

QED StrongPatch™

High strength shrinkage compensated polymer modified repair mortar

Product Description

QED StrongPatch is a single component, shrinkage compensated, fluid concrete deck resurfacing mortar manufactured from selected cements, aggregates and additives. It has exceptional resistance to carbonation, chloride ingress, sulphate attack and freeze thaw attack.

Advantages

- High bond strength
- Shrinkage compensated
- High early strength
- Low permeability
- Excellent freeze/thaw resistance
- Single component

Uses

High strength concrete repairs

Restoration of:

- Parking garages
- Decks and slabs
- Water and wastewater tanks
- Tunnels, dams, bridges
- Marine structures

Laboratory Test Data

Property	Typical Results		
	24 hrs	7 days	28 days
Compressive strength MPa	20.5	41	68
Flexural strength MPa			10
Slant shear bond MPa			40

Packaging

25kg bags

Yield

Approximately 12L per bag. Approximately 18L when extended with 15kg aggregate.

Shelf Life

12 months when stored at below 35C under shade in a dry environment.

Installation Guidelines

QED Chemicals Limited provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting work. The information below is a summary intended for guidance only.

Surface Preparation

Concrete substrate must be structurally sound. Loose or unsound concrete should be removed. Surfaces must be entirely free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits. Saw cut around the edge of the repair to a minimum depth of 6mm.

Reinforcing steel should be fully exposed with enough room behind the steel to place the repair mortar.

Protection of reinforcement steel

Remove all corrosion from the exposed steel in accordance with ICRI Technical Guideline No. 03730. For additional protection against corrosion and to protect the adjacent edges of the repair, coat the steel with QED GalZinc. The steel may also be protected using QED EpoxyBond or QED Latex mixed with cement. Prior to using either of these products, please consult with an X-Calibur Authorized Technical Specialist.

Substrate Priming

After surface preparation has been completed, the substrate should be soaked with water and not allowed to dry out. The substrate should be primed using either of the following methods:

•Priming with QED BondCure

QED BondCure is an acrylic bonding agent that is used undiluted straight from the pack. It is particularly useful in conditions where the bonding agent may dry out. Brush QED BondCure into the saturated surface dry substrate, taking care to avoid ponding or excessive application.

•Priming with QED Latex

QED Latex is a styrene butadiene rubber bonding agent that is mixed with cement 1:1.5 by volume to produce a latex/cement slurry. Brush the latex/cement slurry into the saturated surface dry substrate, taking care to avoid ponding or excessive application. The latex/cement

slurry **must not** be allowed to dry out, otherwise debonding may occur.

•Priming with QED EpoxyBond

In immersed conditions or where the maximum possible bond strength is required; or where a saturated surface dry substrate is not possible, QED EpoxyBond should be used. Mix the entire contents of Part A with the entire contents of Part B until a uniform color is achieved. Brush the mixed material into the surface of the substrate, taking care to avoid ponding or excessive application. QED StrongPatch must be applied while QED EpoxyBond is still tacky.

Mixing

Add QED StrongPatch to 2.75 ltr water and mix for three minutes until fully dispersed. Use an QED approved forced action mechanical mixer. The actual water content per bag depends on which factory supplies the product. The water content is printed on the bag.

Application

The mixed material should be applied immediately after mixing is completed. The material should be applied in such a way as to ensure thorough compaction around the reinforcement and against the edges of the reinstatement area. The repair is then finished by trowel.

Thickness

The application thickness should be between 6mm and 10mm for unsupported vertical applications. When formwork is used, or when used in the horizontal, the maximum depth can be increased to 25mm. The product can be filled out with 10mm aggregate up to 15kg per 25kg of product, allowing the maximum horizontal thickness to be increased up to 100mm. When filled out with aggregate, the minimum thickness is increased to 25mm. Applications in excess of the thickness quoted above may be achieved by "keying" the compacted layer and then applying QED BondCure. Once this layer has reached sufficient strength, apply a primer coat of QED BondCure and proceed as before.

Curing

Cure immediately after finishing using QED BondCure or cure continuously in accordance with good concrete practise for seven days.

Limitations

Ensure the temperature of the mixed mortar does not exceed 35C.

Do not mix by hand.

Do not part mix, use only full bags.

Do not apply in rain or wet conditions or at temperatures below 4C.

Do not expose to running water until the product is cured fully.

Health and Safety

This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website www.xqglobal.com.

Authorized Technical Specialist

Please note that only X-Calibur Authorized Technical Specialists ('ATs') are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product. Visit www.xqglobal.com for a full list of X-Calibur ATs.

Datasheet Validity

QED Chemicals Limited makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on www.xqglobal.com to ensure you have the latest version.

Warranties

QED Chemicals Limited supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. QED Chemicals Limited does not warrant or guarantee the installation of the products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to QED Chemicals Limited in writing within five working days of being detected. QED Chemicals Limited **makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.** QED Chemicals Limited shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.

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