



## MC-FastKick

Hardening accelerator and more

EXPERTISE  
ADMIXTURES & ADDITIVES



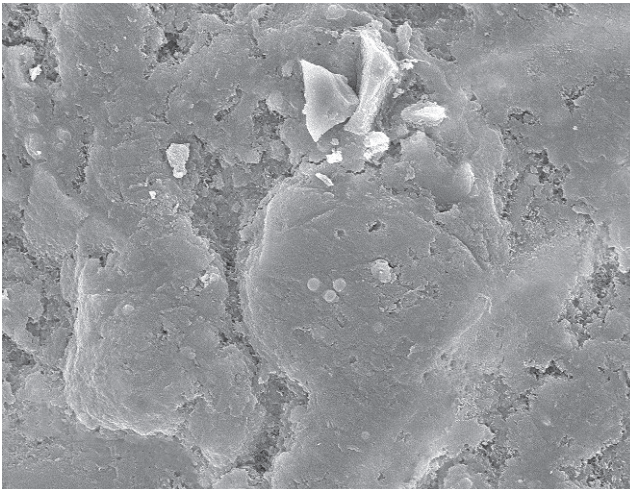
# MC-FastKick

## More than just acceleration

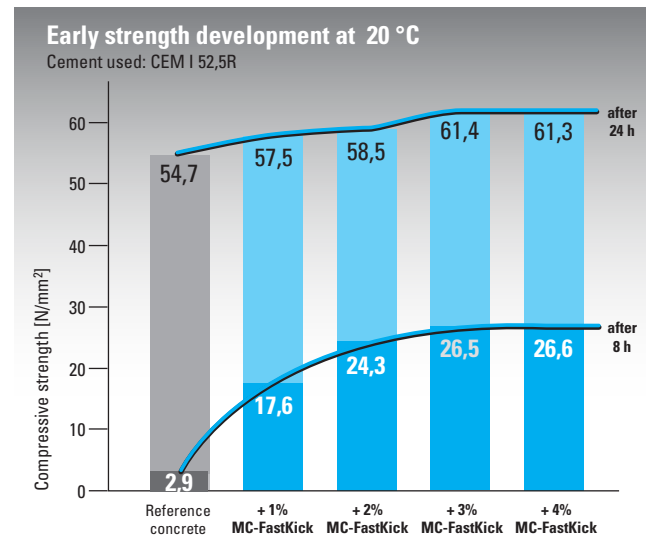
The rate at which concrete hardens appreciably decreases as material and ambient temperatures fall. Without additional, sometimes quite costly measures such as heating, it is often impossible to meet production targets – whether in the precast industry or in progressing in-situ concrete construction.

The new hardening accelerator technology developed by MC enables cycle times to be maintained or even reduced over a wide temperature range, allowing tough productivity targets to still be reached and construction progress to be maintained.

MC-FastKick is based on extensive expertise available at MC in the field of formulation tailoring. A specially developed and innovative hardening accelerator, MC-FastKick influences crystal growth in the calcium silicate hydrate phases in concrete.



This initially causes a partial inhibition of crystal growth, resulting in the formation of **highly amorphous surfaces in the early crystallisation nuclei**. Subsequently, these themselves act as crystallisation initiators, **causing the ensuing crystallisation rate to significantly increase**. The result is substantially higher early strength values with no negative effect on the other properties of the concrete.

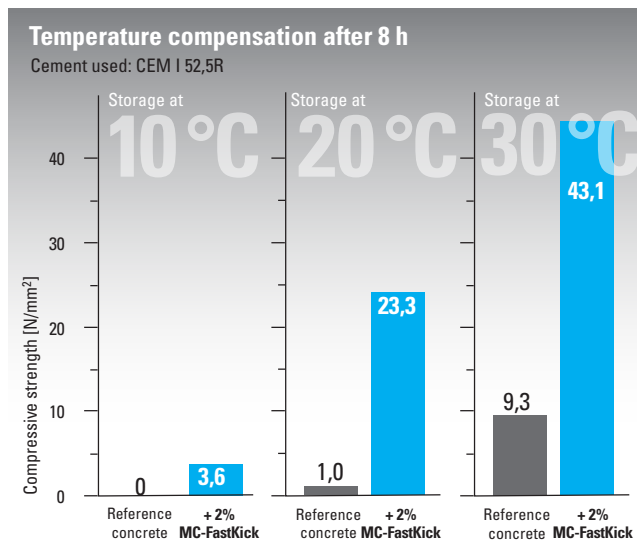


### Increased early strength

Despite the rapid development of early strength values, the special mechanism of the reaction arising ensures the preservation or even a slight increase in the final strength properties.

- Reduced cycle times
- Higher productivity
- Doubling of mould occupancy possible in precast production
- On-schedule completion of construction projects





### Compensation for low temperatures

The hardening accelerator MC-FastKick is effective over a wide temperature range. Particularly in winter conditions, early strengths can be achieved that are otherwise only possible at 10-15 °C higher temperatures. The early strength of the concrete is also significantly increased at high material, storage or ambient temperatures.

- Construction site progress ensured
- Reduction in heating costs and other winter construction expenses
- Retention or increase in final strength values
- Reduced demoulding times
- Reduced waiting times before finishing (e. g. industrial flooring concrete)

### Additional consistency extension

In addition to hardening acceleration, MC-FastKick in combination with MC-PowerFlow superplasticisers extends the concrete's consistency by one to two classes. Alternatively, this feature can be harnessed to reduce the quantity of superplasticiser used (cost savings) or cut the water content (lower w/c value). The consistency profile is not significantly influenced in either case.

- Cost savings resulting from lower superplasticiser quantities
- Water and w/c reduction
- Cost savings resulting from a reduction in binder content
- Further increase in early strength

## **MC-FastKick**

### **Hardening accelerator and more**

- Increased early strength
- Additional consistency extension
- Effective at low temperatures
- Retention of final strength values
- Good controllability thanks to addition immediately before in-situ placement

MC-Bauchemie Müller GmbH & Co. KG  
Concrete Industry

Am Kruppwald 1-8  
46238 Bottrop  
Germany

Phone: +49 2041 101-50  
Fax: +49 2041 101-588

CI@mc-bauchemie.com  
www.mc-bauchemie.com



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