

Rapid Hardening Concrete



CASE STUDY

When Ireland's leading public works contractor needed to extend a tram line in just 36 hours, they approached CEMEX for a building solution. CEMEX responded with Promptis concrete innovation.

The customer needed to complete a vastly ambitious project: the extension of a tram track line required a concrete that could be cast in 16 hours, and be fully hardened, ready to open for traffic the following morning at 1am. Prior to the delivery date, tests were carried out to optimise the mix design and ensure that the targeted performance could be achieved in the expected cold weather conditions (as low as 5°C). The team had only one working day and the weekend to prepare the ready-mix plant for the bold project.

CEMEX came through and delivered results; only six hours after the last casting, the tram lines were handed over to the customer, ready to resume operation immediately.

“Without your team’s dedication and support, we would not have achieved the end result,”

Darren Devane, Contracts Manager for BAM Contractors.



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PROMPTIS. The constructive use of time.

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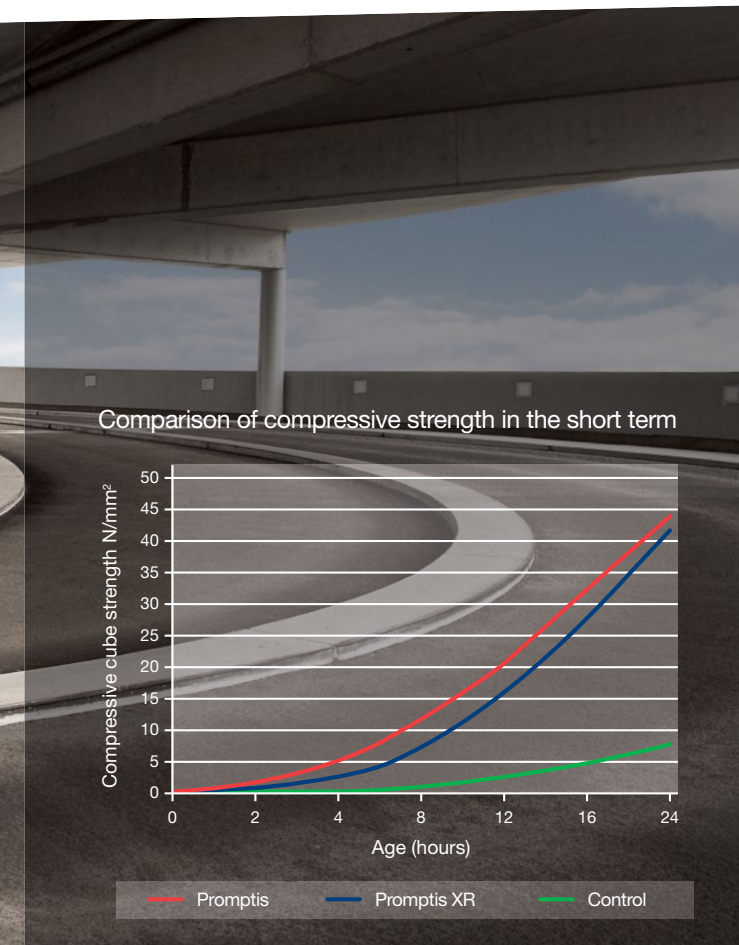


PROMPTIS. The constructive use of time.





Promptis is a new rapid hardening concrete solution that can help save valuable hours



In an ever more demanding and extremely competitive environment, with tight deadlines and even tighter margins, speed and efficiency which save time are critical. Promptis, from CEMEX, is a new rapid hardening concrete solution that can help save valuable hours.

Promptis has similar characteristics to conventional concrete but it reaches accelerated strength after just four hours and still maintains initial flow properties and workability for up to 120 minutes. Formwork can be stripped after only six hours, saving time and money.

It is an ideal solution for projects such as road and rail renovation, where the use of Promptis could help minimise traffic restrictions.

The properties of Promptis are the result of a carefully selected combination of specialist admixtures combined with expert mix design.

Promptis has been launched globally rather than just nationally, as it produces consistent results using a broad variety of cements, available in different countries. In addition there is global market demand, with Promptis suitable for use in both readymix and precast applications.

ADVANTAGES OF PROMPTIS

- » Formwork can be stripped after 6 hours
- » Rapid construction programmes are easily achieved
- » Ultimate design strengths are normally achieved in less than 7 days
- » Faster slip form casting times
- » The concrete is easy to compact and finish
- » Concrete strengths of up to 40N/mm² are achievable at just 24 hours
- » Concrete poured in winter achieves the required strength faster to avoid frost damage
- » Promptis can be designed to achieve a range of end performance characteristics

TECHNICAL DATA

Characteristics

- » Promptis complies with BS EN 206-1 and BS 8500-2
- » Promptis is available in a range of compressive strength classes
- » Promptis can be designed to meet a wide range of exposure classes
- » Promptis is generally supplied at S3 consistence class or higher
- » Consistence is maintained for up to 120 minutes
- » Promptis is suitable for pumping

Performance

- » High early strengths allowing formwork removal 6hrs after delivery
- » Rapid strength development allowing foot traffic to slabs within 6 hours and vehicle traffic after 24 Hours
- » Workability maintained for >90 minutes

Benefits

- » Fast formwork removal leading to increased productivity
- » Cost savings
 - Reduced labour cost
 - reduced rental cost for construction equipment
 - no more delays on-site
- » A unique concrete solution that existing products cannot provide

Applications

- Promptis is a product for a broad range of specific applications:
- » Fast demolding
 - in buildings: columns, walls, beams, slabs, panels
 - in civil engineering: high walls, tunnels, roads
 - » Easy handling
 - in precast facilities: beams, panels, specific elements
 - » Renovation and repair
 - an ideal solution where there is limited time to carry out renovation or repair of structures, slabs or pavements in a wide variety of applications