



# Autoclaved Aerated Concrete

Process Optimization for  
Improved Product Quality





# The 4 Values Concept applied to Autoclaved Aerated Concrete

## Process optimization and improvement of product quality

Master Builders Solutions supports the producers of autoclaved aerated concrete (AAC) with unique technologies, offering numerous benefits, optimising all stages of the AAC process from raw material sourcing to mix design, mixing,

pre-curing of the cake, demolding, cutting, autoclaving, till palletising and transportation to the customer. We offer solutions that address the 4 Values important for AAC producers which are:

1. Economics



2. Performance



3. Aesthetics



4. Durability



## Our customer approach

At Master Builders Solutions we have a specific customer approach which is an integral part of the 4 Values concept. In cooperation with the manufacturer our experts visit AAC plants and analyze the potential solutions for process

optimization and for the quality improvement of the finished elements. Tailor-made solutions can then be developed in our R&D laboratories simulating AAC production processes.



## Benefits of MasterCast in the pre-curing phase

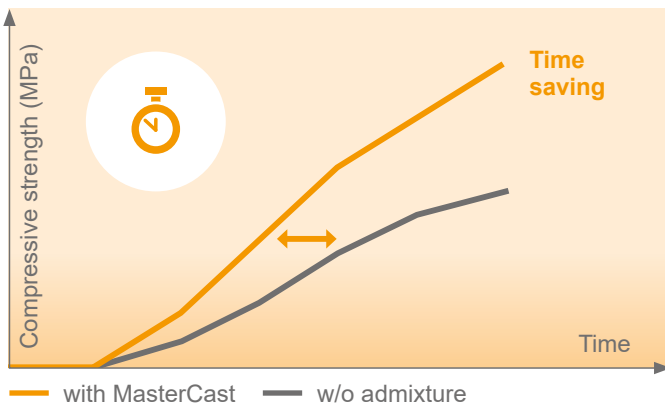
In the precuring phase of AAC production, setting and expansion of the cake occur at the same time. The fluidity of the fresh material and its rheology must be properly set so that both chemical reactions proceed in a harmonic and effective way. Thanks to the special design of its molecules, MasterCast can efficiently disperse the binder particles and

at the same time optimize the rheology of the fresh concrete. The result is a significantly shorter precuring time for optimal use of the molds, faster production and increased throughput. Alternatively, if acceleration of the precuring is not required, the amount of binder in the mix can be reduced generating significant cost reductions for the producer.

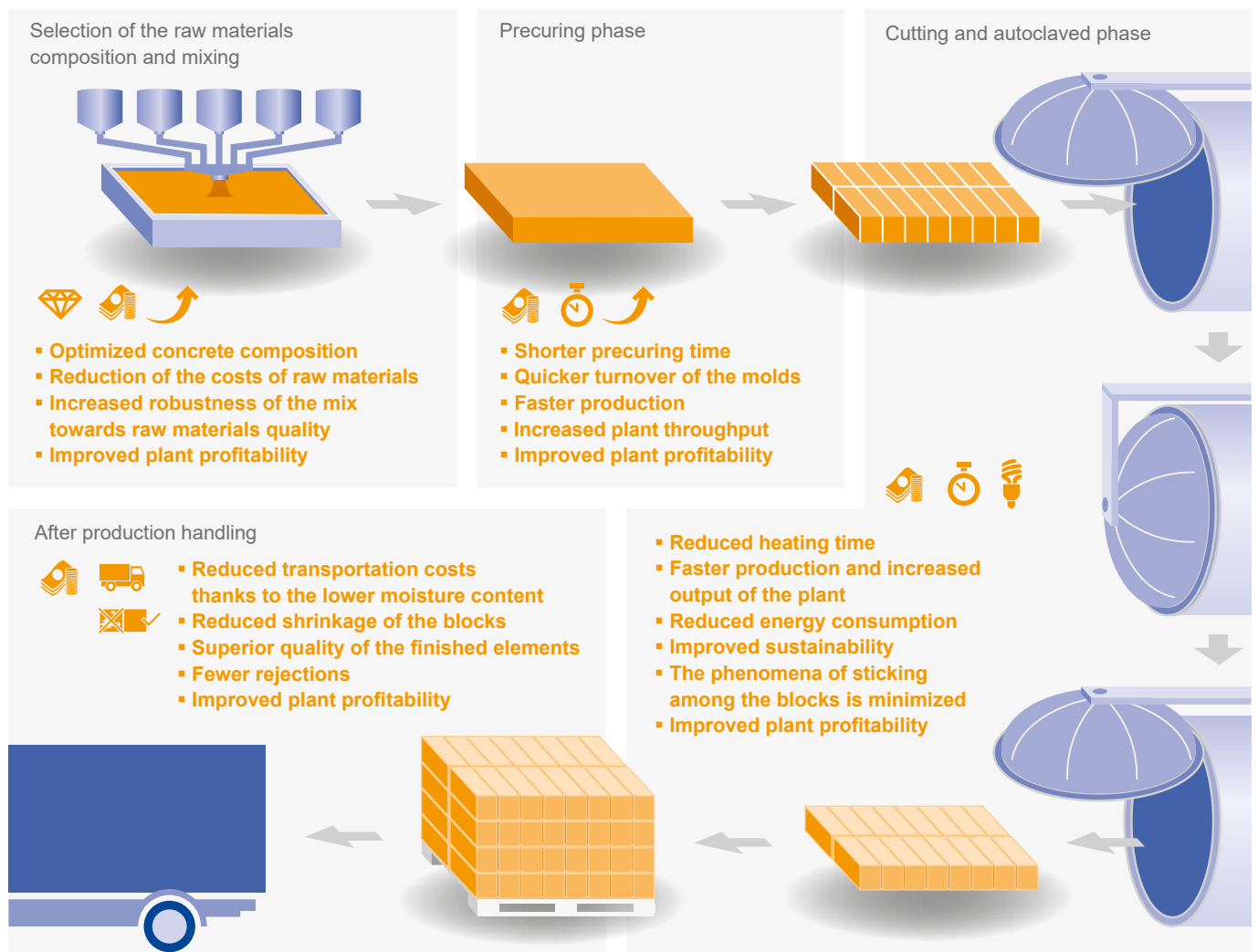
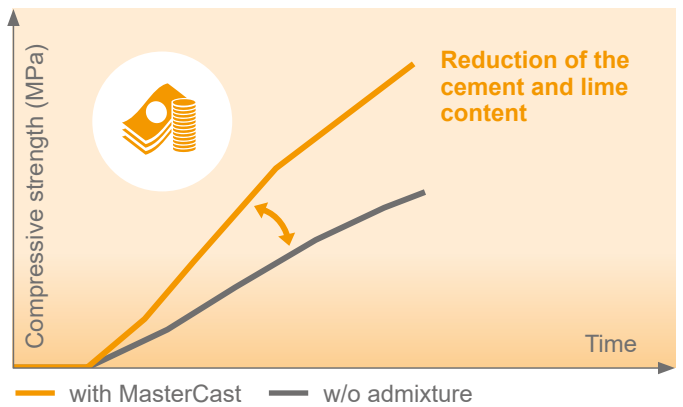


# MasterCast Offers Numerous Benefits for the Whole Production Process

What can MasterCast do in the precuring phase?  
Time saving → earlier cutting → faster production



Cost saving and higher sustainability in the raw materials





# Auxiliaries for Autoclaved Aerated Concrete Products (AAC)

## MasterFiber



For reduced crack formation and minimized shrinkage. The fibers can form a network within the blocks, that increases stability and decreases breakages during the handling and ultimately reduces waste.

## MasterPel



For the hydrophobization of the blocks. The capillary absorption of moisture is reduced, while maintaining the permeability to air and water vapor. Phenomena of humidity formation in the masonry can be avoided.

## Master X-Seed



Accelerated hardening of concrete for quicker turnover of the molds and increased plant throughput.



### Master Builders Solutions – Building on partnership

Our Master Builders Solutions experts find innovative and sustainable solutions to meet your specific construction needs. Our global experience and network help you to be successful – today and tomorrow.



### Contact us!

For recommendations regarding compatibility with other chemicals or building materials, please consult your local Master Builders Solutions Technical Advisor.



# Master Builders Solutions

The Master Builders Solutions brand brings all of our expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures. Master Builders Solutions is built on the experience gained from more than a century in the construction industry. The know-how and experience of a global community of construction experts form the core of Master Builders Solutions.

We combine the right elements from our portfolio to solve your specific construction challenges. We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

The comprehensive portfolio under the Master Builders Solutions brand encompasses concrete admixtures, cement additives, solutions for underground construction, waterproofing solutions, sealants, concrete repair & protection solutions, performance grouts, performance flooring solutions and solutions for on- and offshore wind energy.

## Our comprehensive portfolio

- Concrete admixtures
- Cement additives
- Chemical solutions for underground construction
- Waterproofing solutions
- Sealants
- Concrete repair and protection solutions
- Performance grouts
- Wind turbine grouts
- Performance flooring solutions





# Master Builders Solutions for the Construction Industry

## **MasterAir**

Complete solutions for air entrained concrete

## **MasterBrace**

Solutions for concrete strengthening

## **MasterCast**

Solutions for the manufactured concrete product industry

## **MasterCem**

Solutions for cement manufacture

## **MasterEase**

Low viscosity for high performance concrete

## **MasterEmaco**

Solutions for concrete repair

## **MasterFinish**

Solutions for formwork treatment and surface improvement

## **MasterFlow**

Solutions for precision grouting

## **MasterFiber**

Comprehensive solutions for fiber reinforced concrete

## **MasterGlenium**

Solutions for high performance concrete

## **MasterInject**

Solutions for concrete injection

## **MasterKure**

Solutions for concrete curing

## **MasterLife**

Solutions for enhanced durability

## **MasterMatrix**

Advanced rheology control for concrete

## **MasterPel**

Solutions for hydrophobization, anti-efflorescence and surface protection

## **MasterPolyheed**

Solutions for mid-range concrete

## **MasterPozzolith**

Solutions for water-reduced concrete

## **MasterProtect**

Solutions for concrete protection

## **MasterRheobuild**

Solutions for high strength concrete

## **MasterRoc**

Solutions for underground construction

## **MasterSeal**

Solutions for waterproofing and sealing

## **MasterSet**

Solutions for set control

## **MasterSphere**

Solutions for guaranteed freeze-thaw resistance

## **MasterSuna**

Solutions for sand and gravel in concrete

## **MasterSure**

Solutions for extraordinary workability retention

## **MasterTop**

Solutions for industrial and commercial floors

## **Master X-Seed**

Advanced accelerator solutions for concrete

## **Ucrete**

Flooring solutions for harsh environments



## QUANTIFIED SUSTAINABLE BENEFITS ADVANCED CHEMISTRY BY MASTER BUILDERS SOLUTIONS

**Let the numbers do the talking:** We have portrayed some of our most eco-efficient product solutions for concrete and precast production, construction, civil engineering, and flooring.

[sustainability.master-builders-solutions.com](https://sustainability.master-builders-solutions.com)



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