

HYDROC REINSTATE

DESCRIPTION

Hydroc Reinstare is a fine, brushable cementitious coating that features unique penetrative technology and has been developed specifically for providing waterproofing to old and new concrete structures from positive and negative water pressure.

Concrete treated with Hydroc Reinstare will inhibit the penetration of water and other liquids by catalysing reaction within the micro cracks, pores and capillaries of concrete creating non-soluble cementitious deposits. These deposits grow in the presence of water, blocking the pores, capillaries and shrinkage micro cracks, making treated surfaces waterproof.

Once formed, these deposits are integral in the pore structure and treated surfaces have been proven to provide a very durable waterproofing.

Hydroc Reinstare contains Migrating Corrosion Inhibitor which significantly increases the corrosion protection of steel reinforcement in concrete.

USES

This brushable coating is suitable for repair, waterproofing and corrosion inhibiting of horizontal, vertical and overhead concrete surfaces such as:

- Water treatment and sewage plants
- Swimming pools
- Roof decks
- Concrete water towers and reservoirs
- Underground tunnels
- Basements and foundations
- Bridge pylons, beams and decks
- Marine structures
- Chemical and fertilizer plants
- Below ground car parks

FEATURES AND BENEFITS

- Forms an indivisible body with the base concrete
- Resists extreme hydrostatic pressure from either positive or negative surface of the concrete slab
- Significantly increases impermeability of concrete
- 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 concrete against reinforcement corrosion
- Significantly reduces chloride penetration
- Allows concrete to breathe
- Does not require a dry surface

TYPICAL PROPERTIES

Appearance	Cement grey powder
Layer thickness	0.5-1.5 mm
Fresh wet density	Approx. 2100 kg/m ³
Working time	30 minutes
Temperature for application	From 5 to 35 deg Celsius
Final settings	3-6 hours

PROPERTIES OF TREATED CONCRETE

Impermeability	Waterproof according to DIN 1048
Chloride ion diffusion	Reduced approx. 2 times according to NT Build 443-1955-11
Impact abrasion	Resistance is significantly increased according to AS/NZS 4469.9.2003
Compressive strength (MPa)	1 day: 26.3 28 days: 52.5
Flexural strength (MPa)	28 days: 8.2
Bond strength (MPa)	28 days: 6.1
Carbonation	Resistance is significantly increased according to "Colourmetric method"
Water absorption	Decreased by approximately 3 times
Steel reinforcement (Polarisation curves method)	Steel corrosion is inhibited
Acidic medium resistance at pH 3-4	Approximately 2 times higher than conventional Portland cement mortar

APPLICATION GUIDELINES

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 Hydroc Cempatch or High Build Mortar (Hydroc Reinstare is a coating only). Concrete must have the open capillaries. If surface is covered with oily matter the concrete is to be 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.

Application Method

Mixing:

Use a low sheer mechanical mixer to ensure proper mixing. Normal water requirement is 3.3 - 4.5 L per 20 kg pail dependant on required viscosity. Place 3 litres of water in a clean mixing bucket. While stirring gradually add Hydroc Reinstare 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.

Priming:

Priming is recommended as part of the installation process described below. Aardcure Catalyst (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 Hydroc Reinstare.

Apply Aardcure Catalyst at the rate of one litre per 3-5 square metres on the dry touch concrete substrate. Allow drying to a wet dull lustre and puddle free.

Application:

Spray apply Aardcure Catalyst to re-prime and dampen the substrate, then apply a thin layer of Hydroc Reinstare to the freshly primed surface. Apply material to no more than 3mm per application using a horse hair brush for vertical faces and structures or a squeegee and trowel machine can be used for floors. To ensure complete coverage with no missed or thin spots, we recommend always applying two coats. The second coat can be applied as soon as the first has set hard. It is usually after about 4 hours depending on conditions. Use Aardcure Catalyst instead of water as a finishing aid.

CURING TIME

Keep damp for at least 3 days and provide suitable protection against extreme weather conditions (sun, wind, frost) while setting. The continued curing for several days will be beneficial in most cases.

IMPORTANT

The freshly treated surface should be protected from rain for a minimum period of 12 hours.

Finishes containing Portland cement may be applied over Hydroc Reinstare following the curing period, but other paint and coating finishes should not be applied before 28 days.

ESTIMATING DATA

Approximate yield is 10.5 litres per 20kg bag.

Theoretical coverage rate per 20kg bag:

7.0 m² @ 1.5 mm thickness
10.5 m² @ 1.0 mm thickness
21.0 m² @ 0.5 mm thickness

CLEAN UP

Clean tools and equipment thoroughly with clean water before they dry.

PACKAGING

20kg moisture resistant bag or plastic pail.

SHELF LIFE

12 months when kept in dry store unopened in sealed bags or plastic pails.

SAFETY PRECAUTIONS

Always wear adequate personal protection during use including gloves, eye protection, overalls and appropriate mask. Apply in adequate ventilation. Refer to Material Safety Data Sheet for further safety information.

DISCLAIMER / STATEMENT OF RESPONSIBILITY

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