

# FOSROC® XR 45

constructive solutions

## Rapid Setting Cementitious Bedding and Repair Mortar



### Uses

Fosroc® XR 45 is used for the installation and levelling of street ironwork. It is particularly useful where interruption to traffic flow must be minimised. It allows the bedding and installation of manhole frames and gulleys and their return to use in less than 45 minutes.

Fosroc® XR 45 can also be used for the emergency repair of industrial floors, roads, runways, bridge decks and car park decks.

### Advantages

- Rapid bedding and levelling of manhole frames
- Rapid fixing of signposts and street furniture
- Rapid deck repairs
- Trafficable within 1 hour
- Part bag mixing
- Pre-mixed, only requires addition of clean water
- Manufactured under an approved BS EN ISO 9001 Quality System.

### Standards compliance

Conforms to Department of Transport Specification, HD27/04.

Design Manual for Roads and Bridges, Vol. 7:Sec 2: 3.11. requirements for rapid repair.

### Description

Fosroc® XR 45 is supplied as a ready to use blend of cements, graded aggregates and additives. It only requires addition of clean water to form a rapid setting mortar. Fosroc® XR45 can be applied in thicknesses from 10mm to 75mm in one application.

FOSROC® XR 45 has been specifically formulated for bedding highways ironwork with rapid return to service and is particularly useful when temperatures are expected to be at, or just above freezing.

### Properties

Property	Typical result
<b>Compressive Strength @ 20°C</b>	45 mins: 21N/mm <sup>2</sup> 7 days: >50N/mm <sup>2</sup> 28 days: >60N/mm <sup>2</sup>
<b>Compressive Strength cured @ 5°C</b>	60 mins: 20N/mm <sup>2</sup>
<b>Tensile strength</b>	3N/mm <sup>2</sup>
<b>Working life</b>	5 –10 minutes*
<b>Setting time</b>	5 –15 minutes*
<b>Return to service</b>	45 minutes*
<b>Fresh wet density</b>	2200 kg/m <sup>3</sup>

\*dependant on temperature

### Instructions for use

#### Preparation

Saw cut or cut back the extremities of the repair locations to a depth of at least 10 mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 12 mm up to the sawn edge.

Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or abrasive-blasting.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination should then be assessed by a pull-off test.

Where repairs are required due to steel corrosion, then standard concrete repair practices should be followed. For more information contact Fosroc.

#### Substrate priming

Pre-wet the area with clean water and remove any excess to leave a damp surface.

#### Mixing

Mixing should be carried out using gloved hands. Fosroc® XR45 should be added to clean water. Use enough water to initially produce a fluid grout and then mix in sufficient powder to produce a mortar of the required consistency. Ensure that all the powder is thoroughly wetted and mixed. 25 kg of dry powder requires 3.5 litres of clean water. Due to its rapid set characteristics do not mix more than can be placed and finished in 5 minutes. This is typically 3 – 5 kilos. When sufficient labour is available it can be mixed with a slow

# FOSROC® XR 45

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speed drill and paddle. Due to its rapid setting characteristics the paddle should be cleaned immediately after each mixing operation.

When ambient temperature is between 1°C and 10°C the use of warm water up to a maximum of 25°C is recommended.

## Application

Apply the mixed Fosroc® XR 45 mortar over the pre-wetted substrate. Apply within 5 minutes of mixing, ensuring maximum contact before the material sets. Level the manhole/gully frame before the mortar sets.

## Cleaning

Fosroc® XR 45 should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

## Limitations

Fosroc® XR 45 should not be used when the temperature is below 1°C and falling. For cold weather working below 5°C, preheat mixing equipment and gauging water to a temperature of 25-30°C,

Large/deep repairs may be subject to cracking. This may be minimised by limiting repair volumes and reducing layer thicknesses.

Exposure to heavy rainfall prior to the final set may result in surface scour. The product should not be exposed to moving water during application or totally immersed in water for the first 24 hours after application. If any doubts arise concerning temperature or substrate conditions, consult the local Fosroc office.

## Storage

Store in dry conditions in the original, unopened bags or tubs at between 5°C and 35°C.

The product has a shelf life of 6 months if stored as above. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to less than 3 months.

## Estimating

### Supply

25 kg bags

### Coverage and yield

Approximately 12.0 litres / 25 kg bag (1.0 m<sup>2</sup> at 12 mm thickness).

Notes: The actual yield per bag of Fosroc® XR 45 will depend on the consistency used. The coverage figures for liquid products are theoretical — due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

## Health & safety

For further information refer to appropriate Product Safety Data Sheet

## Fire

Fosroc® XR 45 is non-flammable.



### Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it.

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