

SECAR[®]

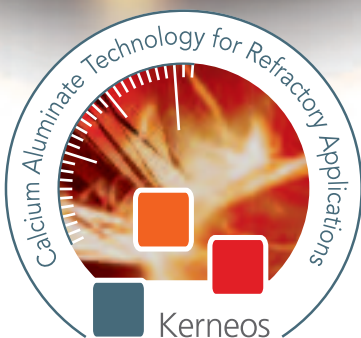
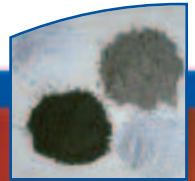
Calcium Aluminate Technology For Refractory Applications

1810°C

1620°C

1450°C

1290°C



High performance
reliable technology...

SECAR®

at the heart of your formulations



For one hundred years the manufacture and supply of calcium aluminates has been our business. Our mission is to meet the demands of industry worldwide for temperature resistant binders.

Consistent reactivity, reliability and high performance are the key characteristics of Kerneos' SECAR® range of binders for the refractory industry. Kerneos supports its clients with a world class supply chain, strong R&D and dedicated technical teams.

Kerneos technology is at the centre of most of the monolithic products manufactured worldwide, from the simplest concrete mix for a heat resistant floor to the most complex high performance refractory system in the world's most advanced steel plants.

The investment by Kerneos in new plants and in its leading research centre allows the company to build on its 100 years of experience. Kerneos resources are directed to the future demands and challenges of the refractory industry to meet the challenges of the 21st century.



Kerneos at a glance

The inventor of Ciment Fondu® in 1908 and the developer of the SECAR® range

Kerneos is the new name of Lafarge Aluminates.

This new name reflects our ambition to offer customers in all our markets innovative technical solutions based on calcium aluminates, while continuing to maintain the product quality and service reliability that they expect from us.

A worldwide network supplying customers in more than 100 countries

- Local technical experts and commercial teams
- World class technology experts operating on a global basis
- 8 plants on five continents for rapid and secure supply

Customer driven Research & Development for the Refractory Industry

- Research & Development centres in Lyon (France) and application laboratories in Tianjin (China) and Norfolk (USA)
- Customer partnerships focused on requirements of the industry
- New products to extend the boundaries of monolithic refractory technology

Consistent quality,
reliable supply and
high performance
are the pillars of
Kerneos

High quality products, consistency, reliability

- SECAR® and Ciment Fondu® products available worldwide
- Benchmark SECAR® 71 product manufactured in 4 plants to the same performance specification on 3 continents
- Quality management systems certified according to ISO 9001 standard

Worldwide leader in calcium aluminate technology with a broad range of properties for all refractory monolithic applications

- A full range of temperature applications
- High mechanical and abrasion resistance
- Conventional, low cement and ultra low cement applications
- Casting, gunning, pumping and self flow applications
- Working time control systems



Quality, reliability and proximity

Kerneos' global production addresses efficiently the needs of customers throughout the industrialised world.



Ensuring quality and long-term performance

Kerneos' principal commitment to its customers is to provide products manufactured to the same standards of regularity and performance to customers at

their sites wherever they are situated in the world.

State-of-the art process and quality control equipment and a high level investment program is maintained at all our plants to ensure that continuous improvements in the quality of our products are made.

All Kerneos products are made and controlled within a quality management system that is certified according to ISO 9001 standard requirements.

Guaranteed delivery through a high performance supply chain

With 8 factories in 5 continents and commercial subsidiaries managing additional warehouses, Kerneos guarantees a continuous supply for its customers wherever they are located.

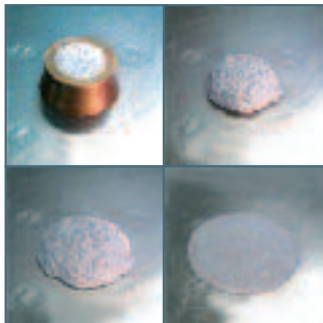
Kerneos has invested in recent years in a dedicated supply chain team that continuously studies and sets up specific logistic solutions to meet customer's requirements.

Worldwide network, local presence

Kerneos established its factory in Tianjin in 2000 and manufactures SECAR® 71 and SECAR® 80 locally in China to the same exacting standards as other plants. Newly established subsidiaries in Russia and India improve access to SECAR® products and ensure a strong local presence.



Kerneos Research and Development



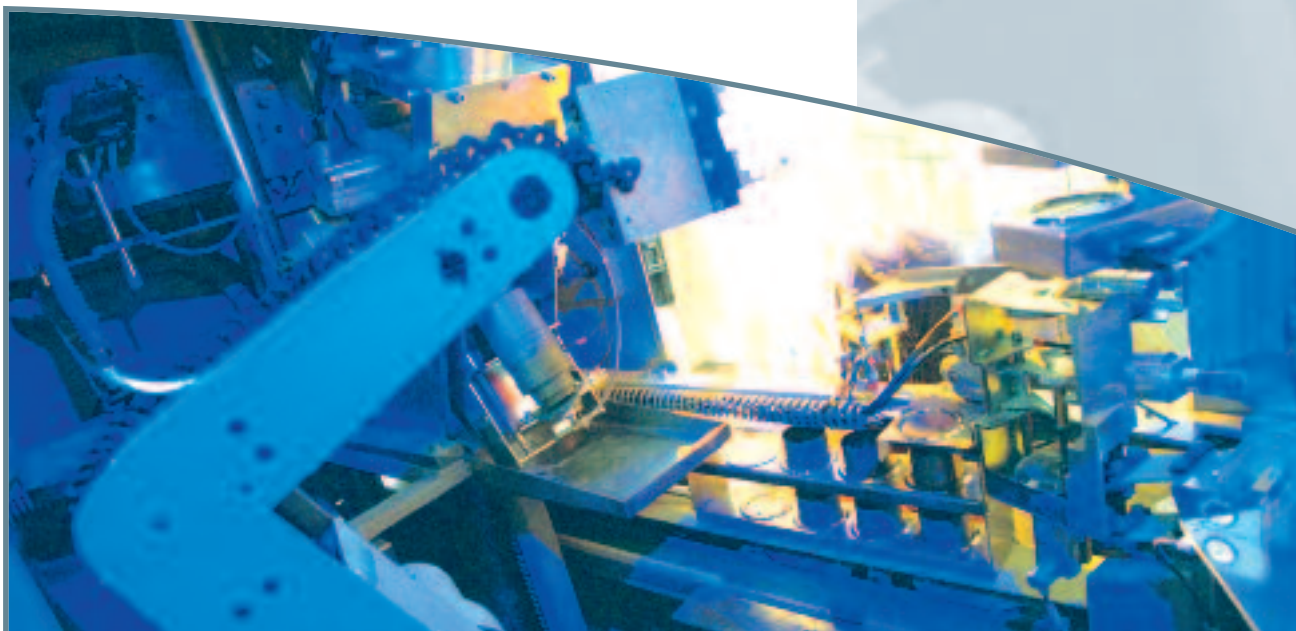
The development of calcium aluminate binders is vital for the progression of refractory monolithics

Kerneos staffs a significant laboratory at its site in Lyon, France with highly qualified scientists and engineers dedicated to the development, manufacture and application of calcium aluminates. Specialists in cement chemistry, mineralogy, hydration and powder technology, plus experts in ceramic technology work to improve Kerneos' product offer.

The role of partnership in bringing new technologies to market

Kerneos works closely in confidential partnerships with many customers throughout the world. Through cooperative programmes Kerneos works together with customers to resolve problems and develop new solutions.

Opening
new opportunities
for monolithics



Sharing Expertise

In all markets around the world Kerneos communicates on the latest application technologies related to calcium aluminates

Technical support worldwide

As the pioneer in calcium aluminate technology Kerneos has developed strong local and central teams in order to assist customers developing new products and managing issues linked to interactions with other raw materials.

This support is provided by:

- A network of technical development managers, supporting customers in the development of new products and in the scientific understanding of their applications,
- An expertise in and access to many complex testing methods through its laboratories and plants worldwide,
- The availability of products with well defined and harmonised characteristics from multiple plants around the world.

Sharing and developing expertise

In all markets around the world Kerneos communicates on the latest application technologies related to calcium aluminates so that customers can build a better understanding with the goal of assisting companies to improve the reliability and performance of their products.

www.secar.net



- **www.secar.net:** Kerneos' SECAR® web-site is devoted entirely to providing global access to state-of-the-art technical information;
- **Technical seminars:** Kerneos is committed to supporting the major technical forums and conferences managed by the industry;
- **Training programmes:** Kerneos manages training seminars for customers on an individual and joint company basis depending on the requirements of the customer.



A broad portfolio of products and solutions

The Kerneos product range includes the following calcium aluminate products commercially available in most countries:

- **Ciment Fondu®**: the original calcium aluminate is widely used in many non-severe high temperature applications as a dense castable or a lightweight insulating material
- **SECAR® range**: the SECAR® range of products has been specifically developed for refractory applications and includes:
 - > SECAR® 41
 - > SECAR® 51
 - > SECAR® 71
 - > SECAR® 80
- **SECAR® "Plus" Range®**: a range of engineered cements designed to provide elevated or specific performance characteristics. The range includes:

> SECAR Plenium®



> SECAR Xeniom™



Kerneos' calcium aluminates allow the refractory monolithic producer to engineer products for a full spectrum of applications:

- **Conventional concretes**: the high purity of the SECAR® range is a sure fast route to a strong, robust and easy to place concretes that can provide excellent in-service performance.
- **Deflocculated systems**: reduced lime content castable systems have to become the reference where high temperature thermo-mechanical performance coupled with corrosion resistance is required. SECAR® 71 in particular is the product of choice for these systems.
- **Special applications**: SECAR Plenium® has been designed for dense high purity systems with reduced lime content. SECAR Xeniom™, a new product specifically addresses the problems of robustness and ease of use of deflocculated systems.

High technology calcium aluminate binders designed for refractory castables allowing flexibility in placing techniques and high levels of performance



Worldwide network

Local presence

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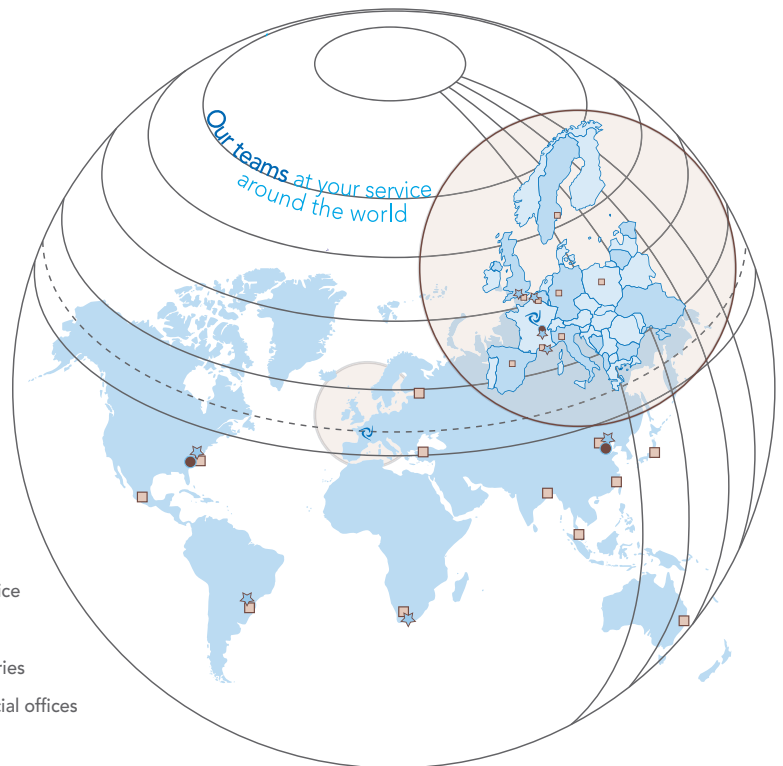
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-  Head Office
-  Plants
-  Laboratories
-  Commercial offices



For more information, visit us at:
www.secar.net

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