

# TECHNICAL DATA

Revision Date 01/2008

## L.A. REPAIR CONCRETE

### Product code

TP64, packaging listed overleaf

### Description

L.A. Repair Concrete is a blend of special Portland cements, ground granulated blast furnace slag plus high quality continuously graded non ASR reactive aggregates. The product, when mixed with water, produces a homogenous concrete which will not segregate or bleed and has a dual shrinkage compensating system giving volume stability in both the plastic and hardened states. The mix has high flow characteristics and will not rapidly stiffen

L.A. Repair Concrete may be used for all concrete repairs wherever a flowing concrete is required. The product is easily mixed and placed under gravity or by pumping. The placed material is self compacting and will displace air from the repair area ensuring a strong bond between the placed material and the repair substrate.

The use of the Portland blast furnace type of cement gives a mix design with less than 3kg of equivalent sodium oxide per m<sup>3</sup> thus minimising the risk of alkali aggregate reaction even in the parent concrete. In addition, the mid range resistivity enables cathodic protection to be undertaken in conjunction with L.A. Repair Concrete.

- Uses include:**
- Motorway bridge repairs
  - Repairs to large structural concrete elements.
  - Protection of corroded and damaged reinforced concrete.
  - Refurbishment of soffits to bridge beams and crossheads

### Specification Outline

Concrete repairs and replacement shall be carried out using L.A. Repair Concrete as manufactured by Tecroc Products Ltd. The product must be stored, handled and used strictly in accordance with the manufacturer's instructions.

### Quality Assurance

Tecroc Products Ltd is a firm of Assessed Capability. The Company's quality system conforms to BS EN ISO 9001:2000 and is assessed by SGS Ltd Systems and Services Certification.

### Standards

L.A. Repair Concrete conforms to the requirements of the Department of Transport Standard BD27/86, clause 4, "Materials for the Repair of Concrete Highway Structures".

L.A. Repair Concrete conforms to the requirements of "the Department of Transport Specification for Highway Works, clause 1704.6 Control of Alkali Silica Reaction."

### Typical Concrete Properties @ 20°C

#### Consistency

Water Content %	Ltr/25kg Bag	Consistency
13	3.25	Flowing Concrete

**DTp Flow Trough 750mm in 10 secs.**

#### Consistency Life

Water Content %	Ltr/25kg Bag	Concrete Slightly Agitated
13	3.25	30 Minutes

#### Set times (BS 4550)

Water content %	Ltr/25kg bag	Initial Set	Final Set
13	3.25	5 Hours	8 Hours

#### Compressive Strength

Water Content %	3 Day N/mm <sub>2</sub>	7 Days N/mm <sub>2</sub>	28 Days N/mm <sub>2</sub>
13	33.0	55.0	65.0

**Continued overleaf**



Grouts



Structural Support Mortars



Concrete Repair Products



Construction Adhesives



Resin Et Cementitious Anchors



Highway Products



Coatings



Waterproofing



Ground Engineering

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# L.A. REPAIR CONCRETE

## Typical Concrete Properties @ 20°C

**Density @ Water Content 13%** 2260kg/m<sup>3</sup>

**Shrinkage** L.A. Repair Concrete is shrinkage compensated

**Bond Strength** 55N/mm<sub>2</sub> (slant shear BS6319)

**Compressive Modulus** 32kN/mm<sup>2</sup>

**Resistivity** 6903 Ohm.cm

**Coefficient of Thermal Expansion** 10-12x10<sup>-6</sup> / °C

**Air Content** 4%

## Instructions For Use

### Preparation

Surfaces to be repaired should be roughened to produce a good mechanical key. Ensure all contact surfaces are clean, free of contamination. Concrete surfaces should be soaked then blown free of standing water prior to concreting. Enclosed formwork sections should have drain holes to remove any standing water.

Formwork must give sufficient hydrostatic head for the concrete to flow across the work area and be strong enough to resist the force of concreting.

When placing concrete upwards from the bottom of a section, air release and tell-tale outlets may be required.

### Mixing

The recommended water addition is 3.25 litres (13%) per 25 kg bag. Place the required quantity of water in a suitable forced action mixer such as a Cretangle. Slowly add the powder to the water whilst continuously mixing. After all the powder has been added mix for a further minute to ensure a smooth lump free consistency is achieved.

### Placing

Ensure that sufficient L.A. Repair Concrete has been mixed and available such that the placing operation can be carried out in one continuous pour. Place the mixed L.A. Repair Concrete from one side of the work piece until the area is full.

When placing concrete through a flexible tube to the bottom of the section being repaired, pour the L.A. Repair Concrete slowly and continuously to displace air upwards within the work piece.

## Instructions For Use

### Curing

At temperatures between 5°C and 35°C, formwork should be left in place until the compressive strength of the L.A. Repair Concrete has reached at least 10N/mm<sup>2</sup>. Once the formwork has been struck any exposed concrete should be cured immediately with Polycure sprayed at a rate of 10m<sup>2</sup> per litre. In adverse ambient conditions of rapid drying such as high temperatures and drying winds apply a second coat of Polycure after the first coat has dried. In cold ambient conditions protect recently placed concrete from freezing.

## Precautions

### Health and Safety

L.A. Repair Concrete is alkaline when mixed with water and should not come into contact with skin or eyes. Avoid inhalation of dust during mixing and wear safety glasses, dust mask and gloves. If skin contact occurs wash thoroughly with clean water. Should eye contact occur rinse immediately with plenty of clean water and seek medical advice.

Full health and safety data are given in Product Safety Data Sheet.

### Fire

L.A. Repair Concrete is non-flammable

### Yield

L.A. Repair Concrete is packed in 25kg bags. The yield obtained is approximately 12.5 litres of mixed material.

## Storage And Shelf Life

L.A. Repair Concrete will have a shelf life of 12 months when kept in dry conditions at a temperature of 5°C to 45°C. Storage at higher temperatures or high humidity may reduce the shelf life.

## Packaging And Ordering

L.A. Repair Concrete is supplied in:

25kg bag Product Code TP64

For further information and sales please contact your local Tecroc Products office as listed below.

Tecroc Products Ltd products are guaranteed against defective materials and manufacture. Products are sold subject to the Tecroc Products Ltd Terms and Conditions of Sale, copies of which are forwarded on invoice and are available on request. Tecroc Products Ltd endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.

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