

MATERIAL  
EVOLUTION

# Material Evolution

The world's partner for green  
cement

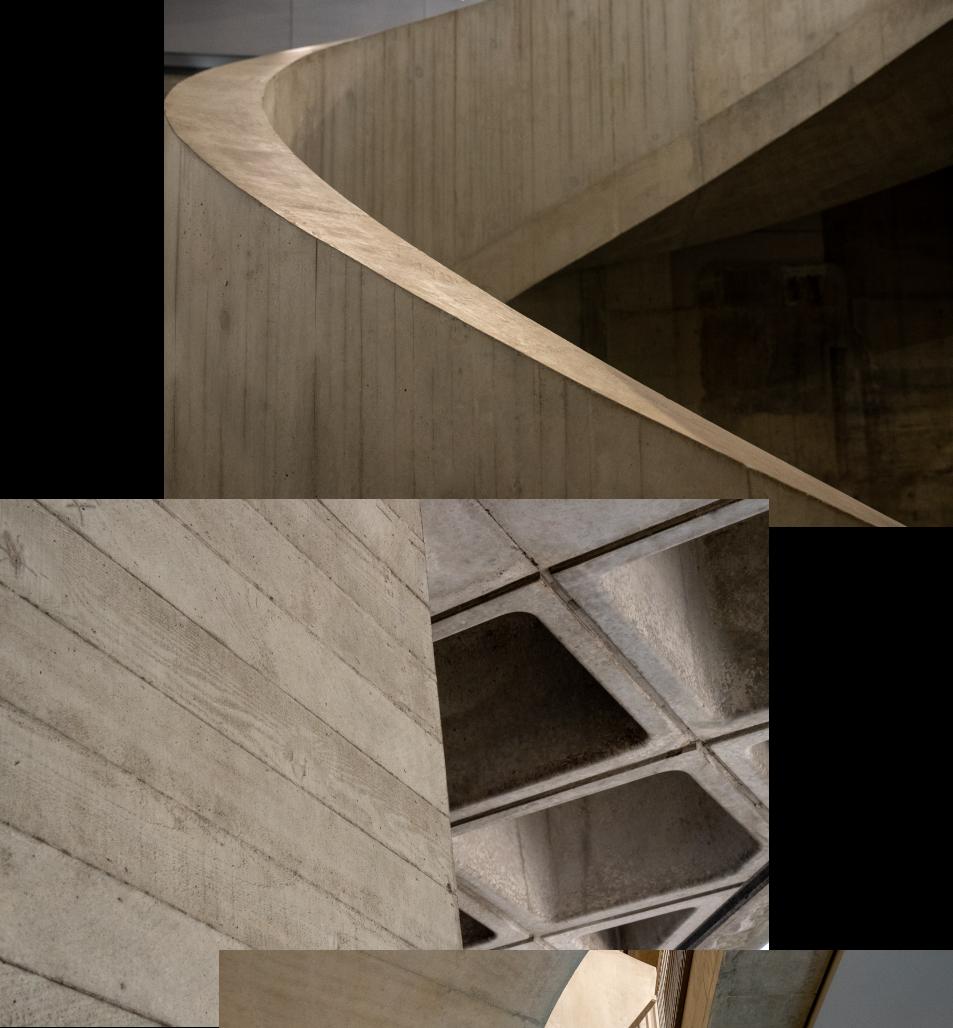


# Cement is the planet's most destructive material

Concrete is the  
**2nd**  
most-used  
material globally

Responsible for  
**8%**  
of total global CO<sub>2</sub>  
emissions

More than  
**80%**  
of concrete emissions  
come from cement  
production



**With clients starting to track carbon & regulation on the horizon, construction companies need low-carbon solutions.**



# Introducing Material Evolution: The world's partner for green cement

- 20+ world class scientists, commercial and operational experts
- Top tier investors
- First commercial-scale facility opened in October 2024
- Product range: from everyday to premium

## Mevo A1 Production Facility

 Wrexham, Wales

Plant Capacity: 120,000 tonnes  
MevoCem per annum



At  
One  
Ventures



SKY RIVER  
VENTURES



KOMPAS



# This is the future of cement

## 01 Waste Feedstocks

Mevo uses multiple waste feedstocks, future-proofing our product supply chain and boosting the circular economy

## 02 Alkali Fusion

We activate the cement using chemical reactions and our reactor, so the entire process happens at ambient temperatures

## 03 Digitally Enabled

We use AI and ML to identify feedstocks from industrial byproducts, optimise formulations, predict performance & streamline manufacturing

**85%**  
fewer carbon  
emissions than  
OPC



## Our product range: we offer two solutions to slash embodied carbon



### Enhance your everyday concrete with **MevoXL**

- ✓ Concrete admixture; enables up to 95% replacement of OPC with GGBS, PFA, other low-carbon SCMs
- ✓ Enables immediate carbon reductions
- ✓ Best for companies already using SCMs
- ✓ All precast & ready-mix
- ✓ 50-80% emissions reduction
- ✓ Compliant with BS8500 concrete code
- ✓ Up to cost-neutral



### Push the limits & go cement-free with **MevoCem**

- ✓ Cement alternative; 1:1 replacement for OPC
- ✓ High-performance, ultra-low carbon
- ✓ Best for superior durability in harsh environments & maximum carbon reductions
- ✓ Precast products & non-structural ready-mix
- ✓ Up to 85% emissions reduction
- ✓ Fits under new Flex350 code
- ✓ 10-15% premium per cube of concrete

# MevoXL product spec

## Super accelerator concrete admixture to increase percentage of GGBS, PFA and other low-carbon SCMs

MevoXL is a concrete admixture that enables concrete producers to replace up to 95% OPC with GGBS, PFA or other low-carbon SCMs, without compromising performance or programme.

Designed for immediate carbon reductions across precast and ready-mix projects with minimal effect on cost. *No impact on manufacturing performance or turnaround times. Delivers ultra-low carbon performance with very limited or no additional cost.*

- ✓ Admixture – powder
- ✓ Maintains performance of existing mix
- ✓ Up to 80% CO<sub>2</sub> savings
- ✓ Cost-neutral
- ✓ Suitable for precast and ready-mix
- ✓ Code-compliant under BS8500 or product codes

Product	MevoXL
<b>Product type</b>	Super accelerator admixture
<b>Strength class</b>	Customised to customer needs
<b>Primary low-carbon material used</b>	Enables up to 95% replacement of OPC with low-carbon SCMs (GGBS, PFA or other)
<b>Delivery format</b>	Bulk 28-tonne tanker, 1-tonne bags, 25kg bags, dissolvable 5kg bags
<b>Material format</b>	Powder
<b>Carbon value</b>	*Depends on mix design
<b>Emission reduction compared to OPC</b>	Up to 80% (depends on mix design)
<b>Certification / standards met</b>	BS8500 or product codes
<b>Ideal applications</b>	All precast and ready-mix applications. Best for producers already using GGBS or other low-carbon SCM; projects looking for lower carbon but cost-neutral options to implement immediately
<b>Manufactured</b>	UK
<b>Implementation</b>	Flexible implementation, compatible with existing manufacturing infrastructure
<b>Product launch date</b>	Currently in limited release

# MevoCem product spec

## High-performance, ultra-low carbon engineered cementitious binder

Our flagship MevoCem product is a high-performance, ultra-low carbon binder, designed to be a 1:1 replacement for OPC – but with up to 85% lower emissions.

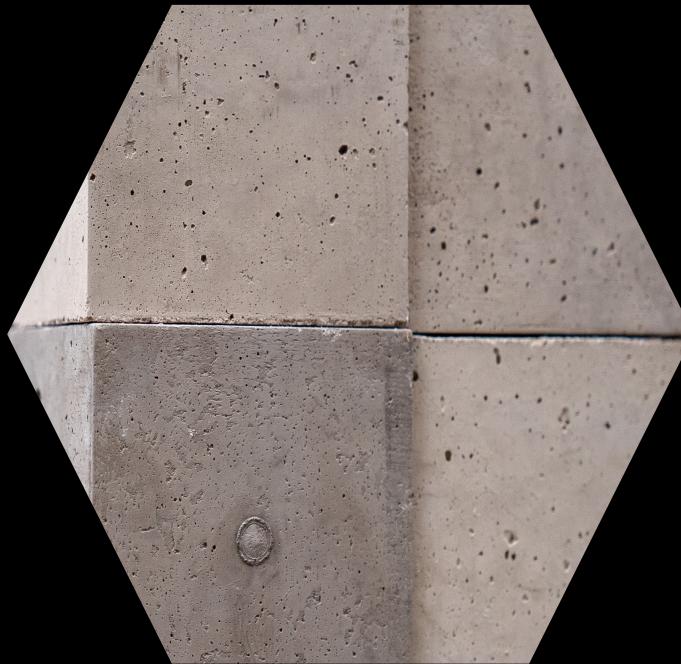
Designed for durability in harsh environments and maximum carbon reductions.

- ✓ 1:1 drop-in replacement for OPC, with 0% clinker
- ✓ One-part powder system
- ✓ High-performance cement for durability
- ✓ Up to 85% CO<sub>2</sub> savings
- ✓ Suitable for precast products and non-structural ready-mix
- ✓ Complies with Flex350 code of practice

Product	MevoCem
Product type	Cement alternative
Strength class	52.5N binder C50+ concrete
Primary low-carbon material used	GGBS
Delivery format	Bulk tankers
Material format	Powder
Carbon value	144-196 kg CO <sub>2</sub> e per tonne 58-78 kg CO <sub>2</sub> e per m <sup>3</sup> concrete
Emission reduction compared to OPC	Up to 85%
Certification / standards met	Flex350 and EN 196/7
Ideal applications	Precast products & non-structural ready-mix. Best for projects seeking maximum carbon reductions; projects in harsh environments (marine, soil, nuclear, wastewater)
Manufactured	UK
Implementation	Flexible implementation, compatible with existing manufacturing infrastructure
Product launch date	Currently available

# MevoCem advantages compared to Ordinary Portland Cement

- ✓ Enhanced durability
- ✓ Less heat generated during curing (non-exothermic)
- ✓ Improved dimensional stability
- ✓ Reduced shrinkage
- ✓ Higher chemical resistance
- ✓ Reduced heat of hydration may reduce steel required for mass structures



- ✓ One-part powder for safe handling
- ✓ Increased strength development compared to CEM1 at elevated curing temps, enabling reduced binder content
- ✓ Early strengths compared to SCMs
- ✓ Lower energy consumption
- ✓ Decreased CO<sub>2</sub> emissions

**While today MevoCem's superior performance and reduced emissions command a premium compared to OPC, the long-term benefits and plans to employ novel industrial byproducts promises cost-competitiveness in the coming years.**

# Certification: compliance with Flex 350

Our MevoCem product has been tested under the British Standards Institution's [Flex 350](#) standard, a performance-based code of practice that sets a stringent cement and concrete testing procedure to ensure innovative cement replacements can be used safely within concrete.

This includes comprehensive independent third-party testing to ensure **strength, durability, and overall performance**:

- Consistence & casting
- Compressive strength
- Tensile strength
- Secant modulus of elasticity
- Poisson's Ratio
- Density
- Accelerated carbonation
- Chloride migration
- Freeze-thaw resistance
- Sulfate resistance



# Scalable across all concrete applications

## 01 Ready-mix concrete

- Foundations
- Footings
- Floors, slabs
- Paths
- Driveways
- Concrete piles

## 02 Precast concrete

- Non-structural and semi-structural precast products
- Ground-bearing small element precast

## 03 Semi-dry concrete

- Paving
- Building blocks
- Kerbstones
- Gardening and landscaping elements
- Roof tiles
- Concrete paving tiles
- Pipes & manholes



### Impact

Scaled globally, our solutions could save up to **3 gigatonnes of CO<sub>2</sub>e annually** while repurposing **millions of tonnes** of industrial waste

# A track record of success

- Award winning innovation
- Strong industry partnerships
- Customer trials & demonstrations across applications



2020	2021	2022	2023	2024	2025	2026
Material Evolution founded	Initial funding & pilot plant	Scaling & patents	£17M Series A funding & growth	A1 Production Facility commissioned	Partnerships & scaling	Commercial expansion

## Partners, collaborators & industry recognition

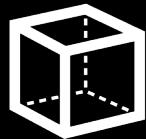


# Carbon data you can specify with confidence

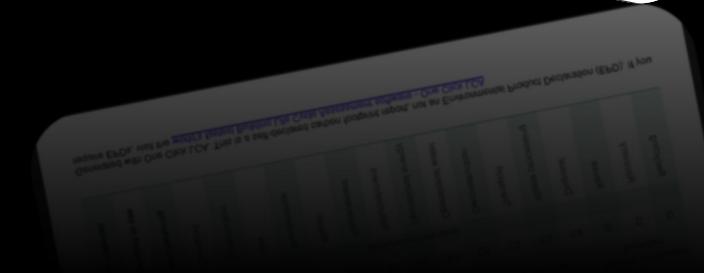
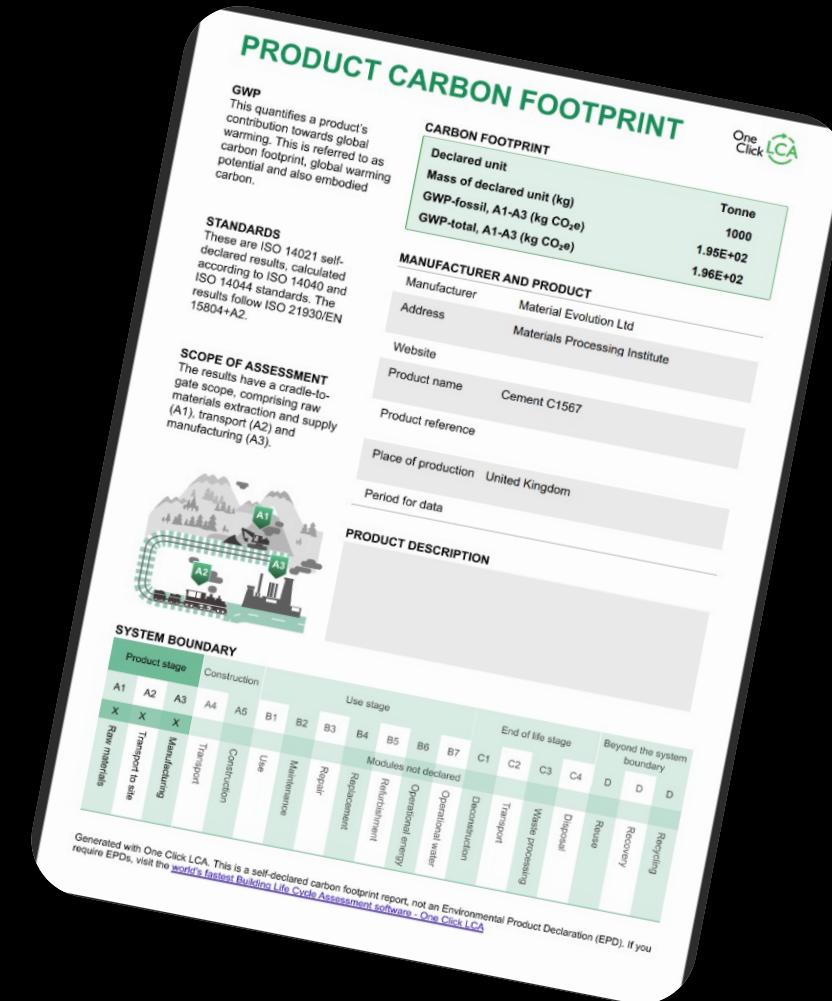
Accurate, product-level carbon data to support specification, compliance, and EPD development

We use One Click LCA to accurately quantify the embodied carbon impact of our materials and support customers with product-level assessments.

Where needed, we help enable third-party verified EPDs, allowing manufacturers to clearly evidence and communicate carbon reductions.



In addition to our ready-mix solutions, we also work with precast concrete producers to generate low-carbon precast elements – both for specific products and as part of larger projects.



## Ready to maximise innovation & go cement-free?



Talk to us about **MevoCem**: our flagship ultra-low carbon cement alternative

- ✓ Ultra-low carbon cement-free alternative
- ✓ 1:1 replacement for OPC
- ✓ High quality and performance
- ✓ Up to 85% carbon reduction
- ✓ Scalable seamless integration

## Looking to introduce immediate carbon reductions within your existing business operations & budget?



Talk to us about **MevoXL**: our cost-neutral solution to help you offer a low-carbon product immediately

- ✓ Enabling up to 95% OPC replacement with SCMs
- ✓ Performance accelerating admixture
- ✓ Enabling up to 95% OPC replacement with SCMs
- ✓ Up to 80% carbon reduction
- ✓ High quality and performance
- ✓ Verified carbon data via One Click LCA
- ✓ Use of alternative SCM without EAS delay

**Join us for the next  
step of the journey**

**Contact:**

Hayley Moller, Director of Marketing

[marketing@materialevolution.com](mailto:marketing@materialevolution.com)

[www.materialevolution.com](http://www.materialevolution.com)

