



## EVOLUTION™ STRUCTURAL

Evolution™ Structural is a self-compacting concrete with low viscosity and free flowing characteristics designed for pouring into walls, columns, beams and precast applications. It sets with a smooth surface that needs no vibrating and no further finishing. Eliminating vibration makes Evolution™ Structural a very attractive solution for any work above ground level or in precast factories.

### Where to use Evolution™ Structural

- Columns
- Walls
- Cores
- Beams
- Suspended floors
- Basements
- Precast

### Advantages of Evolution™ Structural

- Easily placed and economical
- Can generally be poured from a single discharge point
- Self-levelling and needs no compacting
- Reduced labour required for placing
- Sets with a smooth surface that requires minimal further finishing\*
- Enhanced workability and excellent strength characteristics
- No vibration necessary
- Reduced noise and health & safety issues
- Meets or exceeds the relevant British and European Standards

### A cost competitive solution

The product cost of high performance concrete can be more than offset by significant productivity and performance gains. Because Evolution™ Structural can flow into formwork or precast moulds from a single point, is self-levelling, self-compacting and eliminates the need to hire expensive vibration equipment, the cost of placing the concrete can be significantly reduced. In addition to the cost benefits there is also the improved on-site health and safety to take into consideration.

### About Evolution™ High Performance Concrete

Self-compacting concrete is gradually becoming the preferred formulation worldwide for many applications such as foundations, floors, walls and complex bespoke structures because it combines great strength and superb finishes with the opportunity to make serious project productivity improvements. The Evolution™ range fine tunes the high performance concept to provide outstanding solutions for specific applications.

Evolution™ is a high performance, self compacting concrete brand from CEMEX the world's leading suppliers of readymix concrete, and one of the largest producers of aggregates and cement. With operations in over 50 countries CEMEX is a growing global building solutions company pursuing innovative industry advancements whilst promoting a sustainable future

\* N.B. Dependant on quality formwork and placement

## Technical Specification

<b>Characteristic strength</b>	C50/60
<b>Technical category</b>	Self-levelling and self-compacting high performance concrete with a high quality finish.
<b>Material flow behaviour</b>	SF2+/VS1 or VS2, medium/high consistence 700-750+/- 50mm.*
<b>Other characteristics</b>	Maximum aggregate top size governed by reinforcement
<b>Applications</b>	All structural Precast or formwork components requiring a quality and/or high strength finish

\* Where pump applications are required please note material flow behaviour may need changing

## Specifications and Standards

All CEMEX Readymix products meet or exceed the relevant British and European standards. Certification is available on request.

## Delivery

The standard CEMEX Readymix truck mixer is ideal for straightforward deliveries to site, always ensure the area has suitable vehicle access and that sufficient labour is organised to handle the order. Where access or ground conditions may be a problem contact your local sales office well in advance.

CEMEX Readymix also offers a range of flexible options for concrete delivery, including pumping.

A sales directory service and estimating guide are available on our website [www.cemex.co.uk](http://www.cemex.co.uk)

## Health and Safety

The elimination of vibrating equipment improves the working environment wherever Evolution™ concrete is being placed, by reducing the exposure of workers to noise and the risk of 'vibration white finger' caused by vibration. These improved practices and health & safety benefits, make Evolution™ an attractive solution for both precast concrete and civil engineering design and construction.

Contact with concrete may cause irritation, dermatitis or severe alkali burns. There is serious risk of damage to the eyes. Wear suitable waterproof protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. After contact with skin, wash immediately with plenty of clean water. Keep out of reach of children. Contains Chromium (VI), which may cause an allergic reaction.

For a detailed datasheet please visit the health & safety section of our website [www.cemex.co.uk](http://www.cemex.co.uk)

## FAQ's

**Q. Does the formwork need to be specially designed?**

**A.** The formwork needs to be liquid tight and capable of sustaining nearly hydrostatic pressure as during placement the complete section could be fluid concrete. Formwork should be as permeable as possible. If using steel the correct type of release agent must be used and applied as thinly as possible. The formwork faces must be kept spotlessly clean if optimum finish is required.

**Q. What placement controls are needed?**

**A.** Evolution™ Structural must be placed and not allowed to free-fall into formwork, particularly if a quality finish is required. Tremmie pipes should be used to about 10cm above the concrete surface and the concrete placed in a smooth continuous pour allowing air to be pushed to the sides of the moulds and allowed to escape upwards.

**Q. Can Evolution™ Structural be pumped?**

**A.** Yes, but if very high heads are required, then Evolution™ Ultimate will be required as additional design measures will need to be taken. If the application demands pump placement, then please contact us so that we can ensure that the product supplied is suitable for the application.

**Q. When can I strip the formwork?**

**A.** This depends on many factors including temperature, mix design, use of retarders etc. However, normal Evolution™ Structural will usually be able to be stripped at 16 hours (following day) and should then be protected to enable curing to take place (or sprayed with a curing compound) and to ensure that it does not get damaged.

## CEMEX UK and Sustainability

CEMEX UK strives to be socially, economically and environmentally responsible in everything we do. For example, we're aiming to reduce CO<sub>2</sub> emissions by investing in trials of a sustainable fuel that can replace fossil fuels by up to 30%. '24/7 Load' delivers non-urgent materials out-of-hours, further helping to reduce road congestion. We also use materials from other industries that would otherwise go to landfill.

To drive these activities we have a commitment to data collection and the measurement of environmental performance. We also restore land used for extraction and recycle water used for stone washing and aggregate reclamation. It all adds up to industry leading environmental performance.

**For more information contact the Evolution™ Enquiry Line**

Tel: 0800 667 827

Email: [gb-evolution@cemex.com](mailto:gb-evolution@cemex.com)

**Or visit our website at**

[www.cemex.co.uk/evolution](http://www.cemex.co.uk/evolution)

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The information contained in this publication was accurate at the time of production, however CEMEX reserves the right to introduce modifications or changes to detail at any time, as part of a policy of continuous improvement.