precast
Ultraval	● ● ● ● ●	● ● ● ● ●	n.a.	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Cement based on calcium aluminate	● ● ● ●	● ● ●	● ● ●	● ●	n.a.	n.a.
CEM I 52,5 R	● ● ●	● ●	n.a.	● ● ●	● ● ● ●	● ● ●

Excelent



Very good



Good



Poor



Very poor



Not applicable

n.a.



CHARACTERISTICS

ULTRAVAL SR3

Cement type I 52.5 R-SR3 manufactured according to norm UNE-EN 197-1:2011.

- Very low alkali content. Na₂O equivalent to < 0.40
- Initial setting time 90 min.
- Final setting time 120 min.
- Between 4 and 8 hours to reach 25-50 MPa in concrete and exceeding 100 MPa at 28 days.

Product/ Technology	Initial resistance	Regardle of weather conditions	Speed and strenght in marine environments	Infrastructure repairs	Structural concrete	Performance in precast
Ultralval	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Cement based on calcium aluminate	● ● ● ●	● ● ●	● ● ●	● ●	n.a.	n.a.
CEM I 52,5 R	● ●	● ●	● ● ●	● ● ●	● ● ● ●	● ● ●

Excelent



Very good



Good



Poor



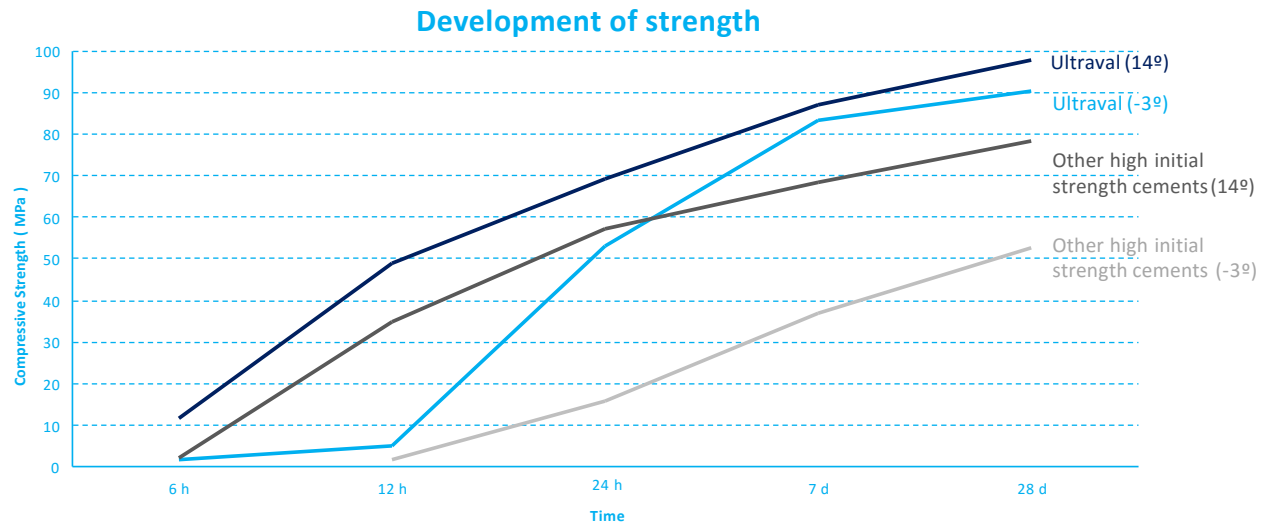
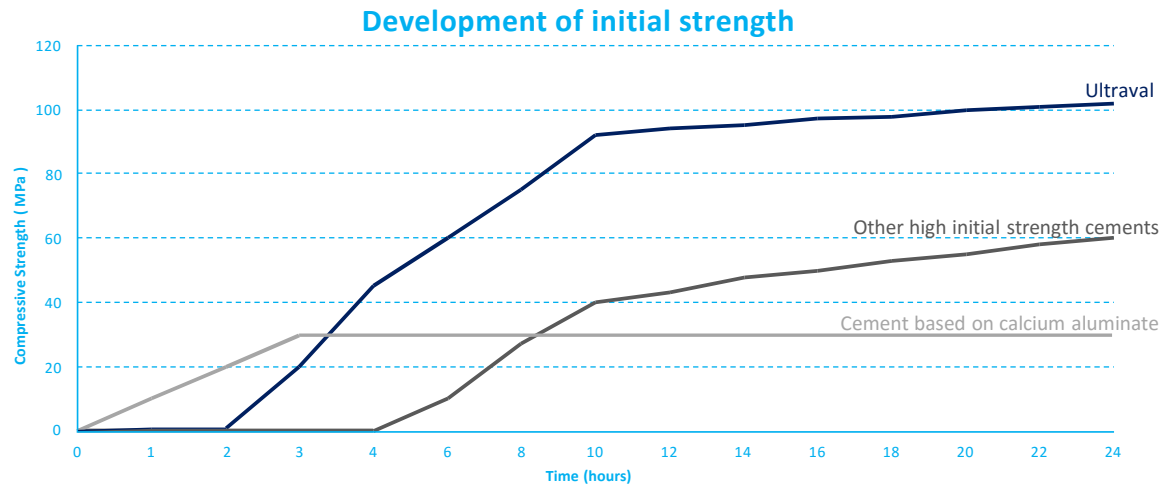
Very poor



Not applicable

n.a.

TWO PRACTICAL CASES OF ULTRAVAL APPLICATION



It is unrivaled in the area of construction and urgent repairs.

APPLICATIONS

CIVIL WORKS:

Both construction and repair of tunnels, bridges, seaports, road surfaces, railways works, airports, etc..

MILITARY WORKS:

Urgent repairs.

BUILDING:

Residential and non-residential.

CONCRETES:

Structural Concrete, Architectural Concrete, Precast, Mortars ...

URBANISM:

Construction of street furniture.

INDUSTRIAL OPERATIONS:

Mining, cryogenic applications.

"As Project Manager of Inneo Torres, and in charge of the construction of 11 prefabricated concrete towers of 120 m high for the wind farm of Gostyn-Poland, we faced a big challenge: At the threshold of winter, we had to find a solution to carry out the works on time and in a climate subjected every day to lower temperatures.

After a thorough market search, we found Portland Ultraval.

Ultraval was a definite improvement in the project overall. We got many benefits: Some tangible, such as improving costs and times or the elimination of accelerated curing processes, and other intangible, like the peace of mind we had knowing we would reach the strength required for the project in such short time. This characteristic quick increase of the initial strength improved considerably our fabrication pace, allowing, even in temperatures near zero, the output and later assembly of the pieces respecting the final terms of the project. This resulted in an improvement in total project deadlines altogether because we could shorten assembly times and bring forward putting the towers in service.

It's also noteworthy the constant attention of the technical staff of Cement International Technologies and the joint work developed to make sure the use of their product would be totally adapted to our needs."

Álvaro Cristóbal.
Country Manager Poland and International
Project Director Inneo Torres S.L.



Quality, commitment
to the environment
and sustainable
development are ours
hallmarks.

BENEFITS

- Ability to control speed.
- Cost reduction in critical points.
- Assistance with emergency repairs.
- Increased production rates.
- Increased performance at critical points of the works.
- Independence of the weather conditions.
- Support from design to execution.
- Avoids penalties for delays and allows bonuses for improvements in execution times.
- Provides an advantage to win tenders in which the execution deadline of the works is a key factor.

PROVEN INNOVATION

The continuous research enables us to provide increasingly efficient and added value products to perfectly fit our customer's needs.

In addition, Cement International Technologies has launched a new line of business, the international sale of technology, which allows companies anywhere in the world to manufacture the most innovative products developed by Cement International Technologies.

"Ultraval cement opened up a myriad of new possibilities."

"We reached a critical moment in the works, when **we needed a self-compacting concrete with workability time of three hours and a final resistance at 28 days of 80 MPa**. For two months we couldn't get a formula that would give us these characteristics."

"Until they recommended Ultraval. Once we tested it, we made it with surprising ease."

"Ultraval Cement has been in my portfolio of options **to solve impossible problems we could not sort out with other cements.**"

**Luis Medrano,
Lab Manager of the Vidin Bridge
(Bulgaria).**

"Certain repairs at airports can be critical to their operation. In these areas the execution speed and the reliability are key factors.

In my department we spent more than five years looking for a concrete that could reach high strengths to flexural in short period of time for mass concrete slabs 5.5x5.5x0.4, and at the same time avoiding retraction issues. The tests performed with Ultraval met all our needs and moreover with a similar handling to the conventional concrete.

To be able to have the repaired area in service within 24 hours is an achievement that saved us costs and improved the quality of service."

**Miguel Lara Nombela
Head Department of Airfield and
Urbanization Prat Airport,
Barcelona.**



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