



Concrete Solutions Datasheet

CEMEX ADVANCED PAVING

Concrete supplied with Reinforcement

With CEMEX Readymix you can be assured of getting the best range of concrete solutions, specifically designed to high specifications for various end uses.

CEMEX Advanced Paving is a pioneering product that combines micro and macro-synthetic fibres that take concrete reinforcement to a new level of performance.

The introduction of deformed macro fibres into the concrete mix results in increased toughness and ductility of the hardened concrete.



Applications

- External ground supported slabs (pavements, yards and hard standings)
- Roadways and pavements
- Farm yards and roadways
- Domestic driveways

Key Features and Benefits

- Concrete and reinforcement is placed in one operation
- Concrete is supplied with the exact amount of reinforcement that is required (no wastage)
- Can show an overall cost saving per square metre compared to concrete placed with traditional steel mesh reinforcement
- Reduces the need to store, cut, place and fix steel reinforcing mesh on site
- Fibre reinforcement is distributed evenly throughout the concrete mix. Steel reinforcement requires exact positioning to be effective
- Provides resistance to cracking and improves impact and abrasion qualities
- Contains a controlled amount of entrained air to enhance freeze thaw resistance

Health and Safety

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), may cause allergic reaction.

For a detailed datasheet please visit the health & safety section of our website www.cemex.co.uk.

Specifications and Standards

All CEMEX Readymix products meet or exceed the relevant British and European standards.

Other fibre concrete available from CEMEX:

- Polypropylene Fibre Concrete
- Steel Fibre Concrete

Hardened state advantages

Features	Benefits
Increases flexural toughness/ residual strength.	Increased load bearing capacity of concrete Potential reduction of concrete slab depth.
Provides post-crack performance.	Concrete retains load carrying capability after cracking has occurred.
Increased impact and abrasion resistance.	Increased durability and reduced maintenance costs.

Plastic state advantages

Features	Benefits
Improves concrete's resistance to plastic shrinkage cracking.	Reduced frequency of plastic cracking.
Inhibits formation of micro-cracks due to dimensional change.	Improved durability and reduced permeability.
Reduces sedimentation.	Decreases risk of plastic settlement cracking over re-bar.

Working improvements

Features	Benefits
Increased cohesion of the mix.	Reduced settlement.
No requirement for crack control steel mesh.	No need to purchase and store additional material. No delays to fast track schedule Easier positioning of joints.
Concrete placement and crack control in ONE operation.	Reduced site labour requirement for on-site handling and cutting of steel reinforcement. No secondary steel mesh is required and reinforcement is automatically positioned.
Reduced bleeding.	Easier finishing of the concrete surface.
Cost effective alternative to conventional steel mesh reinforcement.	Reduced project costs.

Final concrete performance

Features	Benefits
Reduced plastic cracking means a reduction in surface permeability.	Enhanced durability.
Controls cracking which occurs in the hardened state.	Enhanced load bearing capability.
Bleed water control inhibits migration of cement fines and sand to the surface.	Harder, more durable surface with better abrasion resistance.
Even distribution of fibres throughout the concrete.	Improved flexural properties.
A tougher surface with fewer bleed holes.	Reduced absorption of water, chemicals etc.
Non Magnetic / Corrosion free reinforcement.	No rusting of reinforcement.
Contains entrained air.	Enhanced freeze thaw resistance.

FAQs

Q. Can CEMEX Advanced Flooring be used without mesh reinforcement?

A. Yes. The special incorporated blend of fibres will enhance both the plastic and hardened state properties of the concrete. Additionally, they are often used in conjunction with mesh reinforcement in more onerous applications. Advice should be sought when considering the replacement of structural reinforcement.

Q. Is it more cost effective to use CEMEX Advance Flooring than concrete with mesh reinforcement?

A. Generally, Yes. However, savings will be greater when heavier types of crack control steel mesh are being replaced. There is also a saving in handling and an increase in the site productivity, as the mixer can reverse right up to the point of placing.

Q. Are any special finishing techniques required?

A. No, the concrete can be compacted and finished normally. Trowelling will help to embed the fibres into the concrete surface. Since fibre reinforcement is uniformly distributed throughout the concrete some fibres may be exposed on the surface. These fibres should not have any detrimental effect to the performance of the slab and can, if necessary, be easily removed on completion of finishing operations.

Q. Can CEMEX Advanced Paving be pumped?

A. Yes, although some adjustments to the mix design may be necessary depending on fibre dosage requirements.

Q. Are movement joints necessary?

A. Yes, movement joints are necessary and should generally be spaced at intervals no greater than 8m but this will depend upon slab thickness and fibre dosage which may vary according to application. Bays should be kept as square as possible.

Q. What is the dosage rate of the advanced polypropylene fibres?

A. Dosage rates will vary on a project by project basis. This will depend upon loadings and types of steel mesh which are being replaced.

Cost benefit analysis

- Cost savings in secondary reinforcement steel mesh for ground supported slabs
- Faster construction (removes the need to lay mesh and spacers etc.)