

Datasheet:



Concentrate

PRODUCT NAME

Radmyx™ Concentrate

Capillary Waterproofing System

MANUFACTURER

Radcrete Developments Pty Ltd
Level 3, 45a Bay Street
Double Bay NSW 2028
SYDNEY
AUSTRALIA

ACN: 069 156 234

DESCRIPTION

Radmyx™ Capillary Waterproofing System is a complete system to waterproof below grade applications such as basements and water holding structures.

Through the process of osmosis the active chemicals in **Radmyx™** react with the hydration products of cement to create a continuous barrier of insoluble crystals deep within the capillary structure of the concrete. These crystals block the passage of water whilst permitting the transmission of air and water vapour, enabling the structure to breathe.

Radmyx™ is equally effective against positive or negative water pressure and can be used as an admixture or surface applied as a slurry on the internal or external surface.

Full waterproofing is normally achieved 5 – 7 days after application. After the crystallisation process has successfully waterproofed the structure the active chemicals in **Radmyx™** remain dormant in the concrete. Any later contact with water will reactivate the sealing process.

Radmyx™ Capillary Waterproofing System comprises of 4 grades, each formulated for specific situations:

Admixture

Radmyx™ Admixture

Is a cementitious powder added to the dry mix at the concrete truck (approx. 6 cu mtrs) at a rate of 0.78kgs of concentrate per cubic meter of concrete. This works out at 5kg Radmyx addition per 6 cu mtrs concrete truck.

Surface Applied

Radmyx™ Slurry

Initially Radmyx Concentrate will need to be mixed with sand, cement, and lime at the proportions in the table below in the instructions. Radmyx Concentrate would represent 13% of the total finished product

Radmyx™ Mortar

Mixed to a mortar consistency with water, **Radmyx™ Mortar** is used for crack & honeycomb repair as well as a screed, render and fillet material. This material is the same as the finished slurry product with less water added.

Radmyx™ Hardener

Where a leak must be plugged mix Radmyx readymade with Radcon instead of water to create a "flash set".

This can be achieved by placing dry Radmyx in a plastic soft drink bottle, add Radcon as liquid, shake fast and squirt contents immediately into leak then hold in place with a trowel.

INSTRUCTIONS

Admixture

Radmyx™ Admixture

Addition: 0.78 kgs per cu mtr of concrete mix. (5 kgs pail approx)

- **Radmyx™ Admixture** should be distributed evenly through the dry mix prior to adding water to the concrete truck.
- **Radmyx™ Admixture** has a plasticising effect. Water reducing admixtures should not be used in conjunction with **Radmyx™ Admixture** To retain an equivalent slump reduce water content by 10%

Surface Applied

Radmyx™ Slurry

Firstly Radmyx Concentrate will need to be mixed into a ready made product as follows:

Silica Sand	39% (Glass Grade 0-600 um)
Lime	10% (Hydrate)
Cement	38 % (General Purpose)

Radmyx Concentrate 13%

Total 100%

Thoroughly Mix the dry mix.

To make the slurry:

Mixing: 1 water : 2.25 - 2.5 powder by volume.

Rate: 1 kg per m² per coat.

Technique:

- ❖ Dampen surface prior to application.
Applied by brush or spray onto the dampened substrate.
Apply 2 coats at right angles, the 2nd coat whilst the first is firm, but 'green' - usually 3-4 hours after first coat (dependant on temperature).
- ❖ If 2nd coat is done the following day – dampen with water before applying the second coat.

Radmyx™ Mortar

Mixing: Mix sufficient water to achieve a mortar consistency

Rate: Use as requires.

Technique:

1. Dampen Surface prior to application.
2. Laminate in layers no more than 30mm thick.

General Instructions (Surface Application)

- Add water to **Radmyx™** NOT **Radmyx™** to water.
- Only mix sufficient **Radmyx™** that can be used in 20 minutes.
- Protect **Radmyx™** from sun & ponding water for 4 days.
- **Radmyx™** should be sprayed with a fine mist of water 3-4 times a day for 4 days to assist curing & penetration.
- Clean tools and equipment immediately after use. Use of plastic or rubber containers is recommended.
- **Radmyx™** waterproofing is not suitable for subsequent decoration unless first protected by sand/cement render.

Surface Preparation (Surface Application)

Surfaces must be free from dust, oil, grease, paint, residual curing compound, form release oil or any

APPLICATIONS

- In-situ Concrete Basements
- Lift Pits
- Core-filled Blockwork
- Canals
- Tunnels
- Reservoirs
- Dams

KEY BENEFITS

Long-term performance - No re-application or future maintenance require

Fast Backfilling - Backfilling operations can be undertaken immediately after forms are stripped

No Protection Required - Protection boards and drainage cells can be eliminated because there is no risk of damage during construction or thereafter.

Fault Finding - If shrinkage cracks develop - easy to find and repair using **Radmyx™ Slurry & Mortar** No lifting of membranes required.

Efficient - Compresses construction timetable since waterproofing can be either done from positive or negative side

MAINTENANCE

None required.

GUARANTEES

10 year guarantees for **Radmyx™** treated areas are available where approved applicators are used and in appropriate situations. Contact the manufacturer for further information and confirmation of suitability.

LIMITATIONS

Radmyx™ is not suitable for waterproofing above ground applications or applications exposed to thermal stress. Use **Radcon Formula #7** for Above ground applications

Radmyx™ is not suitable for waterproofing dynamic cracks or movement joints. Use elastomeric joint sealant for these applications.

PACKAGING

RADMYX CONCENTRATE: 0,8 kgs plastic bags, 5 kgs pails, 180 kgs metal drums

RADMYX READYMADE: bags of 10, 15 or 20 kgs

SHELF LIFE & STORAGE

Radmyx™ Concentrate maintains an unlimited shelf life in sealed containers.

SPECIFICATION

- See our website for specification download previous surface treatment that will impair adhesion of the **Radmyx™**.
- Remove any laitance and provide a slightly rough, open pored surface sufficient to act as a mechanical key. This is essential for adequate adhesion of the **Radmyx™**.

Cold Joints (New)

The joint should be formed by a vertical stop board during construction. Use a bentonite waterstops such as Volclay RX and **Radmyx™ Slurry** as a dry shake on the joint face prior to pouring the subsequent concrete.

Cold Joints (Existing)

Where the joint leaks repair similar to crack or void/honeycomb.

Penetrations (New)

Use bentonite waterstops as a wrap around the penetration during construction.

Movement Joints

Responsibility of others.

Cracks

Identify static cracks over 0.5 mm that must be chased out and repaired.

1. Chase out to a depth of 30 - 40mm
2. Dampen with water
3. Prime with **Radmyx™ Slurry**
4. Laminate in 30mm layers with **Radmyx™ Mortar** until the crack is filled

voids & Honeycombing

1. Hack out until solid concrete is found
2. Dampen with water
3. Prime the area with **Radmyx™ Slurry**
4. Laminate **Radmyx™ Mortar** in 30mm layers until the void is filled

Plugging Leaks

Leaks and holes drilled to relieve water pressure are sealed permanently using a plugging compound of **Radmyx™ Slurry** mixed with **Radcon Formula # 7**.

To plug leaks under pressure:

1. Chase out the area of the leak until water flow is free and insert a length of Diastic hose.
2. Seal the plastic hose with plugging compound as above.
3. Clean the cavity and apply a coat of Radmyx™ Slurry and when tacky, fill the cavity with a Radmyx™ Mortar and allow to cure.
4. When surrounding waterproofing is complete, withdraw the hose and plug the hole with plugging compound using a gloved thumb to hold it in place until set (approximately 1 minute).
5. Fill the remainder of the hole with Radmyx™ Mortar When the mortar has set, complete the waterproofing, lapping slurry coats onto the concrete surrounding the hole.
6. Holes under low pressure can be similarly sealed, but pipe insertion and removal is omitted.

