

## PRODUCT INFORMATION BULLETIN

### DESCRIPTION

**Ad-Tek R** is a unique penetrative cementitious coating specially designed for the waterproofing, protection and repair of old and new concrete.

**Ad-Tek R** prevents the penetration of water and other liquids into the concrete by causing the reactions those produce the non-soluble cementitious formations within the pores and capillaries of concrete.

### USES

- Concrete water reservoirs
- Water treatment and sewage plants
- Swimming pools
- Roof decks
- Underground tunnels
- Foundations
- Chemical and fertilizer plants
- Bridge pylons, beams and decks

### BENEFITS

When correctly applied as a coating **Ad-Tek R**:

- **Forms an indivisible body with the base concrete.**
- Significantly increases impermeability of concrete
- Resists extreme hydrostatic pressure from either positive or negative surface of the concrete slab
- Can be applied to the positive and negative side of the concrete surface
- Can seal hairline cracks up to 0.5 mm
- Enhances the properties of the concrete against reinforcement corrosion
- Significantly reduces chloride penetration
- Allows concrete to breath
- Does not require a dry surface
- **Has a life greater than 10 years.**

## PROPERTIES OF APPLIED COATING

<b>Appearance</b>	Grey powder
<b>Grain Size</b>	Max 0.6 mm
<b>Layer Thickness</b>	1.5-5.0mm
<b>Fresh Wet Density</b>	Approx 2200 kg/m <sup>3</sup>
<b>Mixing Water per 20 kg pail</b>	3.3-3.7 litres
<b>Working Time</b>	30 minutes
<b>Temperature for application</b>	From 5 to 40 deg Celsius
<b>Final hardening</b>	4-8 hours
<b>Impermeability</b>	Waterproof according to DIN 1048
<b>Chloride ion diffusion</b>	Reduced approx 2 times according to NT Build 443-1955-11
<b>Impact abrasion</b>	Resistance is significantly increased according to AS/NZS 4469.9.2003
<b>Compressive strength (MPa)</b>	1 day: 21.7 28 days: 43.5
<b>Flexural strength (MPa)</b>	28 days: 6.8
<b>Bond strength (MPa)</b>	28 days: 5.0
<b>Carbonation</b>	Resistance is significantly increased according to "Colourmetric method"
<b>Water absorption</b>	Decreased by approx 3 times
<b>Steel reinforcement (Polarisation curves method)</b>	Steel corrosion is inhibited
<b>Crack resistance</b>	Crack resistant according to "Ring Method"
<b>Acidic medium resistance at pH 3-4</b>	Approx 2 times higher than conventional Portland cement mortar
<b>Potable water</b>	<b>Approved for use by AWQC</b>

## INSTALLATION (Refer to MSDS before use)

### Surface Preparation:

- Remove any weak, spalling, unconsolidated concrete and any existing coating; and thoroughly clean surface
- If steel reinforcement is exposed remove any rusting on the steel surface
- If patching is required, please patch with Ad-Tek HB or HB-T (Ad-Tek R is a coating only)
- Concrete must have the open capillaries and rough surface. If surface is too smooth or covered with oily matter, the concrete is lightly sandblasted, acid etched or water pressured
- Then hose the concrete surface to fully impregnate with water and allow drying to a wet dull lustre and puddle free.

### Priming:

We recommend priming as a part of the installation process described below. **AD-TEK H** (as a primer) is applied on the concrete substrate in order to passivate the steel reinforcement embedded beneath the concrete and completely harden the concrete surface, creating an appropriate adhesion platform; and

as a result the increased bond strength of **Ad-Tek R** coating

- Apply **Ad-Tek H** at the rate of one litre per 3-5 square metres on the dry touch concrete substrate to fully impregnate with **Ad-Tek H** (instead of the water impregnation in the process of surface preparation) and allow drying to a wet dull lustre and puddle free.

#### **Mixing Equipment:**

Low shear mechanical mixer.

#### **Mixing instructions 20 kg Ad-Tek R:**

- Normal water requirement is 3.3-3.7 L per 20 kg pail dependant on required viscosity.
- Place 3 litres of water in a clean mixer bucket
- While stirring gradually add **Ad-Tek R**, and mix thoroughly for 2-3 minutes,
- If necessary, add additional water, until a mix of the desired workability is obtained
- Mix for a further minimum 1 minute.
- Use within 30 minutes.

#### **Application:**

Apply by bagging, trowel or spray to a wet, puddle free surface, at a thickness of between 1.5 and 5 mm.

Note: If a shorter cure time is required for hydraulic concrete, **Ad-Tek R** can be applied to a dry surface by vigorous bagging and smoothing by trowel if necessary.

#### **Curing:**

- Keep damp for at least 5 days and provide suitable protection against extreme weather conditions (sun, wind, frost) while setting.
- The freshly treated surface should be protected from rain for a minimum period of 24 h.

**Finishes containing Portland cement may be applied over Ad-Tek R following the curing period but other paint and coating finishes should not be applied before 28 days.**

### **PACKAGING, SHELF LIFE and STORAGE**

**Ad-Tek R** is available in 20 kg plastic pails.

**Ad-Tek R** has a shelf life of 12 months if kept in an original un-open container in a dry store in sealed plastic pails.

### **SAFETY INFORMATION**

Thoroughly read the MSDS before use.

Disclaimer: Any advice, recommendation, information, assistance or service provided by application is in good faith and is believed by AD-TEK PTY LTD to be appropriate and reliable. However, any advice, recommendation, information, assistance or service provided by AD-TEK PTY LTD is provided without liability.