

MASTER®
» BUILDERS
SOLUTIONS

— **MasterMatrix®**

**Advanced Rheology Control
for Concrete**



Master Builders Solutions®

As Master Builders Solutions®, we are a leading global producer of responsible solutions for the construction industry, focussed on delivering our vision: **Inspiring people to build better.**

We provide value-added technology and market-leading R&D capabilities to improve the performance of construction materials and to enable the reduction of CO₂ emissions in the production of concrete. The comprehensive portfolio under the Master Builders Solutions® brand encompasses concrete admixtures, cement additives, and solutions for underground construction.

We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide, leveraging 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.

Founded in 1909, Master Builders Solutions® operates 35 production sites globally, supporting you in mastering your building challenges of today and tomorrow – for a decarbonised future.



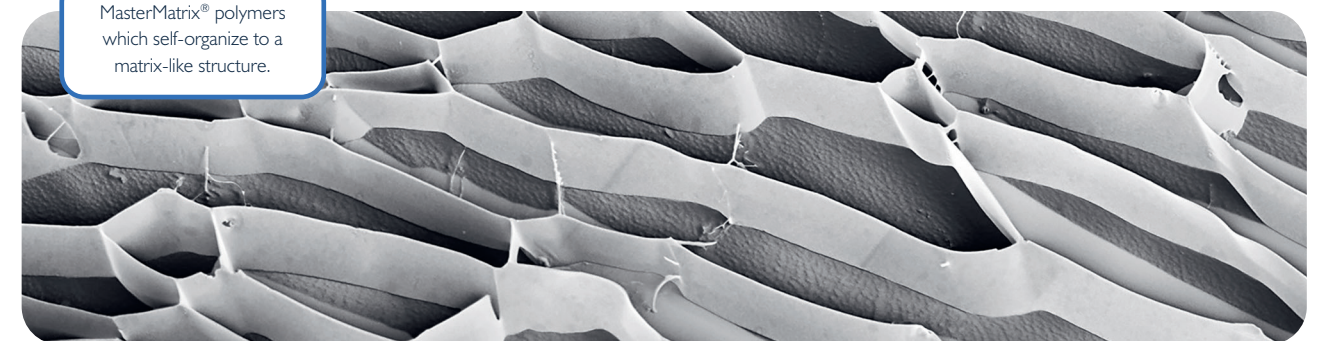
Why Do We Need MasterMatrix® in Concrete Construction?

Reaching the right balance between fluidity and resistance to segregation – apparently opposing properties – is essential in concrete construction. However, with increasing fluidity in the mix, the tendency of concrete to sediment and separate increases. In this regard, the high dispersing power of superplasticizers may lead to an even higher sensitivity of a

concrete mix towards bleeding and segregation, thus resulting in severe damage potentials.

- Structural:** Reduced strength development
- Aesthetics:** Chalking surfaces
- Durability:** Increased porosity/capillarity

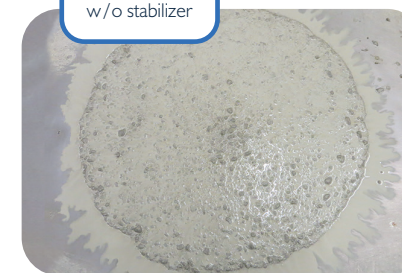
MasterMatrix® polymers which self-organize to a matrix-like structure.



Developed by the experts from Master Builders Solutions®, MasterMatrix® products are customized viscosity-modifying agents (stabilizers and VMA) by which the right balance between high fluidity and high segregation resistance can be obtained.

They are ready-to-use, organic polymers specially dedicated for producing concrete with enhanced viscosity and controlled rheological properties.

w/o stabilizer



with MasterMatrix®



Your benefits



Higher dosage efficiency compared to mineral fillers: economic benefit



Tolerates water and raw material deviations: improved robustness



Individual adjustment of rheological properties possible: total control of flow properties



Excellent stabilization of aggregates: neither sedimentation nor bleeding



MasterMatrix®

Dedicated Portfolio of Viscosity Modifying Agents

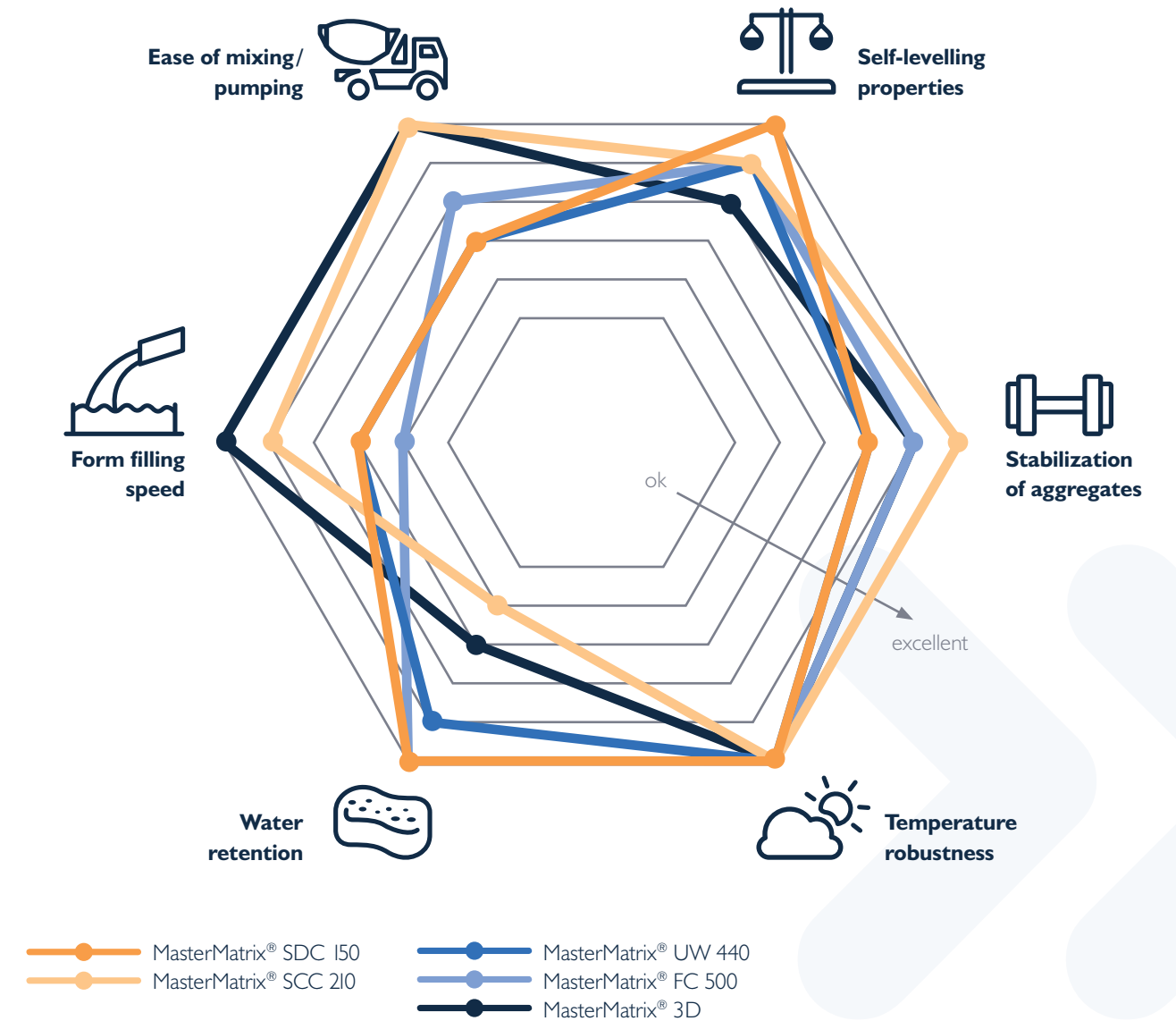
MasterMatrix® products are composed of water-soluble copolymers which form complex molecular aggregates and polymer entanglement, thereby changing the viscosity of the water and influencing the rheological properties of the concrete mix. The single products are perfectly fitting to every-day challenges and convince by their many advantages in all fields of applications.

Application	Product	Main Benefits
 <p>Smart Dynamic Concrete < S6</p>	MasterMatrix® SDC 150 (liquid)	<ul style="list-style-type: none"> • Excellent self-levelling • Self-healing properties • Prevents segregation and bleeding • Can be used with all types of cement • Does not affect setting time • Mixes are less sensitive to changes in water demand
 <p>Self-Consolidating Concrete > S6</p>	MasterMatrix® SCC 210 (powder)	<ul style="list-style-type: none"> • Easy mixing and pumping • Excellent sedimentation stability after placement • Increased viscosity and thixotropic properties: High viscosity at rest and low viscosity during mixing and pumping • Reduced segregation, even with highly fluid mix • Enhanced pumping and finishing
 <p>Underwater Concrete</p>	MasterMatrix® UW 440 (powder)	<ul style="list-style-type: none"> • Excellent anti wash-out properties • Minimal or no effect on water demand • Reduces or eliminates concrete bleeding • Virtually eliminates segregation even with highly fluid, high water-cementitious ratio mixes • No effect on set time
 <p>Foundation Concrete</p>	MasterMatrix® FC 500 (powder)	<ul style="list-style-type: none"> • Excellent water retention properties • Prevents segregation and bleeding • Polymer network effectively counteracts absorbent or cohesive substrates • Very good workability, irrespective of mixing intensity or head of pressure • Optimum temperature stability
 <p>3D Printing of Concrete</p>	MasterMatrix® 3D (liquid)	<ul style="list-style-type: none"> • Easy mixing and pumping • Excellent sag resistance after placement • Strong thixotropic properties for immediate stability • Strong reduction of rebound

See the Difference

Value Proposition of MasterMatrix® Technologies

Concrete containing MasterMatrix® exhibits superior stability and controlled bleeding characteristics, thus increasing resistance to segregation and facilitating placement. Depending on the application MasterMatrix® products may be customized showing a defined rheological profile and fit to purpose properties.



Contact us!

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



Master Builders Solutions® for the Construction Industry

MasterAir

Complete solutions for air entrained concrete

MasterCast®

Solutions for the manufactured concrete product industry

MasterCem®

Solutions for cement manufacture

MasterCO₂re™

Solutions for low-clinker concrete

MasterEase®

Low viscosity for high performance concrete

MasterFinish®

Solutions for formwork treatment and surface improvement

MasterFiber®

Comprehensive solutions for fiber reinforced concrete

MasterGlenium®

Solutions for high performance concrete

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

MasterRheobuild®

Solutions for high strength concrete

MasterRoc®

Solutions for underground construction and surface improvement

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

Master X-Seed®

Advanced accelerator solutions for concrete

Unveil the Power of MasterCO₂re™: Intelligent Cluster System for Low-clinker Concrete Production

info.master-builders-solutions.com/en/masterco2re



Master Builders Solutions UK Ltd

Swinton Hall Road, Swinton,
Manchester, M27 4EU
T +44 161 727 6300

ukinfo@masterbuilders.com

www.master-builders-solutions.com

The data contained in this publication are based on our current knowledge and experience. They do not constitute the agreed contractual quality of the product and, in view of the many factors that may affect processing and application of our products, do not relieve processors from carrying out their own investigations and tests. The agreed contractual quality of the product at the time of transfer of risk is based solely on the data in the specification data sheet. Any descriptions, drawings, photographs, data, proportions, weights, etc. given in this publication may change without prior information. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed (12/2023).

® registered trademark of Master Builders Solutions® in many countries of the world

