Off the shelf solutions for all cement types:

CEM II/C, CEM III/B All ages strength

EnviroAdd® EL

High

substitution

Medium

CEM III/A All ages strength

Opteva® EL

All-ages Strength Activator

CEM II/A-S Early age strength

Opteva® E Chloride-based



CEM II/C

All ages strength

EnviroAdd® LD Superior Low Dosage Activators

EnviroAdd® EL

CEM II/B-L, CEM II/B-M, **CEM II/A-L 52.5 R**

Late age strength

EnviroAdd® LD Superior Low Dosage Activators

EnviroAdd® EL

CEM II/A-L

Late age strength

Opteva® L



CEM II/C-M, LC3

All ages strength + water demand reduction

EnviroAdd® WR

CEM II/B-P, CEM II/B-V, CEM II/B-Q

All ages strength

EnviroAdd® LD Superior Low Dosage Activators

EnviroAdd® EL

CEM II/A-P, CEM II/A-V, CEM II/A-Q

All ages strength

Opteva® WR High Dosage Activators

Opteva® EL All-ages Strength Activator



EnviroAdd®:



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The challenge

Globally, cement is the backbone of construction, yet its production process faces critical challenges:

Heavy reliance on clinker; higher costs & environmental impact.

Variable raw material quality, impacting durability & strength of concrete.

Need to drive innovation without impact to cement performance.

EnviroAdd®: A game-changing solution

Leveraging innovative, tailor-made, and advanced chemistry.



Reduce clinker

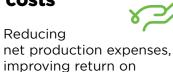


Enabling up to 8% clinker reduction while maintaining performance.

Lower CO₂ emīssions

CO₂ emissions reductions up to 11%, aligning with global sustainability goals.

Optimize costs



investment and margin

gains for cement plants.

Enhance cement performance

Delivering significant strength gains at early, late and all ages.

4



Driving innovation in cement with the use of novel SCM's.

Fosters

innovation

Ensure consistent quality

Constant concrete quality and performance.

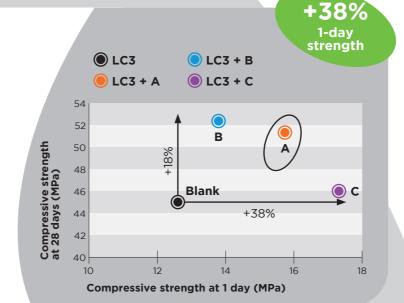
Engineered for excellence

Inputs

 Industrial trial with LC3-50 Cement 30% calcined clay, 15% limestone

Results

- +38% at 1 day or + 5 MPa with EnviroAdd® EL "C"
- +18% at 28 days or + 8 MPa with EnviroAdd® EL "B"
- Customized EnviroAdd® EL "A" met cement plant's target performance at all ages



-15% ossil fuels

Inputs

of 0.38.

	Dosage	1 Day	2 Days	28 Days
	g/t	MPa	MPa	MPa
No additive	-	23,8	36,5	60,8
Reference additive	3300	28,3	41,0	64,2
EnviroAdd®EL	1500	30,3	43,6	71,6

Concrete cured at 10°C with a

100 mm slump at 45 minutes

EnviroAdd® activators boosted

activators. Concrete strengths

early strength in concrete,

outperforming traditional

at 24 hours: +25% at 1 day

when cured at 10°C.

Same admixture and equal

between both samples.

constant water-to-cement ratio

Inputs

- Switching from 100% fossil fuels, 50% pet coke and 50% fuel oil to 85% pet coke and 15% refuse-derived fuel
- · Contributing to unfavorable kiln conditions

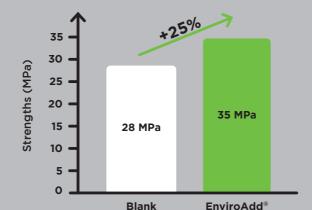
Results

• EnviroAdd® activators offset the negative impact in strength due to the switch from fossil fuels to "areen" fuels

-9.6% CO

Fuels

Concrete strengths at 24 hours; Curing at 10°C



Core solutions

Customized for all cement needs

Superior all ages strength activators

EnviroAdd® EL

Superior strength enhancer that boosts both early ages and 28 late days compressive strengths.

Cement Flowability / Pack set of cement	
Grinding performance	
1-3 day strengths	
28 day strengths	
Water demand reduction	

Benefits

- Superior early and late strength activation
- Setting acceleration

Low dosage activators

EnviroAdd® LD

Low dosage strength enhancer that boosts compressive strengths in cement.

Cement Flowability / Pack set of cement	
Grinding performance	
1-3 day strengths	
28 day strengths	
Water demand reduction	

Benefits

- 28 days strength activation
- Setting acceleration
- Workability retention



Water demand reducers

EnviroAdd® WR

Significantly reduces water demand in cement, enhancing workability and ensuring superior cement flowability.

Cement Flowability / Pack set of cement	
Grinding performance	
1-3 day strengths	
28 day strengths	
Water demand reduction	

Benefits

- Water demand reduction
- Enhanced slump retention
- Good pumpability

Powder flowability optimizers

EnviroAdd® PF

Designed to optimize the flow properties of dry cement powders. facilitating easier mixing and handling.

Cement Flowability / Pack set of cement	
Grinding performance	
1-3 day strengths	
28 day strengths	
Water demand reduction	

Benefits

- Optimized cement handling
- Dust reduction
- Strength activation