



MATERIAL  
EVOLUTION

# Material Evolution

The world's partner for green  
cement





# Cement is the planet's most destructive material

Concrete is the  
**2<sup>nd</sup>**  
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

## Mevo R&D Hub & Pilot Plant

 Teesside, England





# 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



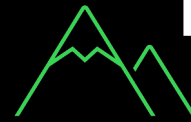


## Our product range: we offer two solutions to slash embodied carbon



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

- ✓ Concrete admixture; enables up to 95% replacement of OPC with GGBS, PFA, other low-carbon SCM
- ✓ 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
Product type	Super accelerator admixture
Strength class	Customised to customer needs
Primary low-carbon material used	Enables up to 95% replacement of OPC with low-carbon SCMs (GGBS, PFA or other)
Delivery format	Bulk 28-tonne tanker, 1-tonne bags, 25kg bags, dissolvable 5kg bags
Material format	Powder
Carbon value	*Depends on mix design
Emission reduction compared to OPC	Up to 80% (depends on mix design)
Certification / standards met	BS8500 or product codes
Ideal applications	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
Manufactured	UK
Implementation	Flexible implementation, compatible with existing manufacturing infrastructure
Product launch date	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



## Partners, collaborators & industry recognition



2020

Material Evolution founded

2021

Initial funding & pilot plant

2022

Scaling & patents

2023

£17M Series A funding & growth

2024

A1 Production Facility commissioned

2025

Partnerships & scaling

2026

Commercial expansion



# 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.

## PRODUCT CARBON FOOTPRINT

**GWP**  
This quantifies a product's contribution towards global warming. This is referred to as potential and also embodied carbon.

**STANDARDS**  
These are ISO 14021 self-declared results, calculated according to ISO 14040 and ISO 14044 standards. The results follow ISO 21930/EN 15804+A2.

**SCOPE OF ASSESSMENT**  
The results have a cradle-to-gate scope, comprising raw materials extraction and supply (A1), transport (A2) and manufacturing (A3).

**CARBON FOOTPRINT**

Declared unit	Tonne
Mass of declared unit (kg)	1000
GWP-fossil, A1-A3 (kg CO <sub>2</sub> e)	1.95E+02
GWP-total, A1-A3 (kg CO <sub>2</sub> e)	1.96E+02

**MANUFACTURER AND PRODUCT**

Manufacturer: Material Evolution Ltd  
Address: Materials Processing Institute  
Website:   
Product name: Cement C1567  
Product reference:   
Place of production: United Kingdom  
Period for data:   
  
**PRODUCT DESCRIPTION**

**SYSTEM BOUNDARY**

Product stage					Use stage							End of life stage				Beyond the system boundary		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	D	D
X	X	X																
Raw materials	Transport to site	Manufacturing	Transport	Construction	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy	Operational water	Decommissioning	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Generated with One Click LCA. This is a self-declared carbon footprint report, not an Environmental Product Declaration (EPD). If you require EPDs, visit the [world's fastest Building Life Cycle Assessment software - One Click LCA](#)

## 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

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