

Instructions to Specifier.

Append the following Specifications and Drawings to tender and contract specifications.



Waterproofing Admixture

1 GENERAL

1.1 SCOPE

This specification describes a waterproofing system for below grade concrete structures such as lift pits, basement floors and walls, water holding structures, tunnels and thermally insulated decks such as podium decks

Proprietary item: **Radmyx Capillary Waterproofing System**

Supplier: Radcrete Developments Pty Ltd.

1.2 RELATED DOCUMENTS

Refer drawings, Preliminaries, Bill of Quantities, General Requirements, and general provisions of the contract.

1.3 RELATED WORKS SPECIFIED ELSEWHERE

Reinforcement, concrete installation, curing, joint preparation and detailing affect this section and are included within this specification.

1.4 REFERENCES

CSIRO test procedures -

1. Permeability

2 QUALITY

2.1 SUBMISSIONS

Approval before application

Submit a detailed statement describing the concrete waterproofing system to be applied.

Inclusions

Include literature, details, samples, warranties and the like in the submission as required.

Provide the manufacturer's or nominated agent/distributors written acceptance and approval of the intended system required.

2.2 QUALITY ASSURANCE

Approved applicators

Use applicators approved and licensed by the manufacturer or their nominated agent/distributor.

Site inspection

The approved applicator must inspect the site prior to commencement of application of the system, for purposes of reviewing related conditions affecting the performance requirements of this specification.

Safety

The site foreman/supervisor shall sight and understand the site specifications and product datasheets.

All products described in this section must be used with adequate personal protection as recommended by the Material Safety Datasheet which accompanies each product shipment.

3 MATERIALS AND COMPONENTS

3.1 MATERIAL

Waterproofing system

Provide a complete waterproofing system by cementitious capillary admixture (dosed at 0.78kg/m³ of concrete) and slurry/mortar repair materials. Through the process of osmosis the admixture, slurry & mortar repair materials form fine, non-soluble fibre like crystals in small cracks, pore and capillary system. Combined with the required detailing of joints, penetration, cracks & honeycombs the system prevents water from entering the structure.

4 REINFORCEMENT, CURING & RELATED DETAILING

4.1 REINFORCEMENT

Shall be in accordance with the current Australian Standards and shall be not less than 1% content. That is no less than 0.25% in each direction on the internal and external face. This equates to moderate/strong degree of crack control.

4.2 CONCRETE INSTALLATION

Insitu concrete

Ensure that the concrete is properly compacted by vibration to avoid honeycombing & segregation.

4.3 CURING

Use a curing compound complying with AS3799 that have water retention levels in excess of 90%.

4.4 CONSTRUCTION/POUR JOINTS

Construction joints/pour joints

Provide a vertical stop board at all construction/pour joints.

Trowel down zone where waterstop is to be applied so is smooth and flat. Areas either side of waterstop area is to be roughened to expose aggregate to facilitate an adequate key for the following pour.

Waterstops

Install Volclay Waterstop RX® as per manufacturers recommendations to prepared area. Apply with the manufacturers Approved Applicator (refer to Floor to Wall & Slab Cold Joint detail following)

Broadcast Radmyx as a dry shake to the joint face wall at a rate of 1kg / m² prior to following pour.

4.5 DRAINS & PENETRATIONS

Prior to concrete pour

Install Volclay Waterstop RX® as per manufacturers recommendations around penetrations. (refer to Penetration Detail following)

5.1 APPLICATION AND SUPERVISION

General

Install the system in accordance to manufacturers' published recommendations.

Personnel

Employ trained applicators.

Tools and equipment

Use proper tools and equipment and working under the direct supervision of a technically competent and experienced supervisor.

5.2 BATCHING & MIXING

Dosage

The admixture is to be dosed at 0.78 kg/m³ of concrete.

Mixing

The admixture is to be added to aggregate in the truck and then thoroughly mixed prior to adding sand, water and cement.

Water/Binder Ratio

This is not to exceed 0.5.

CRACKS

All Stable Leaking Cracks & Cracks exceeding 0.4mm

General

Mix Radmyx Slurry & Mortar as instructed in Radmyx Datasheet. (See Crack Repair Detail following)

Execution

- Chase out to minimum 30 - 40mm depth.
- Dampen with water
- Prime with Radmyx Slurry
- Laminate Radmyx Mortar in maximum 30mm layers until crack is filled

All Moving/Unstable Leaking Cracks

Utilise flexible Polyurethane injection system.

5.3 HONEYCOMBS / SEGREGATION

General

Mix Radmyx Slurry & Mortar as instructed in Radmyx Datasheet. (See Honeycomb repair detail following)

Execution

- Hack out until solid concrete is found
- Dampen with water
- Prime with Radmyx Slurry
- Laminate Radmyx Mortar in 30mm (maximum) layers until crack is filled

5.4 FORM TIES

General

Plug with Radmyx Plugging Compound

6 QUALITY CHECK AND COMMISSIONING

6.1 QA Documentation

All QA procedures to be carried out and signed off. All anomalies to specifications are to be noted. The Batch Check is to be undertaken and signed off. A final inspection is to be made prior to practical completion and signed off prior to a guarantee being issued.