



CONSTRUCTION CHEMISTRY

# Expancure\* 90

High quality, resin based, concrete curing compound

## Uses

Provides a high efficiency, spray-applied curing compound, to retain water within concrete for effective curing. It is suitable for all common forms of concreting, and is of particular benefit for large concrete areas, including :

- Car park decks and ramps.
- Airport runways and hard standing areas.
- Concrete tanks and reservoirs.
- Warehouses and unloading bays.
- Bridges
- Piers, jetties and harbors.

## Advantages

- Improved curing of concrete enhances cement hydration and provides a more durable concrete.
- Control of moisture loss improves surface quality, reducing permeability, producing a hard wearing, dust free surface and minimising potential for surface cracking and shrinkage.
- Cost effective - Light reflective grades minimise solar temperature gain.
- Economic - Spray application reduces labour costs and eliminates the need for alternative curing systems.

## Standards compliance

All grades of Expancure\* 90 give 90% or greater curing efficiency when tested to BS 7542 and comply with BS8110 Part 1, clause 6.6.3(c), ASTM C309 and AASHTO M148. Expancure\* 90 Aluminised, complies with DTP specification for Highway Works, Cl. 1027.

## Specification

The high efficiency, curing compound shall be Expancure\* 90, a low viscosity, resin emulsion supplied by Expanchem Fospak. The curing compound shall have a curing efficiency of at least 90% in accordance with BS7542; shall comply with BS 8110; Part 1, clause 6.6.3(c), ASTM C309 and AASHTO M148.

## Description

Expancure\* 90 concrete curing compound is resin based and is supplied in various pigmented grades.

Clear - straw liquid, drying to a clear film

Green - As clear grade but with green fugitive

White - Silver liquid drying to a silver film

When first applied to a fresh cementitious surface the product forms a continuous, non-penetrating coating. This coating dries to form a continuous film which provides a barrier to moisture loss ensuring more efficient cement hydration, improved durability and reduced shrinkage.

The white and aluminised grades contain pigments based on titanium di-oxide and aluminium flake respectively to meet specifications requiring such pigmentation for reduction of solar temperature gain.

## Properties

Form	: Liquid - white or clear
Curing efficiency	: 90% (BS 7542)

## Instructions for use

### Pre-application

Expancure\* 90 pigmented grades should be gently stirred immediately before use, to ensure even dispersal of the pigment.

Application should not begin until the concrete is free from surface water, and should not commence at all if bleed water is apparent on the concrete surface.

Application Expancure\* 90 should be applied by spray, with the spray nozzle being held approximately 450mm from the concrete surface.

Application should pass back and forth to ensure complete coverage, and pump pressure maintained to give an even, fine spray.

After spraying, no further application of water or other material is necessary to ensure continued curing. The concrete surface should not be disturbed until it has sufficient strength to bear surface loads. The applied film should not be trafficked until fully dry, and care should be taken to ensure that the film is not broken.



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Expancure\* 90 may also be applied to newly hardened concrete immediately after demoulding, which should be damp, not dry. Surfaces which are dry will lead to problematic absorption of the membrane, preventing proper film formation and causing removal difficulties at a later date.

### Equipment

Motorised or knapsack spray equipment, which produces a fine spray, is recommended for use with Expancure\*90.

### Cleaning

Spray equipment should be cleaned immediately after use by flushing through with water. Any residual traces of resin which are left in the nozzle may be cleaned with Expanchem Fospak Solvent 102\*.

### Overcoating and removal

Expancure\* 90 must be removed from concrete substrates before subsequent coating works commence, to promote proper bond between the concrete and the applied coating. Although the membrane will be slowly removed by normal trafficking and UV exposure, this is likely to be inconsistent. To ensure complete removal use high pressure steam or water blasting, or light sand blasting.

### Limitations

- Expancure\* 90 should only be re-circulated using a low shear diaphragm pump.
- Expancure\* 90 should not be applied onto dry surfaces, which may lead to absorption and staining which will be difficult to remove at a later date.
- Any concrete surfaces which receive treatment with Expancure\* 90 should not be disturbed until the concrete has gained sufficient strength to bear surface loading.

### Technical support

Expanchem Fospak offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

### Estimating

#### Supply

Expancure\* 90 : 200 litre packs

Expanchem Fospak Solvent : 5 litre packs

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### Coverage

Coverage figures quoted for Expancure\* 90 are indicative; and based upon application to fresh or damp concrete at the appropriate time. Care should be taken to ensure that the concrete is indeed ready to accept the curing membrane.

Application rates outside the range given below may be used if necessary, but it is recommended to first contact your local Expanchem Fospak office.

Expancure\* 90 : 3.5 to 5.0 m<sup>2</sup>/litre

### Storage

When stored in warehouse conditions below 35°C, Expancure\* 90 has a minimum shelf life of 12 months for the clear version, and 6 months for the pigmented. Freezing and exposure to heat and/or direct sunlight should be avoided.

Containers should be kept sealed and airtight to prevent any reduction in shelf life.

### Precautions

#### Health and safety

Expancure\* 90 does not fall into the hazardous classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin or eyes, in either spray or bulk form.

Suitable protective gloves and goggles should be worn at all times.

Splashes on the skin should be removed with water. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

For further information, please consult the Material Safety Data Sheet for this product.



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## Fire

Expancure\* 90 is non-flammable.

## Cleaning and disposal

Spillages of Expancure\* 90 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities of water.

The disposal of excess or waste material should be carried out in accordance with local legislation, under the guidance of the local waste regulatory authority.

## Additional Information

Expanchem Fospak manufactures a wide range of complementary products which include :

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialised flooring materials

Expanchem Fospak additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Expanchem Fospak's 'Systematic Approach' to concrete repair features the following :

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Expanchem Fospak office - as below.

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## Important note

Expanchem Fospak products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Expanchem Fospak endeavours to ensure that the technical information on this data sheet is correct at the time of printing, it is the customer's responsibility to satisfy himself, by checking with the company that this information is still current at the time of use, that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended. Because Expanchem Fospak has no control over the conditions of use of its products, all recommendations or suggestions regarding the use of these products are made without guarantee.