

## PRODUCT INFORMATION BULLETIN

### DESCRIPTION

**Ad-Tek PW** is an especially modified aqueous silicate solution that provides long-term Waterproofing and Durability to concrete.

**Ad-Tek PW** penetrates into concrete and reacts with free calcium forming a calcium silicate gel complex in pores, capillaries and cracks. This gel creates a sub-surface barrier against the penetration of water and contaminants such as chloride and sulphate ions, protecting the steel reinforcement against corrosion and increasing sulfate resistance of concrete.

After application the **Ad-Tek PW** remains active in the concrete body to provide, in contact with water, self-generative healing properties to future hairline cracks.

### USES

1. As a waterproofing and durability enhancer of existing concrete structures **Ad-Tek PW**:
  - Provides long-term waterproofing
  - Seals cracks up to 2 mm
  - Densifies and hardens the surface layer, increasing the protective properties of the concrete against reinforcement corrosion.
  - Increases chemical resistance and durability.
2. On new hardening concrete, Ad-Tek PW:
  - Increases waterproofing, surface hardness and durability
  - Promotes efficient cement hydration during of the curing phase.
  - Eliminates surface cracking.
  - Enhances concrete protective properties against steel reinforcement corrosion.
3. As a primer for most cementitious renders, Ad-Tek PW increases the adhesive bond strength of the render.

### AREAS OF USE

- Waterproofing of roof and bridge decks, balconies, basements, concrete tanks, tunnels, marine structures, tiled areas etc.
- Surface hardening and abrasion resistance of concrete surfaces i.e. floors, roadworks etc.

## BENEFITS

- Easy application at relatively high waterproofing.
- Waterproofing in difficult to access places.
- Does not require future maintenance.
- Treatment effective for greater than 10 years.

## PROPERTIES OF TREATED CONCRETE

<b>Waterproofing DIN 1048</b>	Resistance to water penetration increases by approximately 80%.
<b>Friction abrasion resistance DIN 52108</b>	Mass loss is reduced by up to 30 times
<b>Impact abrasion resistance AS/NZS 4456.9-2003</b>	The abrasion resistance is increased.
<b>Chloride Ion Diffusion NT Build 443 1995 – 11</b>	Reduced approximately two times.
<b>Water absorption Taywood Engineering Test</b>	Absorption is decreased by approximately 25%.
<b>Water retention for new hardening concrete</b>	Water loss is reduced by approximately 25%.
<b>Slip resistance</b>	Unchanged by treatment.

## INSTALLATION (Refer to the MSDS before applying)

### Surface preparation:

- **Ad-Tek PW** must be applied to a clean and dry surface free of contaminants.
- Concrete must have the open capillaries. All materials on the concrete surface that retard or resist penetration should be removed. If surface is covered with oily matter, the concrete is lightly sandblasted or water pressured.
- If segregation or voids are apparent, chip out, treat with Ad-Tek PW, then repair with Ad-Tek HB or HB-T.

Note: If the hardened concrete base is pozzolanic Portland cement, the concrete upper layer is carbonized or vastly leached (colourmetric method is acceptable for the free lime evaluation), then other Ad-Tek waterproofing products Ad-Tek R-F or Ad-Tek R are recommended.

The test for the free lime is advised for the concrete older than two years.

**Application rate of Ad-Tek PW:** Depends on the condition of concrete but usually in the range of 3.0 - 3.5 sq. metres/litre for the cracked areas and 3.5 – 4 sq. metres/litre for normal areas .

**Application: Ad-Tek PW** can be applied by spray, brush, mop or broom two ways:

1. Treat all visible cracks by applying **Ad-Tek PW** into and along hairline cracks prior to wetting the entire concrete surface with **Ad-Tek PW**. Allow the surface to become touch dried (3-6 hours) and spray with water to fully wet,

**Or**

2. Dilute **Ad-Tek PW** two times with water (by volume). Treat all visible cracks by applying half of the Ad-Tek PW volume into and along hairline cracks prior to wetting the entire concrete surface with **Ad-Tek PW**.

Allow the surface to become touch dried (3-6 hours) and apply the second part of **Ad-Tek PW**.

Waterproofing properties will develop over a period of time with exposure to moisture but can be attained in 72 hours by further spraying water to fully wet the concrete at intervals of approximately 12, 24 and 48 hours after application.

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

**Ad-Tek PW** is available in 20-litre and 1000-litre containers.

**Ad-Tek PW** has a shelf life of 12 months if kept in an original unopened containers.

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.