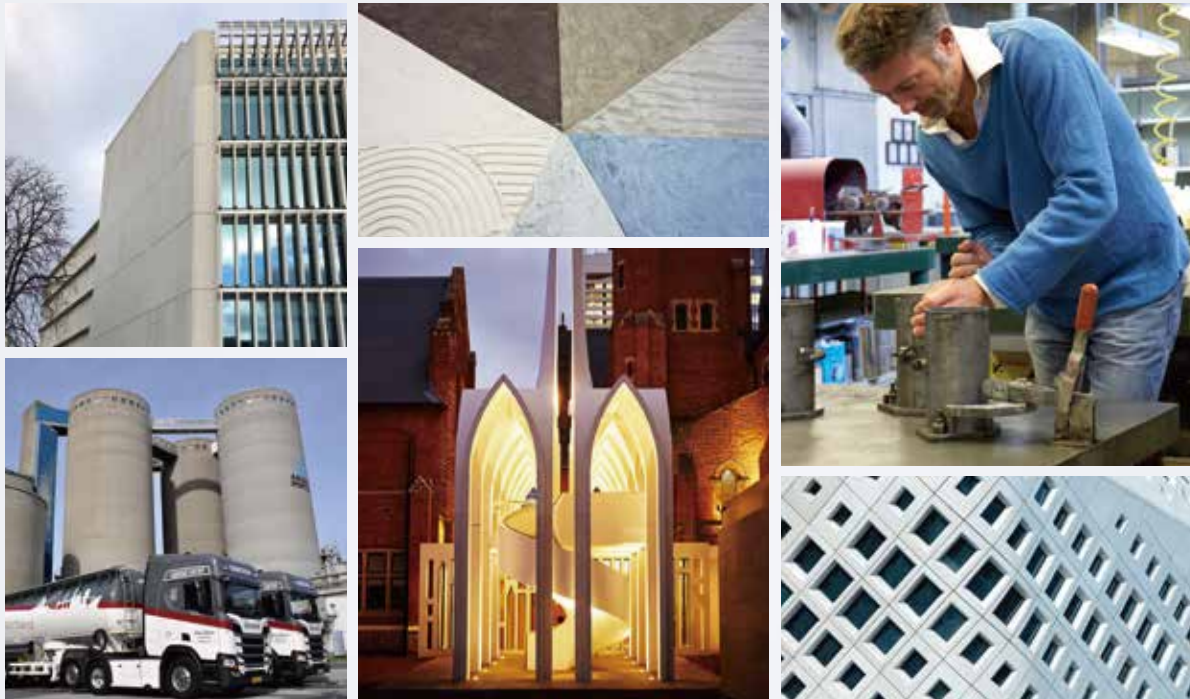




AALBORG WHITE®



Aalborg White® Overview | Europe

# Unlimited Possibilities of Aalborg White® Cement



# AALBORG PORTLAND IN WHITE CEMENT

Aalborg Portland, with over 130 year's history, is the global leading player in White Cement with 3.3 million MT capacity and production facilities strategically located in four continents.

More than 70 countries worldwide are served under the global AALBORG WHITE® brand from production plants in Denmark, Egypt, Malaysia, China as well as US , with a reliable supply of consistent quality for all the cement features.

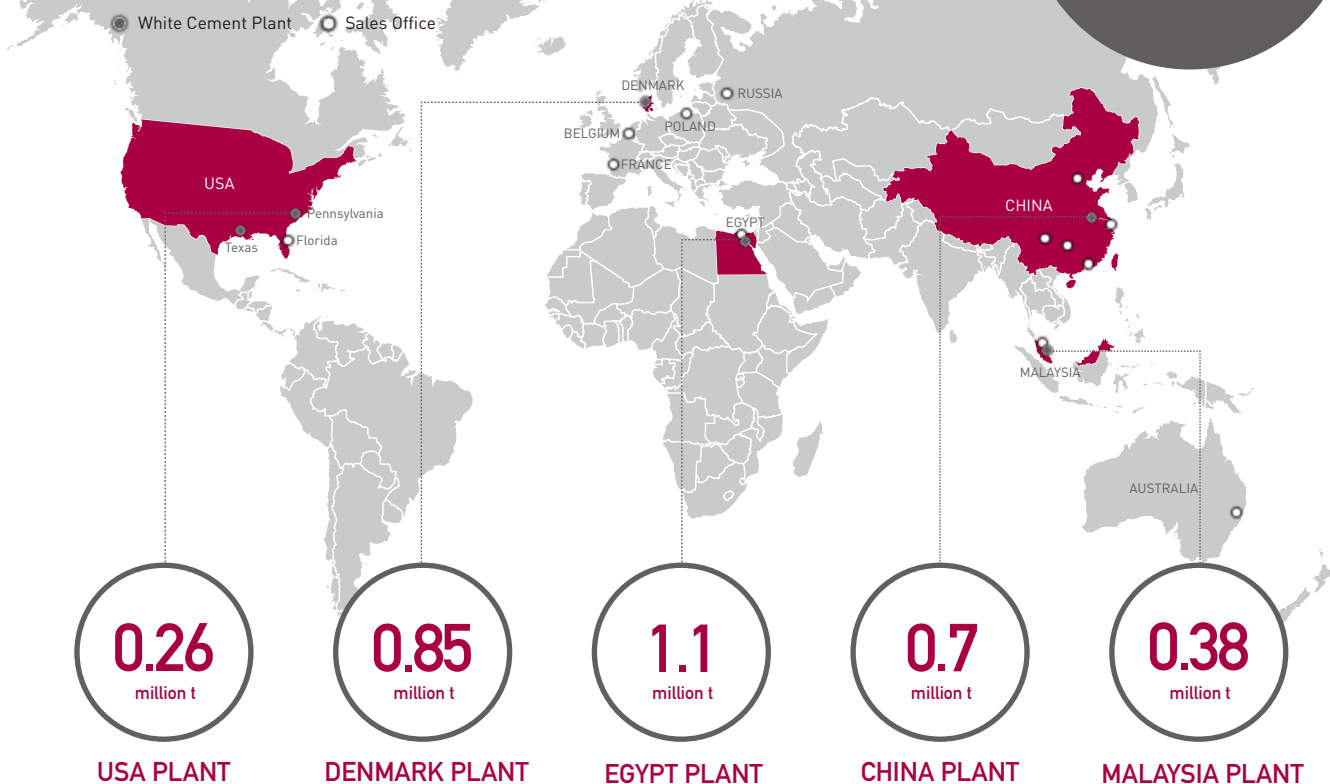
Aalborg Portland supports its partners by providing a consistent and high performance product, value-adding services into the customers' supply chain, extensive technical and customer support, as well as potential cooperation in (co)developing new applications using White Cement.

Aalborg Portland is owned by the Italian Cementir Holding, an international Group with operations in 18 countries, with over 3,000 employees, active in white and grey cement, ready mix concrete, aggregates, concrete products and waste management.



# AALBORG WHITE® PLANTS CAPACITY

**TOTAL**  
**3.29**  
million t



## AALBORG WHITE® PRODUCTS

● **AALBORG WHITE® cement**  
CEM I 52.5 R-SR 5 (made in Denmark)

Produced in Aalborg, Denmark  
Sold in all European markets as bulk,  
bigbags and 25kg bags



- **AALBORG WHITE® cement**  
CEM I 52,5 R (made in Egypt)

Produced in Sinai, Egypt  
Currently sold in Benelux, France and  
Germany as bulk, bigbags and in 25kg bags.



- **AALBORG WHITE® cement**  
CEM II/B-LL 42,5 N (made in Egypt)

Produced in Sinai, Egypt  
Currently sold in Benelux, France and Germany  
as bulk, bigbags and in 25kg bags.



## AALBORG WHITE® Product Overview

	Physical Properties							Chemical Properties				Product Features					
The cement conforms to national/regional standards in the market served	Strength(Mpa)			Initial Setting time	Whiteness	Fineness	SO <sub>3</sub>	Alkalies as Na <sub>2</sub> O	C <sub>3</sub> A	Loss on ignition	High Whiteness	High Strength (28days)	High Early Strength	High Consistency in Quality	Low Alkali Content	Sulphate Resistance	
	1 Days	2 Days	28 Days	Mins	Hunter L	m <sup>2</sup> /kg	%	%	%							(SR5- EN 197-1)	
AALBORG WHITE® Product - Product Data Sheet Source: Cementir White Cement Plants																	
AALBORG WHITE® cement CEM I 52.5 R - SR 5	Made in Denmark	24	44	72	135	93	400	2.1	≤ 0.2	5	1.2	●	●	●	●	●	
AALBORG WHITE® cement CEM I 52.5 R	Made in Egypt	29	39	68	160	93	450	3.1	0.6	7	2.8	●	●	●	●	●	
AALBORG WHITE® cement CEM II/B-LL 42.5 N	Made in Egypt	16	26	48	180	93	520	2.3	0.4	7	12.9	●		●	●		

# Unlimited Possibilities of WHITE CEMENT

## Aesthetics and Functionality

Unique raw materials and advanced production technology developed over 130 years make up the AALBORG WHITE® as the global leading White Cement brand over for its supreme quality.

High whiteness, high strength and high consistency in quality of AALBORG WHITE® makes it a broad range of applications in the fields of Commercial & Residential Building, Landscaping, Infrastructure, Energy & Waste and Industry & Agriculture.

AALBORG WHITE® has already been an essential building material for architects, engineers, general contractors and manufactures to achieve architectural functionality and aesthetics.



## Pre-stressed and Ordinary Reinforced Precast

By building with structural concrete elements, there is no limit of creating an attractive airy indoor environment with columns and beams of white or coloured concrete based on AALBORG WHITE®.

The immediate impression is one of elegance and lightness in construction, which takes full advantage of the AALBORG WHITE® high reflective index.



## Precast Products

Prefabricated construction is an area in which white elements can play a successful role. AALBORG WHITE® also makes a large contribution in reaching a clear and pure nuance for all the colours designed.



## Artificial Stones

Artificial Stone is mainly used in landscaping and building exterior & interior wall. AALBORG WHITE® makes artificial stones have real stones' textures and colours, creating a natural and vibrant space and environment.



## GRC (Glass Fiber Reinforced Concrete)

GRC is used for very thin, bending and light panels. A common application in the old building facade renovation or in a completely new design. GRC produced with AALBORG WHITE® has optimum strength and toughness thanks to the compact matrix created by high cement performances.



## UHPC (Ultra High-performances Concrete)

UHPC is the emerging concrete technology for slim aesthetic and structural concrete elements with high mechanical, chromatic and durability performance. Peculiar and consistent quality of AALBORG WHITE® make it all possible.



## Dry Mix Mortars

Mortars are used in a wide range of applications. When aesthetic appeal is a priority, AALBORG WHITE® is often included in the formulation.

AALBORG WHITE® with its high reflective index, in addition to high strength and consistent chemical composition, makes it the preferred cement for many mortar products like colour mortar, tile adhesives and grout, skim coat, self-levelling floor screed, swimming pool plasters, etc.



## In-situ Cast Concrete

The greatest freedom in shaping concrete usually exists for constructions where concrete is poured and cast on site. Only your imagination and operation' feasibility can limit the possibilities. When mixed properly, concrete based on AALBORG WHITE® cement achieves very high strength and durability thanks to high cement overall performances.

# OUTSTANDING PRODUCTION FACILITIES

- High quality raw materials with extensive resource for further 100 years thanks to own quarry
- High production environmental standards exceeding European regulations
- 5 White Cement kilns in Denmark and 2 kilns in Egypt



# CUSTOMER ORIENTATION

*We have been dedicated to offer diversified and flexible customers services encompass Logistics, Warehousing & Technical supports as a practice of Cementir's customer-oriented strategy.*

- 25kg bag and bulk cement by vessel, train and truck transportation
- 11 terminals and 6 Warehouses in Europe
- Strategic plant location with own sea port facilities



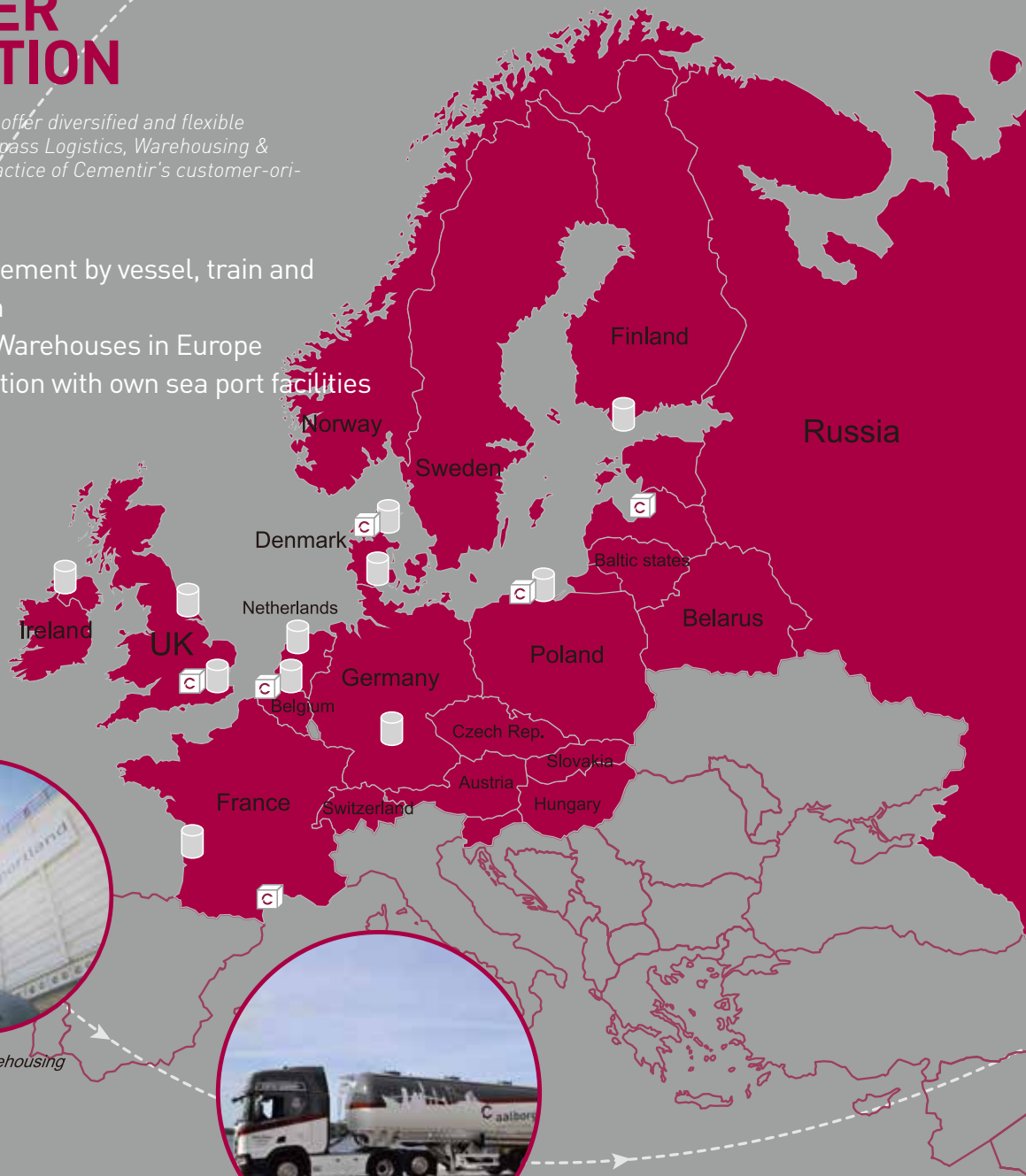
Vessel Transportation



Terminal & Warehousing



Truck Transportation



Terminal



Warehouse





# THINK GLOBAL ACT LOCAL

As a global leading player in White Cement with production facilities and commercial subsidiary strategically located in four continents, we support our local partners by providing high performance product, value-adding services, extensive technical support, and potential cooperation in (co)developing new applications using Aalborg White® cement.

## Global Expertise & Innovation

**Aalborg InWhite Solution®** is the global Innovation Engine for White Cement Application established with the purpose of generating the most sustainable, cost-effective solutions in construction and building material. Aalborg Extreme® Light120 is our first commercialized Premixed Ultra High-Performance Concrete product under the Aalborg InWhite Solution®.

**White Cement Competence Center (WCCC)** serves as knowledge and emerging technology center for the global activities and customer supports by developing new White Cement applications. Annual WCCC workshop gathers all **“White Marketers”** in all Regions for sharing best practices and in-house training in applications, technology and innovation.



## Local Practice

Cementir has global presence in White Cement, but we listen to the “Voice of Customer” in local markets, understand in-depth of local market needs and have a close relationships with local partners.

**Our innovation team**, together with our global experts and scientists of R&D Center in Aalborg, Denmark offer product technical supports and market-specific product and application trainings to local customers and stakeholders in all Regions.

# Building A SUSTAINABLE FUTURE

Cementir regards sustainable growth as both a responsibility and a requirement for continuing to work in the cement industry. Our business model must strike the right balance between the creation of economic value, the protection and conservation of the environment and a sense of responsibility towards people and communities.

Group has identified 4 pillars that represent the benchmark principles that have inspired the company's defined sustainability strategy.

## Alternative Fuel in the Cement Production



**16.8%** alternative fuel used for thermal energy production in place of non-renewable fossil fuels.



## Energy Recycling



Cementir's Plant in Aalborg, Denmark achieves District Heating covering **28%** of the heat consumption in Aalborg, Denmark which is equivalent to 30.000 homes per year.

District Cooling for Aalborg Hospital via Plant Rørdal chalk lake. Expected electricity savings of **80%**, and annual **CO<sub>2</sub> savings of 500-700 tons**.

## Planning for Wind Energy



New project to have self-production of electricity from **5 three MW wind turbines** in Cementir's plant in Aalborg, Denmark.

**18%** electricity consumption can be supplied by wind energy, equivalent to approx. 45 GWh.

CO<sub>2</sub> emissions for power generation can be reduced by **28.000 tons** per year (600g CO<sub>2</sub>/kWh).

## Green Cement Innovation



**FutureCem™** developed by Cementir's R&D center in Aalborg, Denmark cuts up to **30%** CO<sub>2</sub> emission during the cement production.

It is also a **sustainable binder** technology further developed by Cementir Innovation team together with R&D center for UHPC (Ultra High-Performance Concrete) application.



## Cementir Four Pillars on Sustainability

### PILLAR 1

We ensure that waste and secondary products are turned into resources, adopting an increasingly integrated approach to cement production and establishing partnerships with other industry players and public authorities.

### PILLAR 2

We adopt all necessary measures and the most innovative technological solutions to minimise the impact of our business on the environment.

### PILLAR 3

We attract talent and we ensure a safe and stimulating working environment for our people, our most valuable resource.

### PILLAR 4

We create value for local communities, listening to their needs and concerns and basing our relationships with them on transparency and accountability.

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